



Safety and protection installations

Surge protection





Our products for your project Towards the future with OBO

Reliable, safe and of the highest quality: Product features such as installation speed, load capacity, functionality and availability are at the forefront of each of our innovations. Discover the whole range of OBO products – in a new structure, allowing us to deal in a more targeted manner with the needs of you, our customers.

It is our aim to be the first port of call for the best and most innovative connections for electrical and data technology infrastructure. Thus, when looking towards the future, we have asked ourselves what we can do to be the best possible partner you could ever imagine, also in the long term. Against this backdrop, we have optimised our structure once again, sharpened our profile and defined our services more clearly. The result: Three new areas of application, which replace our previous seven product units, in order to provide you with a contemporary and user-orientated visual identity and structure, for both products and communication. This helps you to find exactly the products you are looking for in an even faster and simpler manner.

In this catalogue, we will present to you the variety of the entire product range of the safety and protection installations application area. Here, one thing – above all else – is in the spotlight: Safety. Besides our expert knowledge in this field, we place particular emphasis on innovations in product development and comprehensive quality testing, in order to offer you maximum protection at all times.

Our products for surge and lightning protection provide reliable protection against the impacts of thunderstorms and remote switching operations. These can cause not only significant damage to property, but also endanger human lives. The unique, wide product range in the field of fire protection makes OBO one of the few providers who cover all three protection aims and help you to protect people and property as best as possible in case of fire.

OBO – simply better.

OBO Product Worlds



Safety and protection installations

- Surge protection
- Explosion protection
- Lightning protection
- Earthing
- Equipotential bonding
- Insulation
- Cable bandages – prevention of the spread of fire
- Escape route installations – false ceiling mounting
- Fire protection ducts
- Systems for the maintenance of electrical functionality – cable-specific routing variants
- Systems for the maintenance of electrical functionality – standard support structures and routing systems
- Systems for the maintenance of electrical functionality – FireBox T series junction boxes
- Anchoring

You can find additional products in our new Industrial installations and Building installations catalogues



Industrial installations

Cable support systems and connection and fastening systems for industry and construction project infrastructure

- Cable trays
- Mesh cable trays
- Cable ladders
- Industrial ducts
- Support structures
- Electrical installation pipes
- Wiring ducts
- Power supply units
- Distributors
- Junction boxes
- Concealed and cavity wall installations
- Terminals
- Cable glands
- Installation and fastening clips
- Anchors and fastening systems



Building installations

Cable routing and underfloor systems for administrative and functional buildings including architectural solutions

- Electrical installation ducts and trunking
- Device installation ducts and trunking
- Skirting trunking
- Service poles
- Underfloor applications, in screed
- Underfloor applications, in concrete
- Underfloor applications, on-floor
- Service outlets for underfloor applications
- Floor sockets and floor boxes
- Installation housing and support
- Tabletop sockets
- Sockets, switches, data and multimedia technology

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Explosion protection

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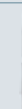


Lightning protection

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Earthing

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Equipotential bonding

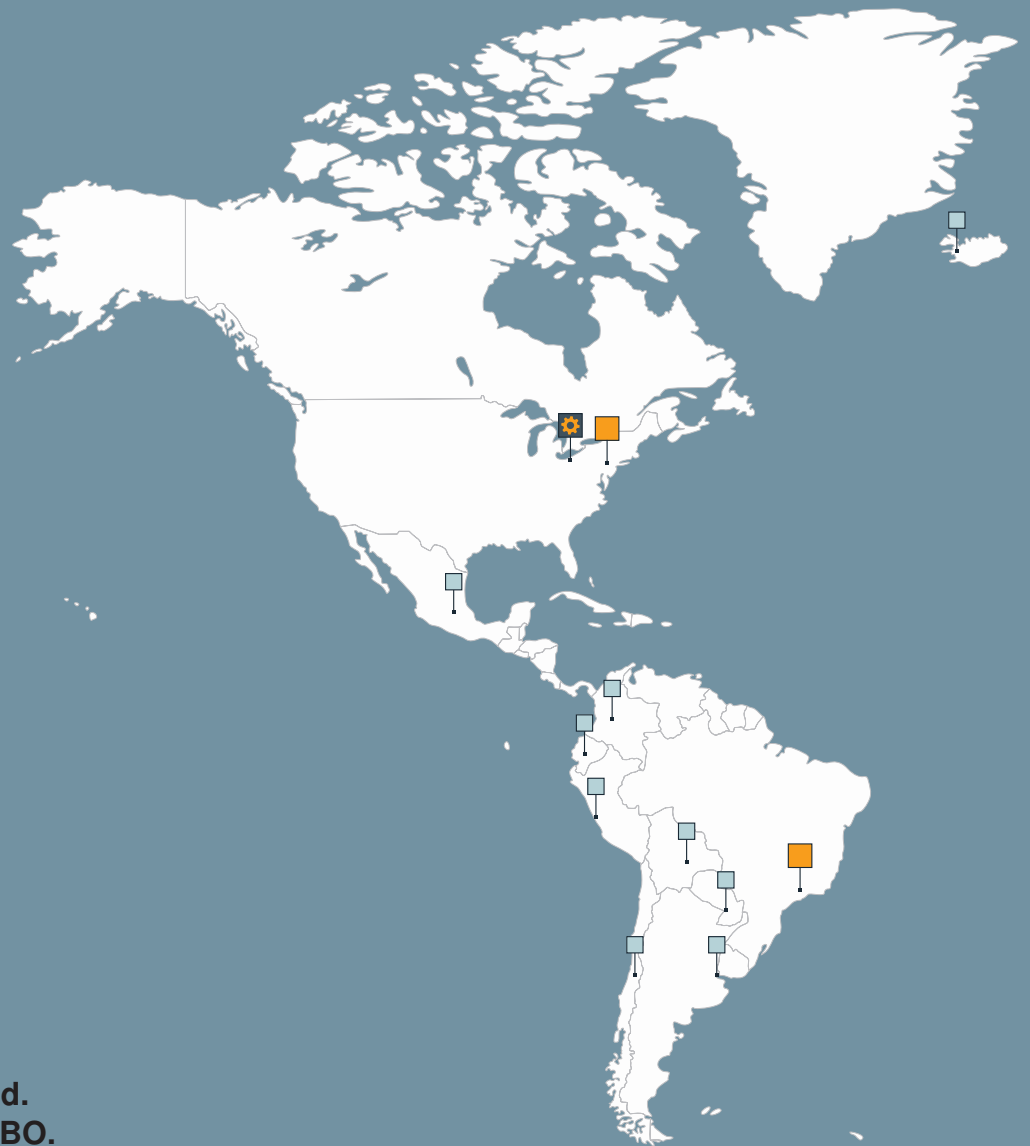
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Directories

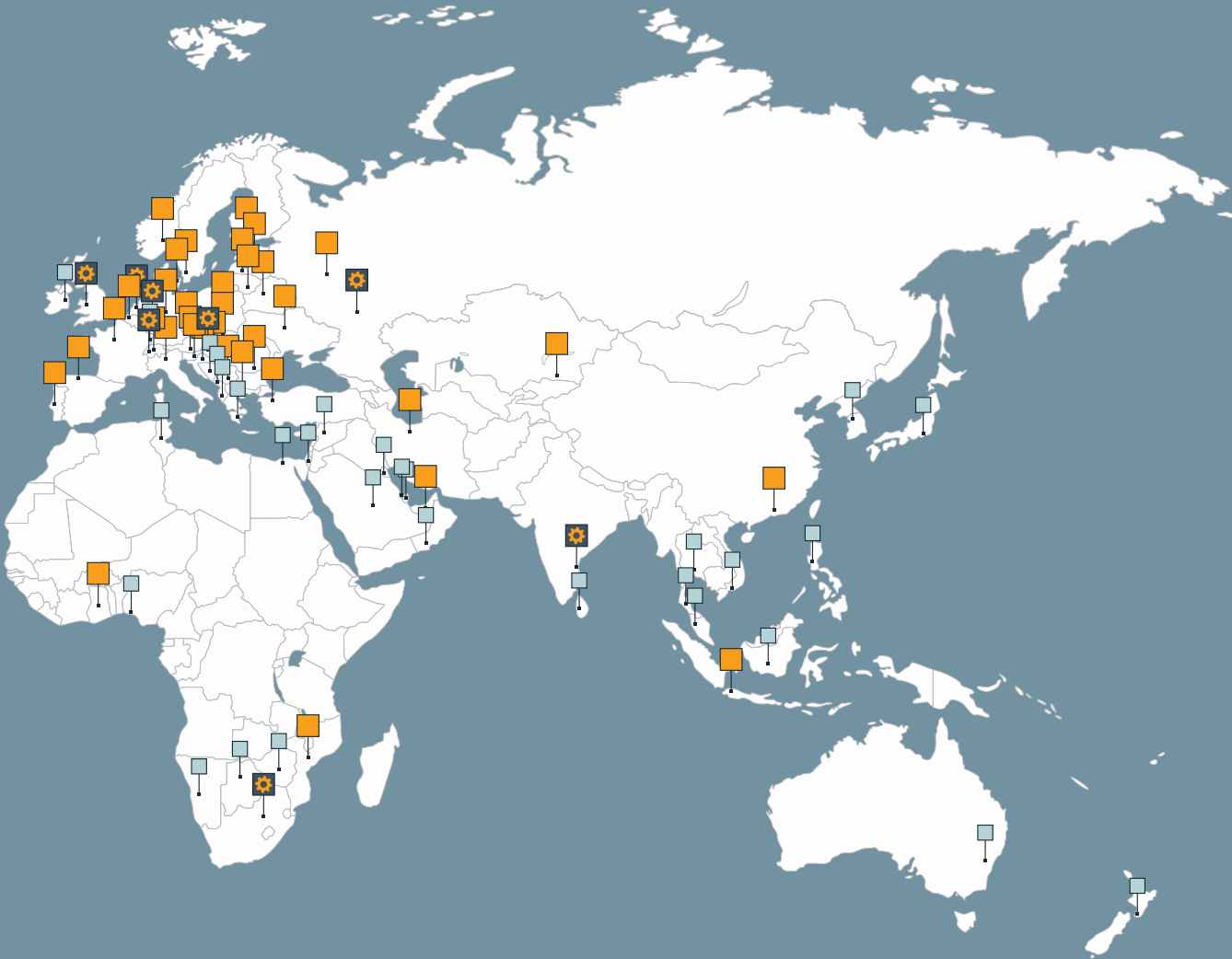
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**Welcome world.
Welcome to OBO.**

New solutions to improve functionality and the ease of installation – OBO employees all around the world use their abilities and creativity to make this happen. Because we know that each individual market has its special characteristics and that the requirements for our products change within each market, we have paid particular attention to the compatibility of products in their place of use. We always offer our customers intelligent, well-thought-out solutions. Our brands always keep this promise. The OBO global team wishes to make the work of electrical planners and operatives around the world as easy as possible.



Production location

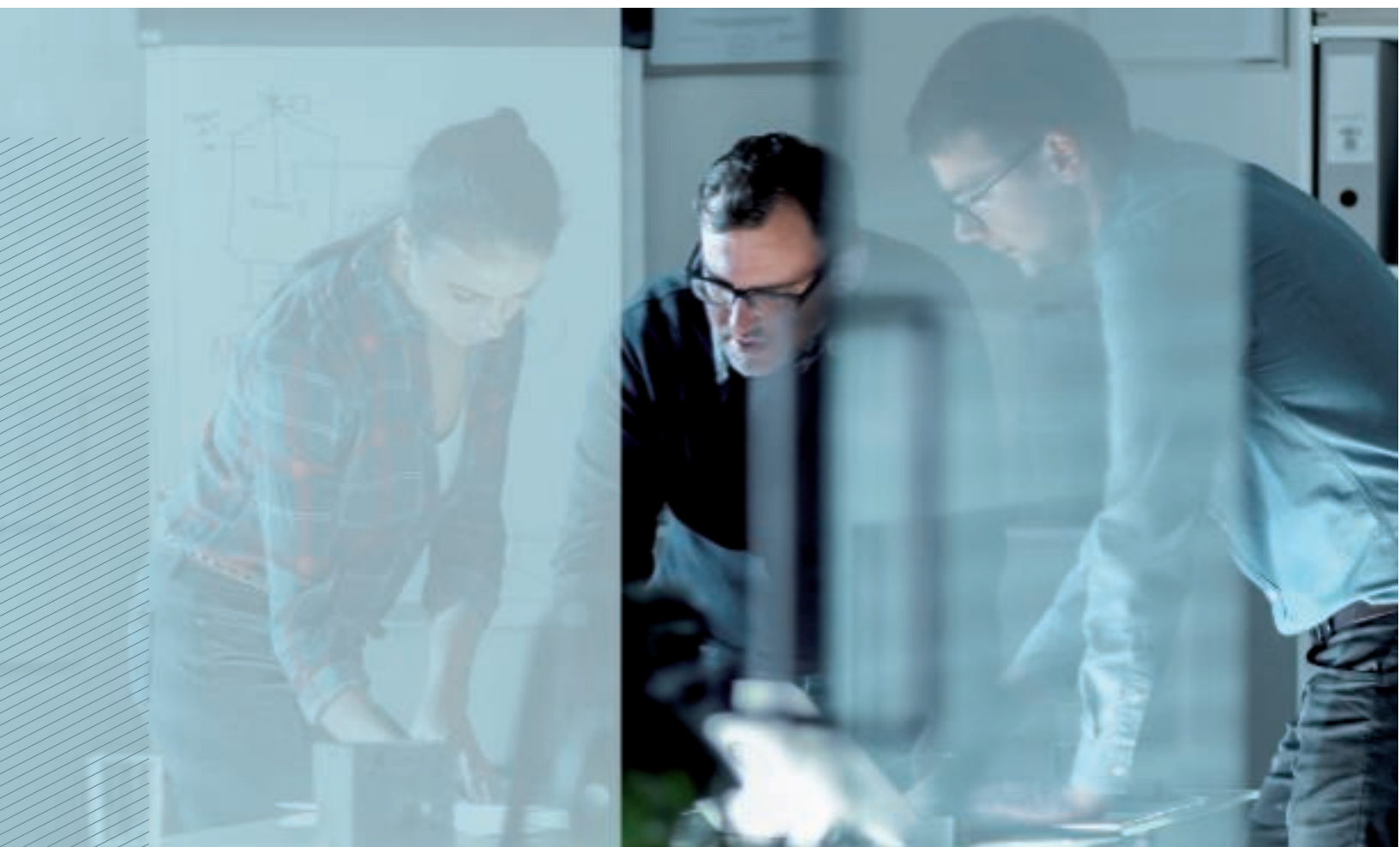


Subsidiary



Representative office

OBO Support & *contact*



***You have a
problem?
We have the
solution!***

OBO Bettermann is more than the sum of its products. In any situation, we are the reliable partner right by your side. You have a problem? We have the solution!

It doesn't matter in which area of industry our support is needed – from industrial and plant engineering to private, public and administrative buildings, as well as in the areas of mobility and renewable energies – we have everything that you need.

OBO can not only provide the entire electro-technical infrastructure with the best possible products. We can also support you with sound expert knowledge and more than 100 years of experience, right from the planning phase through to the realisation of your projects. OBO – solutions you can rely on.

What is OBO Support?

Every OBO product carries a plus inside it, which only a branded product can offer. It is developed, manufactured and tested with a high level of competence, from the idea right through to the final check. In addition, our specialists are available for consultation and can offer you assistance and training courses for products at any time.

Together with you, we plan your project and help you choose the right products, and are also available to you at any time should you need us. From flawless logistics through to practical information – we can provide support at every level. We can also offer security through certificates on the conformity of our products with the most important standards and directives.

We are as flexible as you are – because we know how practical people work and what is important to them. Each step is a plus – that is the OBO Support concept.

You can contact our Customer Service department on:

Monday to Friday
08:00 a.m. to 5:00
p.m.

Estonia: +372 6519870

Latvia: +371 67802050

Lithuania: +370 52375911

Estonia: obo@obo.ee

Latvia: obo@obo.lv

Lithuania: obo@obo.lt



Service



Training



Handling



Certification

Service – OBO can help

Everywhere and in every project phase:

- Highly competent hotline
- Product and system information, digitally or printed
- Selection and planning aids on the web, as an app, as a CAD application or in printed form
- 2D and 3D product data for planning
- Field service, branch offices and subsidiaries in 60 countries
- Engineering services for major projects

Training courses from OBO

- Seminars and workshops
- Local consultation and training courses
- Planner days

Handling – OBO delivers reliably

With optimised delivery processes:

- Reliable logistics
- Practical transport systems and packaging
- Loading gear handling and disposal concepts

Certification and guarantee








OBO offers safety. Our products fulfil the most important country-specific regulations:

- Conformity (e.g. IEC, VDE, CE, KEMA, KEUR, UL)
- Certification (e.g. DIN EN, DGNB)
- 5-year guarantee for surge protection products
- Guarantee management

Surge protection



Surge protection

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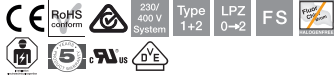


Combination arrester MCF Compact

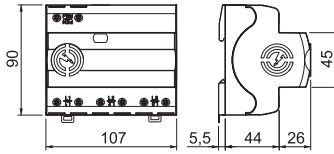
Surge protection energy technology, arrester, type 1+2



- Type 1 + 2 SPD: $I_{imp} = 25$ kA per pole and up to 100 kA in total
- Protection level: < 1.5 kV, usable in coordination with type 3 SPD
- Usable in buildings with lightning protection class 1–4
- Quality according to EN 61643-11 certified by an external testing institute
- Universally usable for industry, offices, commercial and residential buildings
- System protection up to 315 A usable without separate fusing
- Remote signalling, potential-free changeover (RS)
- Variants in three to three-pole+NPE versions
- Operating instructions always available online via QR code
- Space savings of up to 25% (compared to MCD variant)



LightningController Compact - MCF75



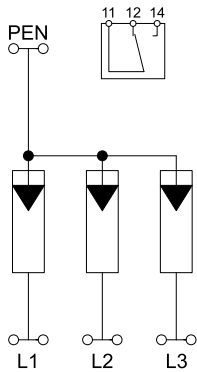
Combination arrester, lightning current and surge arrester, type 1+2

- Protection level ≤ 1.5 kV
- For lightning protection equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity to 75 kA (10/350), 3-pole
- Line following current quenching 50 kA I_{peak}, arrester backup fuse to 315 A gL/gG
- Fulfils the requirements of VDE-AR-N 4100 for use in pre-meter area
- Encapsulated, non-extinguishing spark gap arrester for use in distributor housings

Application: Industrial systems and buildings with external lightning protection of the highest class I to IV.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
MCF75-3+FS	255	3	IP20	1	75.000	5096981

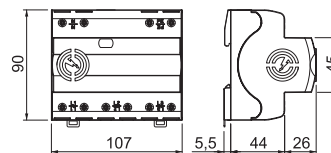
Connection options



MCF75-3+FS	
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U _n 230 V
Maximum continuous voltage AC	U _c 255 V
Nominal discharge current (8/20 μs)	I _n / L-N 35 kA
Maximum discharge current (8/20 μs)	I _{max} 50 kA
Lightning surge current (10/350 μs)	I _{imp} 25 kA
Lightning surge current (10/350)	I _{total} 75 kA
Arrester surge current (8/20 μs) [total]	I _{total} 75 kA
Combined voltage protection level [L-PEN]	U _d / L-PEN 1.5 kV
Max. mains-side overcurrent protection	315 A
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T _u -40 - +80 °C
Protection rating	IP20
Approvals	VDE, UL
Conductor cross-section, flexible (fine-wire)	1.5 - 25 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 3 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



LightningController Compact - MCF100



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
MCF100-3+NPE+FS	255	3+N/PE	IP20	1	93.500	5096987

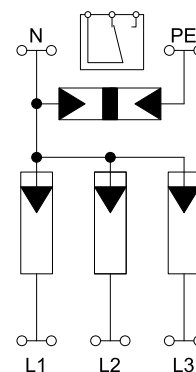
Combination arrester, lightning current and surge arrester, type 1+2

- Protection level ≤ 1.5 kV
- For lightning protection equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity up to 100 kA (10/350), 3+NPE
- Line following current quenching 50 kA Ipeak, arrester backup fuse to 315 A gL/gG
- Fulfills the requirements of VDE-AR-N 4100 for use in pre-meter area
- Encapsulated, non-extinguishing spark gap arrester for use in distributor housings

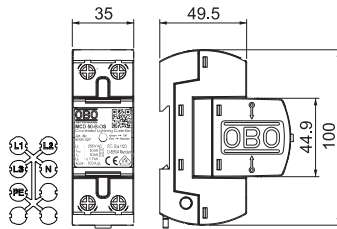
Application: Industrial systems and buildings with external lightning protection of the highest class I to IV.

MCF100-3+NPE+FS	
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_c 255 V
Nominal discharge current (8/20 μ s)	$I_{n/L-N}$ 35 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 25 kA
Lightning surge current (10/350)	I_{total} 100 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 100 kA
Protection level [L-N]	U_p 1.5 kV
Max. mains-side overcurrent protection	315 A
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	VDE, UL
Conductor cross-section, flexible (fine-wire)	1.5 - 25 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 3 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

Connection options



Coordinated Lightning Controller MCD 50-B-OS-320



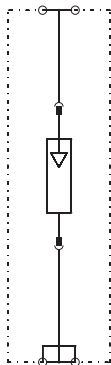
Lightning arrester, type 1

- Voltage protection level < 1.3 kV, allows device protection
- For lightning protection equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity to 50 kA (10/350) per pole and up to 150 kA (10/350) in total
- Line following current quenching 25 kA I_{peak}, arrester backup fuse to 500 A gL/gG
- Encapsulated, non-extinguishing spark gap arrester for use in distributor housings

Application: Industrial systems and buildings with external lightning protection of the classes I to IV.

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
MCD 50-B-OS-320	320	1-pole	1	34.800	5096861

Connection options



MCD 50-B-OS-320

Nominal voltage	U _N	230 V
Max. continuous operating voltage	U _C	320 V
SPD to EN 61643-11		Type 1
SPD to IEC 61643-11		Class I
Lightning protection zone LPZ		0→2
Impulse discharge current (10/350)	I _{imp}	50 kA
Protection level	U _p	1,3 kV
Response time	t _A	<100 ns
Maximum back-up fuse		500 A
Temperature range	θ	-40 - +85 °C
Division unit TE (17.5 mm)		2
Connection cross-section, rigid		10 - 50 mm ²
Connection cross-section, multi-wire		10 - 35 mm ²
Connection cross-section, flexible		10 - 25 mm ²



MCD 50 combination arrester

Surge protective device for energy technology, arrester, type 1 (industry)

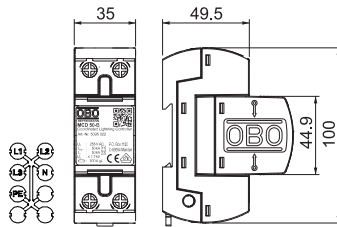


- Type 1+2 SPD – VDE-tested
- Connectable lightning current and surge arresters
- High arresting capacity up to 50 kA (10/350) per pin
- Combination arresters for buildings with lightning protection system
- Simple standard hat rail mounting
- Labelled connections
- Usable in systems with lightning protection class I-IV

The combination arresters MCD 50 meet the type 1+2 requirement class according to IEC 61643-11. These devices protect low-voltage consumer systems from surges of all types and are available in single-pole to four-pole versions. The voltage-limiting, high-performance spark gaps offer several benefits. A short response time, a low protection level and high current leakage capability with long service life.



Combination arrester, 1-pole



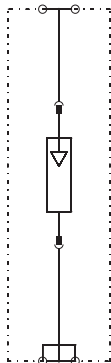
Combination arrester, type 1+2, for use in TN and TT networks

- Lightning protection equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity to 50 kA (10/350) per pole and up to 150 kA (10/350) in total
- Protection level < 1.7 kV allows device protection
- Short-circuit resistance 10 kA, arrester backup fuse to 500 A gL/gG
- Suitable for use in pre-meter area
- Encapsulated, non-extinguishing spark gaps

Application: Industrial systems and buildings with external lightning protection of the highest class I to IV.

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
MCD 50-B	255	1-pole	1	34.400	5096849

Connection options



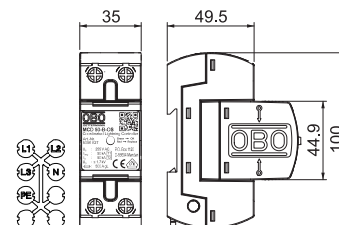
MCD 50-B

Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	255 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0+2
Impulse discharge current (10/350)	I_{imp}	50 kA
Lightning surge current (10/350)	I_{total}	50 kA
Nominal discharge current (8/20)	I_n	50 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	50 kA
Protection level	U_p	< 1,7 kV
Response time	t_A	<100 ns
Follow current quenching capacity leff	$I_{fi,eff}$	10 kA
Maximum back-up fuse		500 A
Temperature range	ϑ	-40 - +85 °C
Division unit TE (17.5 mm)		2
Protection rating		IP20
Approvals		VDE
Connection cross-section, rigid		10 - 50 mm ²
Connection cross-section, multi-wire		10 - 35 mm ²
Connection cross-section, flexible		10 - 25 mm ²





Combination arrester, 1-pole with function display



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
MCD 50-B-OS	255	1-pole	1	34.800	5096852

Combination arrester, type 1+2, 1-pole, for use in TN and TT networks:

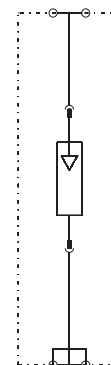
MCD 50-B-OS: Coordinated lightning current arrester, type 1+2 to EN 61643-11 with visual function display. For interface 0 to 2 (LPZ) in accordance with lightning protection zone concept to IEC 61312-1 and/or DIN VDE 0185-305.

- Arresting capacity 50 kA (10/350 μ s) per pole
- Power consumption < 26 mW/pole
- Protection level < 1.7 kV, allows device protection
- Line follow current quenching 25 kA I_{peak}
- Incl. plug caps for labelling the connections
- Encapsulated, non-extinguishing spark gap
- Can be used in standard distributor housings.

Application: Compact surge protection concepts and installations in a distributor.

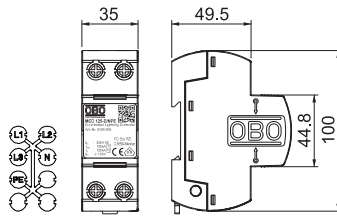
MCD 50-B-OS			
Nominal voltage	U_N		230 V
Max. continuous operating voltage	U_C		255 V
SPD to EN 61643-11			Type 1+2
SPD to IEC 61643-11			Class I+II
Lightning protection zone LPZ			0-2
Impulse discharge current (10/350)	I_{imp}		50 kA
Lightning surge current (10/350)	I_{total}		50 kA
Nominal discharge current (8/20)	I_n		50 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$		50 kA
Protection level	U_p		< 1,7 kV
Response time	t_A		<100 ns
Follow current quenching capacity I _{eff}	$I_{fi eff}$		10 kA
Maximum back-up fuse			500 A
Temperature range	ϑ		-40 - +85 °C
Division unit TE (17.5 mm)			2
Protection rating			IP20
Approvals			VDE
Connection cross-section, rigid			10 - 50 mm ²
Connection cross-section, multi-wire			10 - 35 mm ²
Connection cross-section, flexible			10 - 25 mm ²

Connection options





Combination arrester, 1-pole NPE



Combination arrester, type 1+2, N+PE for use in TN-S and TT networks.

MCD 125-B/NPE: Coordinated N-PE spark gap, type 1+2 to EN 61643-11. For interface 0 to 2 (LPZ) in accordance with lightning protection zone concept to IEC 61312-1 and/or VDE 0185-305.

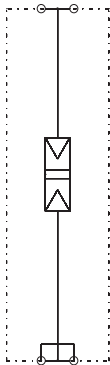
- Arresting capacity 125 kA (10/350 μ s)
- Conforms to VDE-AR-N 4100
- Incl. plug caps for labelling the connections
- Protection level < 1.5 kV, allows device protection
- Encapsulated, non-extinguishing spark gap

Application: Industrial systems and buildings with external lightning protection of Classes I to IV.

Highest continuous voltage

Type	V	Version	Pack Piece	Weight kg/100 pc.	Item no.
MCD 125-B NPE	255	NPE	1	46.500	5096865

Connection options

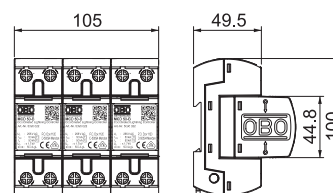


MCD 125-B NPE

Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	255 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0→2
Impulse discharge current (10/350)	I_{imp}	125 kA
Lightning surge current (10/350)	I_{total}	125 kA
Nominal discharge current (8/20)	I_n	125 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	125 kA
Protection level (N-PE)		< 1,5 kV
Response time	t_A	<100 ns
Follow current quenching capacity (eff) [N-PE]	I_{fi}	0.1 kA
Temperature range	ϑ	-40 - +85 °C
Division unit TE (17.5 mm)		2
Protection rating		IP20
Approvals		VDE
Connection cross-section, rigid		10 - 50 mm ²
Connection cross-section, multi-wire		10 - 35 mm ²
Connection cross-section, flexible		10 - 25 mm ²



Combination arrester, 3-pole



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
MCD 50-B 3	255	3-pole	1	117.000	5096877

Combination arrester, type 1+2, 3-pole, for use in TN-C networks.

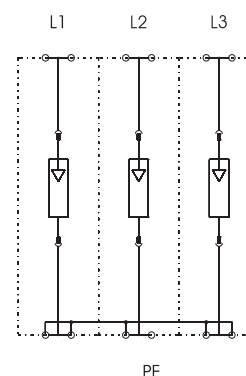
Completely pre-terminated and ready for connection, consisting of: 3x MCD 50-B: Type 1+2 (Class B) coordinated lightning current arrester EN 61643-11. For interface 0 to 2 (LPZ) in accordance with lightning protection zone concept to IEC 61312-1 and/or VDE 0185-305.

- Lightning protection equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity to 50 kA (10/350) per pole and up to 150 kA (10/350) in total
- Protection level < 1.7 kV allows device protection
- Short-circuit resistance 10 kA, arrester backup fuse to 500 A gL/gG
- Suitable for use in pre-meter area according to VDE-AR-N 4100
- Encapsulated, non-extinguishing spark gaps

Application: Industrial systems and buildings with external lightning protection of the Classes I to IV.

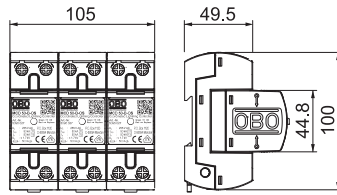
MCD 50-B 3		
Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	255 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class III
Lightning protection zone LPZ		0→2
Impulse discharge current (10/350)	I_{imp}	50 kA
Lightning surge current (10/350)	I_{total}	150 kA
Nominal discharge current (8/20)	I_n	50 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	150 kA
Protection level	U_d	< 1,7 kV
Response time	t_A	<100 ns
Follow current quenching capacity $I_{fi\ eff}$		10 kA
Maximum back-up fuse		500 A
Temperature range	ϑ	-40 - +85 °C
Division unit TE (17.5 mm)		6
Protection rating		IP20
Approvals		VDE
Connection cross-section, rigid		10 - 50 mm ²
Connection cross-section, multi-wire		10 - 35 mm ²
Connection cross-section, flexible		10 - 25 mm ²

Connection options





Combination arrester, 3-pole with function display



Combination arrester set, type 1+2, 3-pole, with visual function display, for use in TN-C networks:

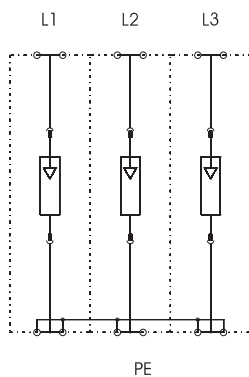
Completely pre-terminated and ready for connection, consisting of:
3 x MCD 50-B-OS: Type 1+2 coordinated lightning current arresters to DIN EN 61643-11. For interface 0 to 2 (LPZ) in accordance with lightning protection zone concept to IEC 61312-1 and/or VDE 0185-305.

- Lightning protection equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity to 50 kA (10/350) per pole and up to 150 kA (10/350) in total
- Protection level < 1.7 kV allows device protection
- Short-circuit resistance 10 kA, arrester backup fuse to 500 A gL/gG
- Power consumption < 26 mW/pole
- Encapsulated, non-extinguishing spark gaps

Application: Industrial systems and buildings with external lightning protection of Classes I to IV.

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
MCD 50-B 3-OS	255	3-pole	1	118.000	5096835

Connection options

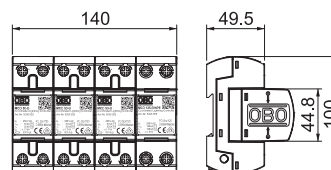


MCD 50-B 3-OS

Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	255 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0-2
Impulse discharge current (10/350)	I_{imp}	50 kA
Lightning surge current (10/350)	I_{total}	150 kA
Nominal discharge current (8/20)	I_n	50 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	150 kA
Protection level	U_p	< 1,7 kV
Response time	t_A	<100 ns
Follow current quenching capacity leff	$I_{fi eff}$	10 kA
Maximum back-up fuse		500 A
Temperature range	ϑ	-40 - +85 °C
Division unit TE (17.5 mm)		6
Protection rating		IP20
Approvals		VDE
Connection cross-section, rigid		10 - 50 mm ²
Connection cross-section, multi-wire		10 - 35 mm ²
Connection cross-section, flexible		10 - 25 mm ²



Combination arrester, 3-pole + NPE



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
MCD 50-B 3+1	255	3+NPE	1	168.000	5096879

Combination arrester, type 1+2, 4-pole, for use in TT and TN-S networks.

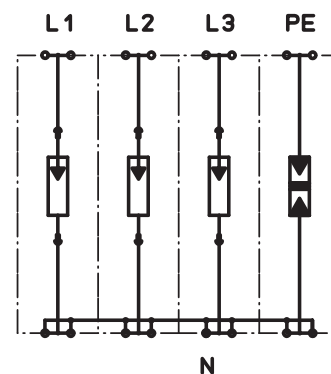
Completely pre-terminated and ready for connection, consisting of:
 3x MCD 50-B: Coordinated lightning current arrester, type 1+2 to EN 61643-11 and
 1x MCD 125-B/NPE: Coordinated N-PE spark gap, type 1+2 to EN 61643-11. For interface 0 to 2 (LPZ) in accordance with lightning protection zone concept to IEC 61312-1 and/or VDE 0185-305.

- Lightning protection equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity to 50 kA (10/350) per pole and up to 125 kA (10/350) in total
- Protection level < 1.7 kV allows device protection
- Short-circuit resistance 10 kA, arrester backup fuse to 500 A gL/gG
- Suitable for use in pre-meter area according to VDE-AR-N 4100
- Encapsulated, non-extinguishing spark gaps

Application: Industrial systems and buildings with external lightning protection of the classes I to IV.

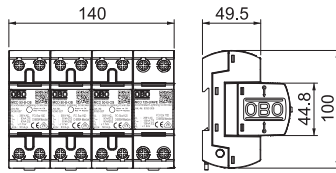
MCD 50-B 3+1		
Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	255 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0→2
Impulse discharge current (10/350)	I_{imp}	50 kA
Lightning surge current (10/350)	I_{total}	125 kA
Nominal discharge current (8/20)	I_n	50 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	125 kA
Protection level	U_p	< 1,7 kV
Protection level (N-PE)		< 1,5 kV
Response time	t_A	<100 ns
Follow current quenching capacity leff	$I_{fi eff}$	10 kA
Follow current quenching capacity (eff) [N-PE]	I_{fi}	0.1 kA
Maximum back-up fuse		500 A
Temperature range	ϑ	-40 - +85 °C
Division unit TE (17.5 mm)		8
Protection rating		IP20
Approvals		VDE
Connection cross-section, rigid		10 - 50 mm ²
Connection cross-section, multi-wire		10 - 35 mm ²
Connection cross-section, flexible		10 - 25 mm ²

Connection options





Combination arrester, 3-pole + NPE with function display



Combination arrester, type 1+2, 4-pole, with visual function display, for use in TN-S and TT networks.

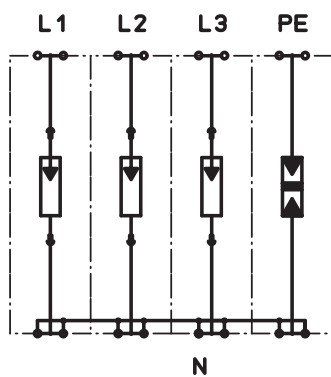
Completely pre-terminated and ready for connection, consisting of:
 3x MCD 50-B-OS: Type 1+2 (Class B) coordinated lightning current arrester EN 61643-11.
 1x MCD 125-B/NPE: Coordinated N-PE spark gap, type 1+2 EN 61643-11 for use in TN-S and TT systems.
 Interface 0 to 1 according to lightning protection zone concept according to IEC 61312-1 and VDE 0185-305.

- Lightning protection equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity to 50 kA (10/350) per pole and up to 125 kA (10/350) in total
- Protection level < 1.7 kV allows device protection
- Short-circuit resistance 10 kA, arrester backup fuse to 500 A gL/gG
- Power consumption < 26 mW/pole
- Encapsulated, non-extinguishing spark gap

Application: Industrial systems and buildings with external lightning protection of Classes I to IV.

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
MCD 50-B 3+1-OS	255	3+NPE	1	172.000	5096836

Connection options

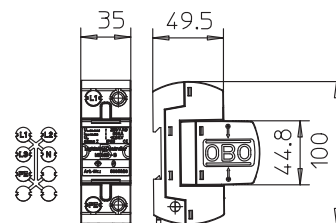


MCD 50-B 3+1-OS

Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	255 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0→2
Impulse discharge current (10/350)	I_{imp}	50 kA
Lightning surge current (10/350)	I_{total}	125 kA
Nominal discharge current (8/20)	I_n	50 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	125 kA
Protection level	U_D	< 1,7 kV
Protection level (N-PE)		< 1,5 kV
Response time	t_A	<100 ns
Follow current quenching capacity leff	$I_{fi\ eff}$	10 kA
Follow current quenching capacity (eff) [N-PE]	I_{fi}	0.1 kA
Maximum back-up fuse		500 A
Temperature range	ϑ	-40 - +85 °C
Division unit TE (17.5 mm)		8
Protection rating		IP20
Approvals		VDE
Connection cross-section, rigid		10 - 50 mm ²
Connection cross-section, multi-wire		10 - 35 mm ²
Connection cross-section, flexible		10 - 25 mm ²



Lightning arrester, 1-pole



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
MC 50-B VDE	255	1-pole	1	34.400	5096847

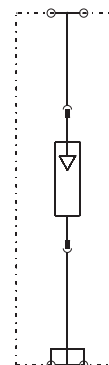
Type 1 lightning arrester in accordance with DIN EN 61643-11 for interface 0 to 1 (LPZ) and/or in accordance with lightning protection concept to IEC 61312-1 and/or VDE 0185-305 (IEC 62305)

- Cover and base, plug-in cover
- Arresting capacity 50 kA (10/350 μ s) per pole
- Voltage protection level < 2.0 kV
- Line following current quenching 25 kA I_{peak}
- Incl. plug caps for labelling the connections
- Encapsulated, non-extinguishing spark gap: can be used in standard distributor housings

Application example: Industrial plants; lightning arrester in accordance with VDE-AR-N 4100 for pre-meter area.
Note: Requires as a decoupling length for surge protection 5 m of cable.

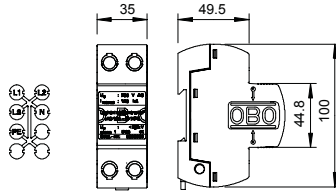
MC 50-B VDE		
Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	255 V
SPD to EN 61643-11		Type 1
SPD to IEC 61643-11		Class I
Lightning protection zone LPZ		0-1
Impulse discharge current (10/350)	I_{imp}	50 kA
Lightning surge current (10/350)	I_{total}	50 kA
Nominal discharge current (8/20)	I_n	50 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	50 kA
Protection level	U_p	< 2,0 kV
Response time	t_A	<100 ns
Follow current quenching capacity (eff) [N-PE]	I_{fi}	25 kA
Maximum back-up fuse		500 A
Temperature range	ϑ	-40 - +85 °C
Division unit TE (17.5 mm)		2
Protection rating		IP20
Connection cross-section, rigid		10 - 50 mm ²
Connection cross-section, multi-wire		10 - 35 mm ²
Connection cross-section, flexible		10 - 25 mm ²

Connection options





Lightning current arrester, 1-pole NPE



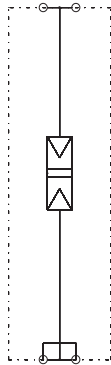
For use in TN-S and TT systems as N-PE discharge gap, type 1 (Class B) IEC 61643, for interface 0 to 1 (LPZ) according to lightning protection zone concept to IEC 61312-1 and/or DIN VDE 0185-305 Part 4 for use as discharge gap between N and PE.

- Complies with VDE-AR-N 4100
- Arresting capability 125 kA (10/350 μ s)
- Incl. plug caps for labelling the connections
- Voltage protection level <2.5 kV
- Enclosed, non-extinguishing discharge gap: can be used in normal commercial distributor housings

Application example: lightning arrester in accordance with VDE-AR-N 4100 for pre-meter area.
 Note: Requires as a decoupling length for surge protection 5 m of cable.

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
MC 125-B NPE	255	NPE	1	52.000	5096863

Connection options

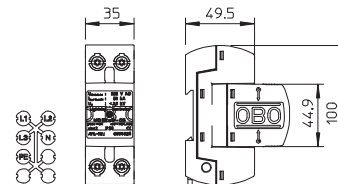


MC 125-B NPE		
Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	255 V
SPD to EN 61643-11		Type 1
SPD to IEC 61643-11		Class I
Lightning protection zone LPZ		0→1
Impulse discharge current (10/350)	I_{imp}	50 kA
Lightning surge current (10/350)	I_{total}	125 kA
Nominal discharge current (8/20)	I_n	50 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	125 kA
Protection level	U_p	< 2,5 kV
Response time	t_A	< 100 ns
Follow current quenching capacity (eff) [N-PE]	I_{fi}	0.1 kA
Maximum back-up fuse		— A
Temperature range	ϑ	-40 - +85 °C
Division unit TE (17.5 mm)		2
Protection rating		IP20
Connection cross-section, rigid		10 - 50 mm ²
Connection cross-section, multi-wire		10 - 35 mm ²
Connection cross-section, flexible		10 - 25 mm ²





Lightning current arrester, 1-pole with function display



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
MC 50-B-OS	255	1-pole	1	34.800	5096851

Lightning arrester with visual function display, type 1, in accordance with DIN EN 61643-11 for interface 0 to 1 (LPZ) in accordance with lightning protection concept to IEC 61312-1 and VDE 0185-305 (IEC 62305)

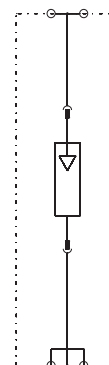
- Upper part and base, plug-in upper part
- Arresting capacity 50 kA (10/350 μs) per pole
- Voltage protection level < 2.0 kV
- Power consumption < 26 mW/pole
- Line following current quenching 25 kA Ipeak
- Incl. plug caps for labelling the connections
- Encapsulated, non-extinguishing spark gap: can be used in standard distributor housings

Application example: Industrial systems.
Note: Requires as a decoupling length for surge protection 5 m of cable.

MC 50-B-OS

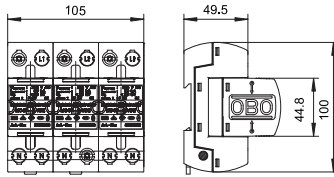
Nominal voltage	U_N	230 V
SPD to EN 61643-11		Type 1
SPD to IEC 61643-11		Class I
Lightning protection zone LPZ		0→1
Impulse discharge current (10/350)	I_{imp}	50 kA
Lightning surge current (10/350)	I_{total}	50 kA
Nominal discharge current (8/20)	I_n	50 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	50 kA
Protection level	U_p	< 2,0 kV
Response time	t_A	<100 ns
Follow current quenching capacity (eff) [N-PE]	I_{fi}	25 kA
Maximum back-up fuse		500 A
Temperature range	ϑ	-40 - +85 °C
Division unit TE (17.5 mm)		2
Protection rating		IP20
Connection cross-section, rigid		10 - 50 mm ²
Connection cross-section, multi-wire		10 - 35 mm ²
Connection cross-section, flexible		10 - 25 mm ²

Connection options





Lightning current arrester, 3-pole



LightningController-Set, 3-pole, for use in TN-C networks:

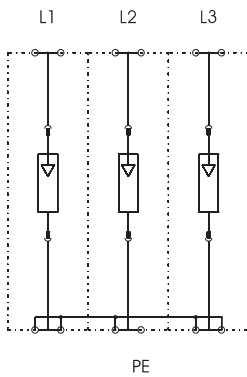
Completely pre-terminated and ready for connection, consisting of:
Lightning current arrester, type 1, to EN 61643-11 for interface 0 to 1 (LPZ) according to lightning protection zone concept to IEC 61312-1 and DIN VDE 0185-305.

- Entspricht VDE-AR-N 4100
- Ober- und Unterteil, steckbares Oberteil
- Ableitvermögen 50 kA (10/350 μ s) pro Pol
- Protection level < 2,0 kV
- Netzfolgestromlöschend 25 kA Ipeak
- Inkl. Steckkappen zur Kennzeichnung der Anschlüsse
- Gekapselte, nicht ausblasende Funkenstrecke: Einsatz in handelsüblichen Verteilergehäusen möglich

Anwendungsbeispiel: Industrieanlagen; Blitzstromableiter gemäß VDE-AR-N 4100 für den Vorzählerbereich.
Note: Requires as a decoupling length for surge protection 5 m of cable.

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
MC 50-B 3	255	3-pole	1	117.000	5096876

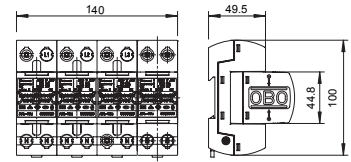
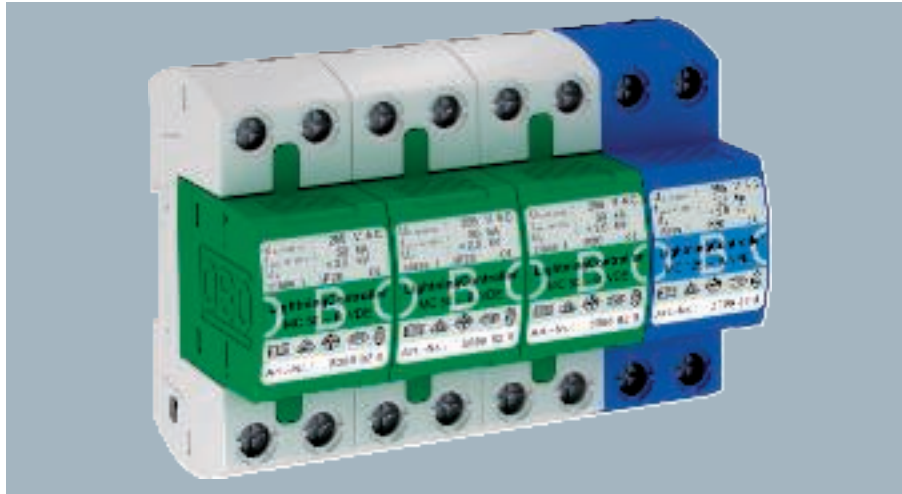
Connection options



MC 50-B 3		
Nominal voltage	U_N	230 V
SPD to EN 61643-11		Type 1
SPD to IEC 61643-11		Class I
Lightning protection zone LPZ		0→1
Impulse discharge current (10/350)	I_{imp}	50 kA
Lightning surge current (10/350)	I_{total}	150 kA
Nominal discharge current (8/20)	I_n	50 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	150 kA
Protection level	U_p	< 2,0 kV
Response time	t_A	<100 ns
Follow current quenching capacity (eff) [N-PE]	I_{fi}	25 kA
Maximum back-up fuse		500 A
Temperature range	ϑ	-40 - +85 °C
Division unit TE (17.5 mm)		6
Protection rating		IP20
Connection cross-section, rigid		10 - 50 mm ²
Connection cross-section, multi-wire		10 - 35 mm ²
Connection cross-section, flexible		10 - 25 mm ²



Lightning current arrester, 3-pole + NPE



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
MC 50-B 3+1	255	3+NPE	1	168.000	5096878

LightningController set, 4-pole, for use in TN-S and TT networks:

Completely pre-terminated and ready for connection, consisting of: MC 50-B VDE: Lightning arrester, type 1 to EN 61643-11 for interface 0 to 1 (LPZ) according to lightning protection zone concept to IEC 61312-1 and DIN VDE 0185-305.

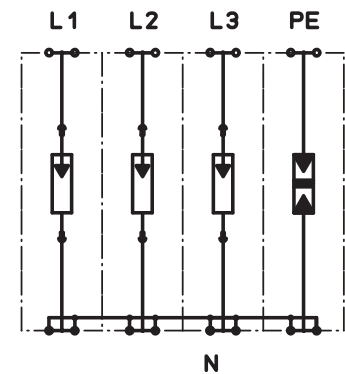
MC 125-B/NPE: N-PE spark gap, type 1 to IEC 61643 for use in TN-S and TT systems.

- Meets VDE-AR-N 4100
- Cover and base, plug-in cover
- Arresting capacity 50 kA (10/350 μs) per pole
- Protection level < 2,0 kV
- Line following current quenching 25 kA Ipeak
- Incl. plug caps for identifying the connections
- Encapsulated, non-extinguishing spark gap: can be used in standard distributor housings

Application example: Industrial systems, lightning current arresters in accordance with VDE-AR-N 4100 for the pre-meter area. Note: Requires as a decoupling length for surge protection 5 m of cable.

MC 50-B 3+1	
Nominal voltage	U_N 230 V
SPD to EN 61643-11	Type 1
SPD to IEC 61643-11	Class I
Lightning protection zone LPZ	0→1
Impulse discharge current (10/350)	I_{imp} 50 kA
Lightning surge current (10/350)	I_{total} 125 kA
Nominal discharge current (8/20)	I_n 50 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$ 125 kA
Protection level	U_p < 2,0 kV
Response time	t_A < 100 ns
Follow current quenching capacity (eff) [N-PE]	I_{fi} 25 kA
Maximum back-up fuse	500 A
Temperature range	ϑ -40 - +85 °C
Division unit TE (17.5 mm)	8
Protection rating	IP20
Connection cross-section, rigid	10 - 50 mm ²
Connection cross-section, multi-wire	10 - 35 mm ²
Connection cross-section, flexible	10 - 25 mm ²

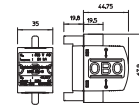
Connection options





LightningController, plug-in arrester

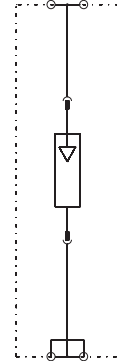
	Highest continuous voltage		Pack Piece	Weight kg/100 pc.	Item no.
Type	V	Version	1	24.000	5096820
MC 50-B 0 VDE	255	1-pole			



LightningController cover

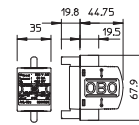
MC 50-B 0 VDE		
Nominal voltage	U_N	230 V
SPD to EN 61643-11		Type 1
SPD to IEC 61643-11		Class I
Lightning protection zone LPZ		0→1
Impulse discharge current (10/350)	I_{imp}	50 kA
Lightning surge current (10/350)	I_{total}	50 kA
Nominal discharge current (8/20)	I_n	50 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	50 kA
Protection level	U_p	<2,0 kV
Response time	t_A	<100 ns
Follow current quenching capacity (eff) [N-PE]	I_{fi}	25 kA
Maximum back-up fuse		500 A
Temperature range	ϑ	-40 - +85 °C
Division unit TE (17.5 mm)		2
Protection rating		IP20
Connection cross-section, rigid		10 - 50 mm ²
Connection cross-section, multi-wire		10 - 35 mm ²
Connection cross-section, flexible		10 - 25 mm ²

Connection options



LightningController, plug-in arrester with function display

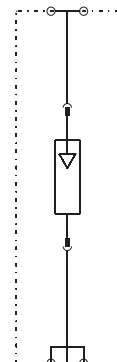
	Highest continuous voltage		Pack Piece	Weight kg/100 pc.	Item no.
Type	V	Version	1	19.500	5096825
MC 50-B 0-OS	255	1-pole			



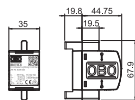
LightningController cover
Power consumption: <1 mW

MC 50-B 0-OS		
Nominal voltage	U_N	230 V
SPD to EN 61643-11		Type 1
SPD to IEC 61643-11		Class I
Lightning protection zone LPZ		0→1
Impulse discharge current (10/350)	I_{imp}	50 kA
Lightning surge current (10/350)	I_{total}	50 kA
Nominal discharge current (8/20)	I_n	50 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	50 kA
Protection level	U_p	< 2,0 kV
Response time	t_A	<100 ns
Follow current quenching capacity (eff) [N-PE]	I_{fi}	25 kA
Maximum back-up fuse		500 A
Temperature range	ϑ	-40 - +85 °C
Division unit TE (17.5 mm)		2
Protection rating		IP20
Connection cross-section, rigid		10 - 50 mm ²
Connection cross-section, multi-wire		10 - 35 mm ²
Connection cross-section, flexible		10 - 25 mm ²

Connection options



Coordinated Lightning Controller, plug-in arrester



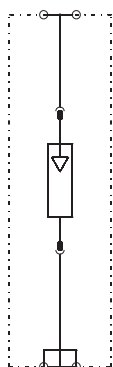
Highest continuous voltage		Pack	Weight	
Type	V	Version	Piece	kg/100 pc. Item no.
MCD 50-B 0	255	1-pole	1	19.200 5096822

Combination arrester type 1+2

- Lightning current arresting capacity 50 kA (10/350)
- Protection level < 1.7 kV
- Line current quenching capacity 10 kA
- Encapsulated, non-extinguishing spark gap

Application: Industrial systems and buildings with external lightning protection of classes I to IV.

Connection options

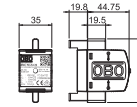


MCD 50-B 0		
Nominal voltage	U_N	230 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0-2
Impulse discharge current (10/350)	I_{imp}	50 kA
Lightning surge current (10/350)	I_{total}	50 kA
Nominal discharge current (8/20)	I_n	50 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	50 kA
Protection level	U_p	< 1,7 kV
Response time	t_A	<100 ns
Follow current quenching capacity leff	$I_{fi eff}$	10 kA
Maximum back-up fuse		500 A
Temperature range	ϑ	-40 - +85 °C
Division unit TE (17.5 mm)		2
Protection rating		IP20
Approvals		VDE
Connection cross-section, rigid		10 - 50 mm ²
Connection cross-section, multi-wire		10 - 35 mm ²
Connection cross-section, flexible		10 - 25 mm ²



Coordinated Lightning Controller, plug-in arrester with function display

	Highest continuous voltage		Pack Piece	Weight kg/100 pc.	Item no.
Type	V	Version			
MCD 50-B 0-OS	255	1-pole	1	19.500	5096827



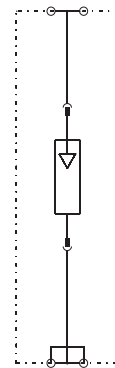
Combination arrester, type 1+2, plug-in arrester with visual display.

- Lightning current arresting capacity 50 kA (10/350)
- Power consumption < 26 mW/pole
- Protection level < 1.7 kV
- Line current quenching capacity 10 kA
- Encapsulated, non-extinguishing spark gap

Application: Installations of surge protection devices, type 1+2, in a distribution.

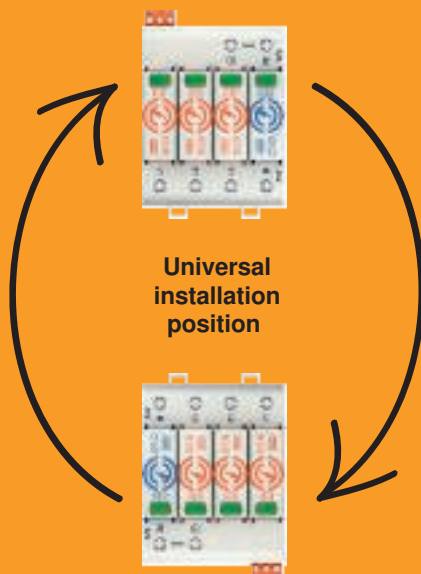
MCD 50-B 0-OS		
Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	255 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0→2
Impulse discharge current (10/350)	I_{imp}	50 kA
Lightning surge current (10/350)	I_{total}	50 kA
Nominal discharge current (8/20)	I_n	50 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	50 kA
Protection level	U_d	< 1,7 kV
Response time	t_A	<100 ns
Follow current quenching capacity leff	$I_{fi eff}$	10 kA
Maximum back-up fuse		500 A
Temperature range	ϑ	-40 - +85 °C
Division unit TE (17.5 mm)		2
Protection rating		IP20
Approvals		VDE
Connection cross-section, rigid		10 - 50 mm ²
Connection cross-section, multi-wire		10 - 35 mm ²
Connection cross-section, flexible		10 - 25 mm ²

Connection options



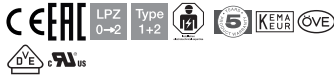
V50 combination arrester

Surge protection energy technology, arrester, type 1+2

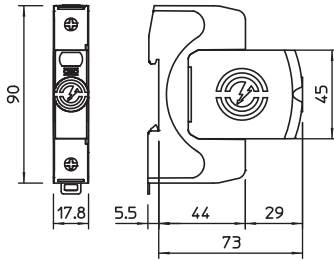


- Type 1 + 2 SPD: Imp = 12.5 kA per pole and up to 50 kA in total
- Usable in buildings with lightning protection class III + IV
- Protection level: < 1.3 kV, usable in coordination with type 3 SPD
- Quality according to EN 61643-11 certified by an external testing institute
- Universally usable for offices, commercial and residential buildings
- Can be installed universally through 90° labelling
- System protection up to 160 A usable without separate fusing
- Locking function with vibration protection
- Voltage variants: 150 V, 280 V, 320 V, 385 V
- Optional remote signalling, potential-free changeover contact
- Variants in one to four-pole versions
- Operating instructions always available online via QR code

PA



Combination arrester V50, 1-pole 150 V



Lightning current combination arrester, type 1+2

- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-1-150	150	1	IP20	1	15.400	5093440

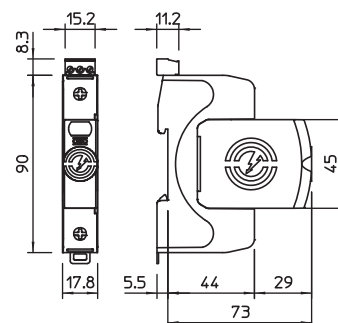
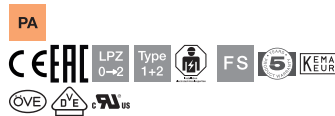
Connection options



V50-1-150	
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 120 V
Maximum continuous voltage AC	U_C 150 V
Nominal discharge current (8/20 μ s)	$I_n/L-N$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Protection level [L-N]	U_p 0.8 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0.4 kV
Residual voltage [L-N] @ 5 kA	U_{res} 0.5 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



Combination arrester V50, with RS, 150 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-1+FS-150	150	1	IP20	1	15.600	5093446

Lightning current combination arrester, type 1+2

- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

V50-1+FS-150	
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 120 V
Maximum continuous voltage AC	U_c 150 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Protection level [L-N]	U_p 0.8 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,4 kV
Residual voltage [L-N] @ 5 kA	U_{res} 0,5 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE
FM contacts	Changeover
Switching power AC	230 V; 0,5 A
Switching power DC	230 V; 0,1 A / 75 V; 0,5 A
Connection cross-section, FM terminals	0,5 - 1,5 mm ²
Connection cross-section, FM terminals	21 - 16 AWG
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

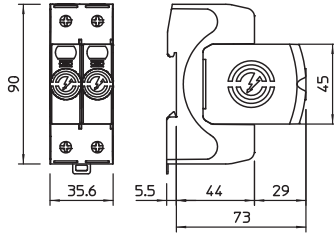
Connection options



PA



Combination arrester V50, 1-pole + NPE 150 V



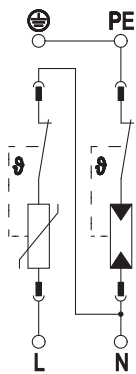
Lightning current combination arrester, type 1+2

- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-1+NPE-150	150	1+N/PE	IP20	1	29.300	5093452

Connection options



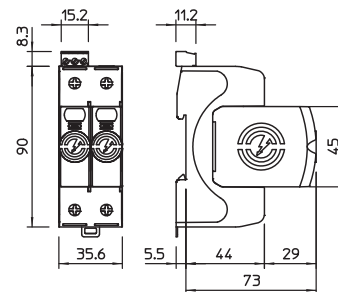
V50-1+NPE-150		Type 1+2
SPD to EN 61643-11		Class I-II
SPD to IEC 61643-11		Type 4
SPD to UL 1449		
Nominal voltage AC (50/60 Hz)	U_n	120 V
Maximum continuous voltage AC	U_C	150 V
Nominal discharge current (8/20 μ s)	$I_{n/L-N}$	30 kA
Maximum discharge current (8/20 μ s)	I_{max}	50 kA
Lightning surge current (10/350 μ s)	I_{imp}	12.5 kA
Lightning surge current (10/350)	I_{total}	25 kA
Arrester surge current (8/20 μ s) [total]	I_{total}	80 kA
Protection level [L-N]	U_p	0.8 kV
Combined voltage protection level [L-PE]	$U_{p/L-PE}$	2.1 kV
Residual voltage [L-N] @ 1 kA	U_{res}	0,4 kV
Residual voltage [L-N] @ 5 kA	U_{res}	0,5 kV
Max. mains-side overcurrent protection		160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection		50 kA eff
Operating temperature range	T_u	-40 - +80 °C
Protection rating		IP20
Approvals		UL, ÖVE, VDE
Conductor cross-section, flexible (fine-wire)		1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)		1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)		16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)		16 - 2 AWG

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Surge protection



Combination arrester V50, 1-pole + NPE with FS 150 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-1+NPE+FS-150	150	1+N/PE	IP20	1	29.600	5093460

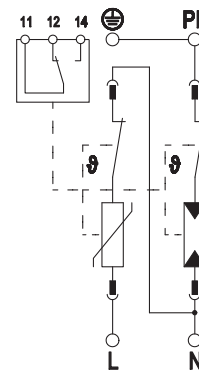
Lightning current combination arrester, type 1+2

- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

V50-1+NPE+FS-150	
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 120 V
Maximum continuous voltage AC	U_c 150 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Protection level [L-N]	U_p 0.8 kV
Combined voltage protection level [L-PE]	$U_{p/L-PE}$ 2.1 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,4 kV
Residual voltage [L-N] @ 5 kA	U_{res} 0,5 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE
FM contacts	Changeover
Switching power AC	230 V; 0,5 A
Switching power DC	230 V; 0,1 A / 75 V; 0,5 A
Connection cross-section, FM terminals	0,5 - 1,5 mm ²
Connection cross-section, FM terminals	21 - 16 AWG
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

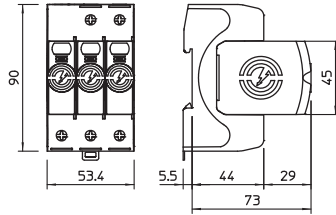
Connection options



PA



Combination arrester V50, 3-pole 150 V



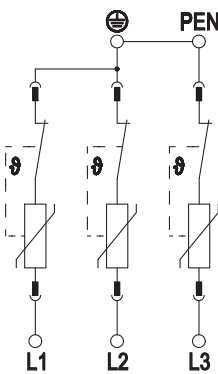
Lightning current combination arrester, type 1+2

- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-3-150	150	3	IP20	1	43.500	5093442

Connection options

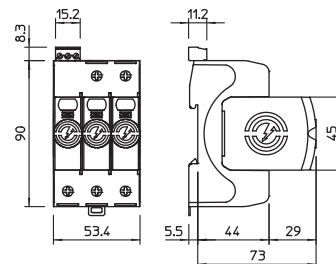


V50-3-150

SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 120 V
Maximum continuous voltage AC	U_C 150 V
Nominal discharge current (8/20 μ s)	$I_{n/L-N}$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Lightning surge current (10/350)	I_{total} 37.5 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 120 kA
Protection level [L-N]	U_p 0.8 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0.4 kV
Residual voltage [L-N] @ 5 kA	U_{res} 0.5 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



Combination arrester V50, 3-pole with FS 150 V



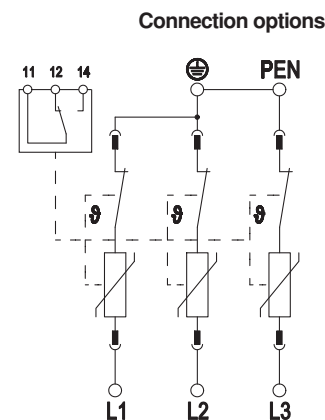
Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-3+FS-150	150	3	IP20	1	43.900	5093448

Lightning current combination arrester, type 1+2

- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

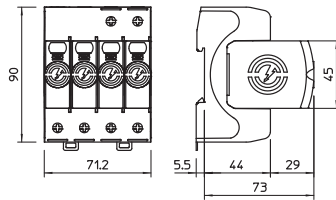
V50-3+FS-150	
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 120 V
Maximum continuous voltage AC	U_c 150 V
Nominal discharge current (8/20 μ s)	$I_{n/L-N}$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Lightning surge current (10/350)	I_{total} 37.5 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 120 kA
Protection level [L-N]	U_p 0.8 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,4 kV
Residual voltage [L-N] @ 5 kA	U_{res} 0,5 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE
FM contacts	Changeover
Switching power AC	230 V; 0,5 A
Switching power DC	230 V; 0,1 A / 75 V; 0,5 A
Connection cross-section, FM terminals	0,5 - 1,5 mm ²
Connection cross-section, FM terminals	21 - 16 AWG
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



PA



Combination arrester V50, 3-pole + NPE 150 V



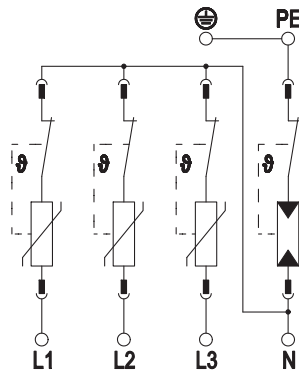
Lightning current combination arrester, type 1+2

- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-3+NPE-150	150	3+N/PE	IP20	1	55.800	5093454

Connection options

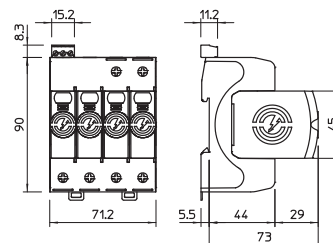
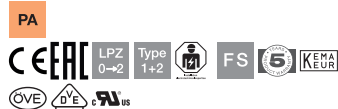


V50-3+NPE-150		Type 1+2
SPD to EN 61643-11		Class I-II
SPD to IEC 61643-11		Type 4
SPD to UL 1449		
Nominal voltage AC (50/60 Hz)	U_n	120 V
Maximum continuous voltage AC	U_C	150 V
Nominal discharge current (8/20 μ s)	$I_{n/L-N}$	30 kA
Maximum discharge current (8/20 μ s)	I_{max}	50 kA
Lightning surge current (10/350 μ s)	I_{imp}	12.5 kA
Lightning surge current (10/350)	I_{total}	50 kA
Arrester surge current (8/20 μ s) [total]	I_{total}	80 kA
Protection level [L-N]	U_p	0.8 kV
Combined voltage protection level [L-PE]	$U_{p/L-PE}$	2.1 kV
Residual voltage [L-N] @ 1 kA	U_{res}	0,4 kV
Residual voltage [L-N] @ 5 kA	U_{res}	0,5 kV
Max. mains-side overcurrent protection		160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection		50 kA eff
Operating temperature range	T_u	-40 - +80 °C
Protection rating		IP20
Approvals		UL, ÖVE, VDE
Conductor cross-section, flexible (fine-wire)		1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)		1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)		16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)		16 - 2 AWG

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Combination arrester V50, 3-pole + NPE with FS 150 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-3+NPE+FS-150	150	3+N/PE	IP20	1	56.300	5093462

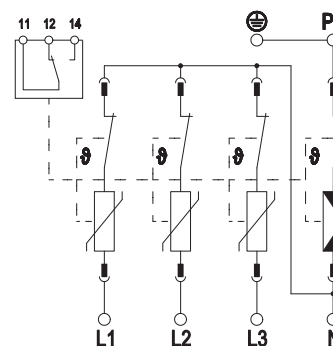
Lightning current combination arrester, type 1+2

- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

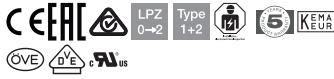
Application: Lightning current equipotential bonding for buildings of class III and IV.

V50-3+NPE+FS-150		Type 1+2
SPD to EN 61643-11		Class I+II
SPD to IEC 61643-11		
SPD to UL 1449		Type 4
Nominal voltage AC (50/60 Hz)	U_n	120 V
Maximum continuous voltage AC	U_c	150 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$	30 kA
Maximum discharge current (8/20 μ s)	I_{max}	50 kA
Lightning surge current (10/350 μ s)	I_{imp}	12.5 kA
Lightning surge current (10/350)	I_{total}	50 kA
Arrester surge current (8/20 μ s) [total]	I_{total}	80 kA
Protection level [L-N]	U_p	0.8 kV
Combined voltage protection level [L-PE]	$U_{d/L-PE}$	2.1 kV
Residual voltage [L-N] @ 1 kA	U_{res}	0,4 kV
Residual voltage [L-N] @ 5 kA	U_{res}	0,5 kV
Max. mains-side overcurrent protection		160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection		50 kA eff
Operating temperature range	T_u	-40 - +80 °C
Protection rating		IP20
Approvals		UL, KEMA, ÖVE, VDE
FM contacts		Changeover
Switching power AC		230 V; 0,5 A
Switching power DC		230 V; 0,1 A / 75 V; 0,5 A
Connection cross-section, FM terminals		0,5 - 1,5 mm ²
Connection cross-section, FM terminals		21 - 16 AWG
Conductor cross-section, flexible (fine-wire)		1,5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)		1,5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)		16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)		16 - 2 AWG

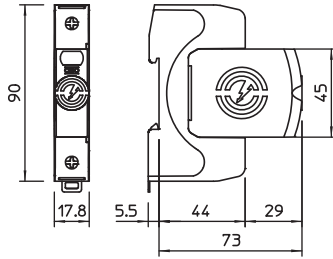
Connection options



PA



Combination arrester V50, 1-pole 280 V



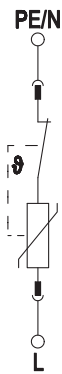
Lightning current combination arrester, type 1+2

- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-1-280	280	1	IP20	1	16.400	5093500

Connection options

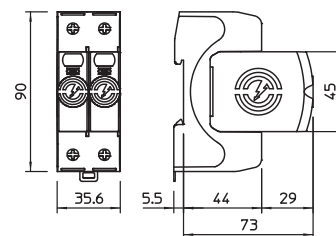


V50-1-280

SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_C 280 V
Nominal discharge current (8/20 μ s)	$I_{n/L-N}$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Protection level [L-N]	U_p 1.3 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,7 kV
Residual voltage [L-N] @ 5 kA	U_{res} 0,8 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



Combination arrester V50, 1-pole + NPE 280 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-1+NPE-280	280	1+N/PE	IP20	1	32.929	5093522

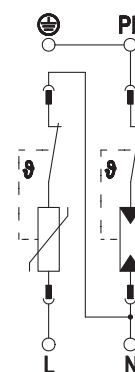
Lightning current combination arrester, type 1+2

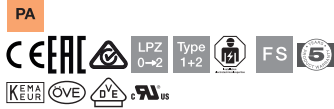
- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

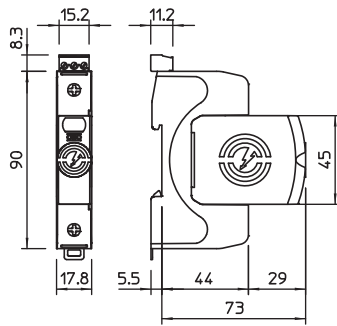
V50-1+NPE-280	
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_c 280 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Lightning surge current (10/350)	I_{total} 25 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 80 kA
Protection level [L-N]	U_d 1.3 kV
Combined voltage protection level [L-PE]	$U_{d/L-PE}$ 2.5 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,7 kV
Residual voltage [L-N] @ 5 kA	U_{res} 0,8 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

Connection options





Combination arrester V50, 1-pole with FS 280 V



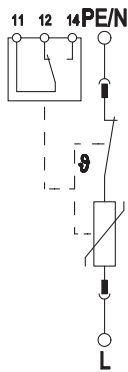
Lightning current combination arrester, type 1+2

- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-1+FS-280	280	1	IP20	1	16.600	5093502

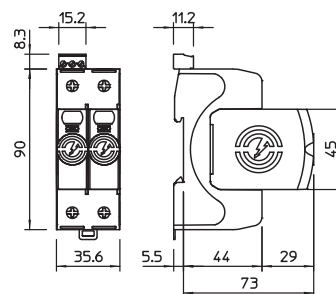
Connection options



V50-1+FS-280	
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_C 280 V
Nominal discharge current (8/20 μ s)	$I_{n/L-N}$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Protection level [L-N]	U_p 1.3 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,7 kV
Residual voltage [L-N] @ 5 kA	U_{res} 0,8 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE
FM contacts	Changeover
Switching power AC	230 V; 0,5 A
Switching power DC	230 V; 0,1 A / 75 V; 0,5 A
Connection cross-section, FM terminals	0,5 - 1,5 mm ²
Connection cross-section, FM terminals	21 - 16 AWG
Conductor cross-section, flexible (fine-wire)	1,5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1,5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



Combination arrester V50, 1-pole + NPE with FS 280 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-1+NPE+FS-280	280	1+N/PE	IP20	1	30.600	5093531

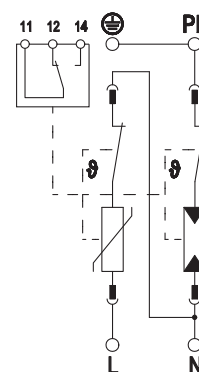
Lightning current combination arrester, type 1+2

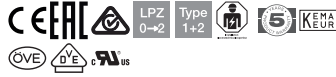
- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

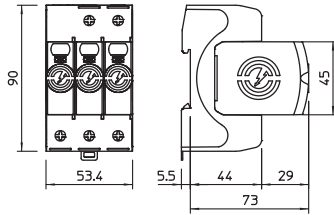
V50-1+NPE+FS-280	
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_c 280 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Lightning surge current (10/350)	I_{total} 25 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 80 kA
Protection level [L-N]	U_p 1.3 kV
Combined voltage protection level [L-PE]	$U_{p/L-PE}$ 2.5 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,7 kV
Residual voltage [L-N] @ 5 kA	U_{res} 0,8 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE
FM contacts	Changeover
Switching power AC	230 V; 0,5 A
Switching power DC	230 V; 0,1 A / 75 V; 0,5 A
Connection cross-section, FM terminals	0,5 - 1,5 mm ²
Connection cross-section, FM terminals	21 - 16 AWG
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

Connection options





Combination arrester V50, 2-pole + NPE 280 V



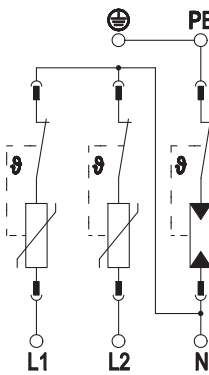
Lightning current combination arrester, type 1+2

- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-2+NPE-280	280	2+N/PE	IP20	1	44.300	5093524

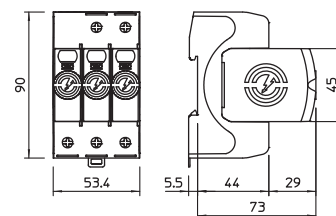
Connection options



V50-2+NPE-280	
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I-II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_C 280 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Lightning surge current (10/350)	I_{total} 37.5 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 80 kA
Protection level [L-N]	U_p 1.3 kV
Combined voltage protection level [L-PE]	$U_{p/L-PE}$ 2.5 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0.7 kV
Residual voltage [L-N] @ 5 kA	U_{res} 0.8 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



Combination arrester V50, 3-pole 280 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-3-280	280	3	IP20	1	46.500	5093511

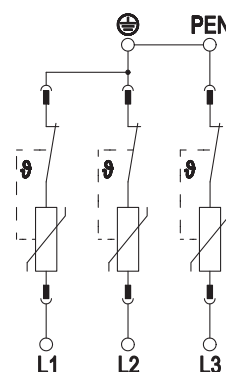
Lightning current combination arrester, type 1+2

- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

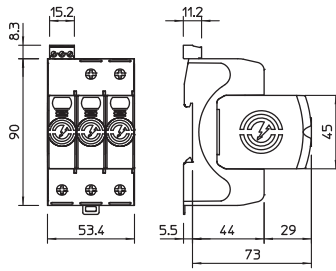
V50-3-280	
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_c 280 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Lightning surge current (10/350)	I_{total} 37.5 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 120 kA
Protection level [L-N]	U_p 1.3 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,7 kV
Residual voltage [L-N] @ 5 kA	U_{res} 0,8 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

Connection options





Combination arrester V50, 3-pole with FS 280 V



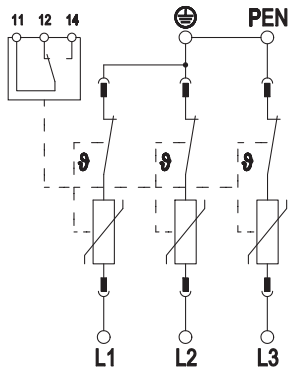
Lightning current combination arrester, type 1+2

- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-3+FS-280	280	3	IP20	1	46.900	5093516

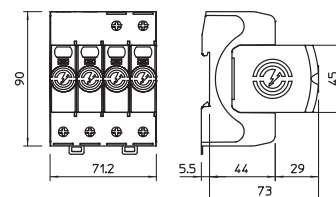
Connection options



V50-3+FS-280	
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_C 280 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Lightning surge current (10/350 μ s)	I_{total} 37.5 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 120 kA
Protection level [L-N]	U_p 1.3 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,7 kV
Residual voltage [L-N] @ 5 kA	U_{res} 0,8 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE
FM contacts	Changeover
Switching power AC	230 V; 0,5 A
Switching power DC	230 V; 0,1 A / 75 V; 0,5 A
Connection cross-section, FM terminals	0,5 - 1,5 mm ²
Connection cross-section, FM terminals	21 - 16 AWG
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



Combination arrester V50, 3-pole + NPE 280 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-3+NPE-280	280	3+N/PE	IP20	1	58.800	5093526

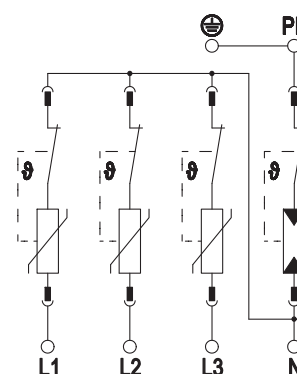
Lightning current combination arrester, type 1+2

- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

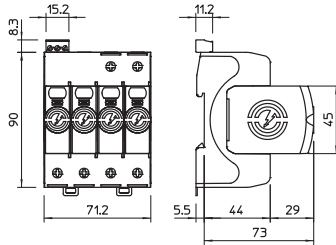
V50-3+NPE-280	
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_c 280 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Lightning surge current (10/350)	I_{total} 50 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 80 kA
Protection level [L-N]	U_p 1.3 kV
Combined voltage protection level [L-PE]	$U_{p/L-PE}$ 2.5 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,7 kV
Residual voltage [L-N] @ 5 kA	U_{res} 0,8 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

Connection options





Combination arrester V50, 3-pole + NPE with FS 280 V



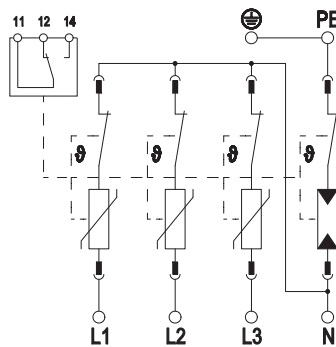
Lightning current combination arrester, type 1+2

- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-3+NPE+FS-280	280	3+N/PE	IP20	1	59.300	5093533

Connection options

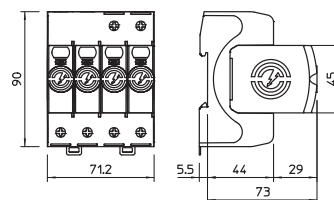


V50-3+NPE+FS-280

SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class II-II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_C 280 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Lightning surge current (10/350)	I_{total} 50 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 80 kA
Protection level [L-N]	U_p 1.3 kV
Combined voltage protection level [L-PE]	$U_{p / L-PE}$ 2.5 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,7 kV
Residual voltage [L-N] @ 5 kA	U_{res} 0,8 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE
FM contacts	Changeover
Switching power AC	230 V; 0,5 A
Switching power DC	230 V; 0,1 A / 75 V; 0,5 A
Connection cross-section, FM terminals	0,5 - 1,5 mm ²
Connection cross-section, FM terminals	21 - 16 AWG
Conductor cross-section, flexible (fine-wire)	1,5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1,5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



Combination arrester V50, 4-pole 280 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-4-280	280	4	IP20	1	61.000	5093513

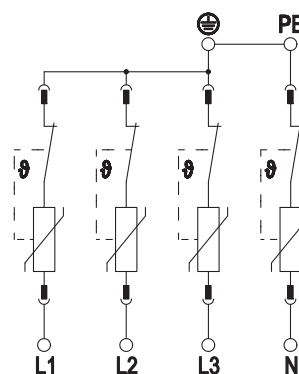
Lightning current combination arrester, type 1+2

- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

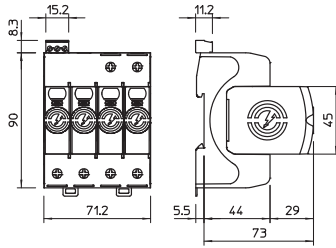
V50-4-280	
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_C 280 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Lightning surge current (10/350)	I_{total} 50 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 160 kA
Protection level [L-N]	U_p 1.3 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,7 kV
Residual voltage [L-N] @ 5 kA	U_{res} 0,8 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

Connection options





Combination arrester V50, 4-pole with FS 280 V



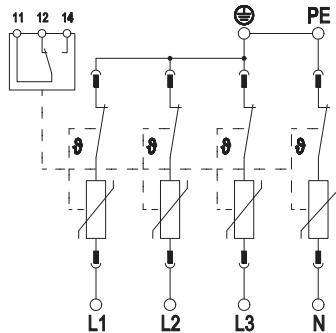
Lightning current combination arrester, type 1+2

- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-4+FS-280	280	4	IP20	1	61.500	5093518

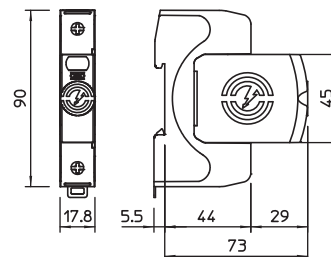
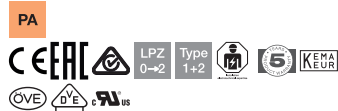
Connection options



V50-4+FS-280	
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_C 280 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Lightning surge current (10/350)	I_{total} 50 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 160 kA
Protection level [L-N]	U_p 1.3 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,7 kV
Residual voltage [L-N] @ 5 kA	U_{res} 0,8 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE
FM contacts	Changeover
Switching power AC	230 V; 0,5 A
Switching power DC	230 V; 0,1 A / 75 V; 0,5 A
Connection cross-section, FM terminals	0,5 - 1,5 mm ²
Connection cross-section, FM terminals	21 - 16 AWG
Conductor cross-section, flexible (fine-wire)	1,5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1,5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



Combination arrester V50, 1-pole 320 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-1-320	320	1	IP20	1	17.200	5093540

Lightning current combination arrester, type 1+2

- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

V50-1-320	
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_c 320 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Protection level [L-N]	U_p 1.4 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,9 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,0 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

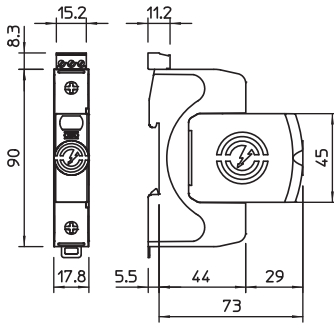
Connection options



PA



Combination arrester V50, 1-pole with FS 320 V



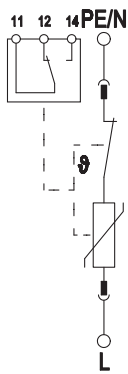
Lightning current combination arrester, type 1+2

- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-1+FS-320	320	1	IP20	1	17.200	5093546

Connection options



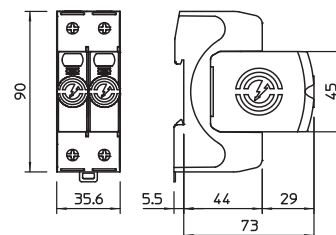
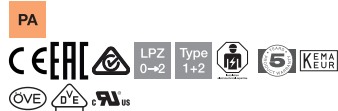
V50-1+FS-320	
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_C 320 V
Nominal discharge current (8/20 μ s)	$I_{n/L-N}$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Protection level [L-N]	U_p 1.4 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,9 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,0 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE
FM contacts	Changeover
Switching power AC	230 V; 0,5 A
Switching power DC	230 V; 0,1 A / 75 V; 0,5 A
Connection cross-section, FM terminals	0,5 - 1,5 mm ²
Connection cross-section, FM terminals	21 - 16 AWG
Conductor cross-section, flexible (fine-wire)	1,5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1,5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

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Surge protection



Combination arrester V50, 1-pole + NPE 320 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-1+NPE-320	320	1+N/PE	IP20	1	31.100	5093552

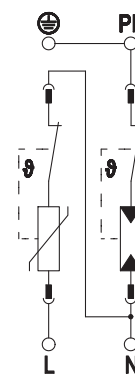
Lightning current combination arrester, type 1+2

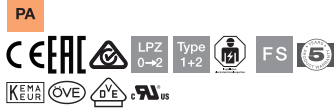
- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

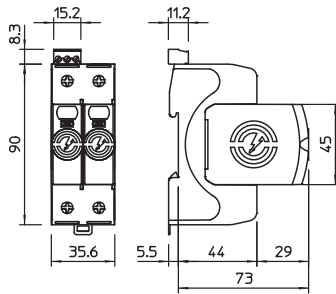
V50-1+NPE-320	
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_c 320 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Lightning surge current (10/350)	I_{total} 25 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 80 kA
Protection level [L-N]	U_p 1.4 kV
Combined voltage protection level [L-PE]	$U_{d/L-PE}$ 2.5 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,9 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,0 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

Connection options





Combination arrester V50, 1-pole + NPE with FS 320 V



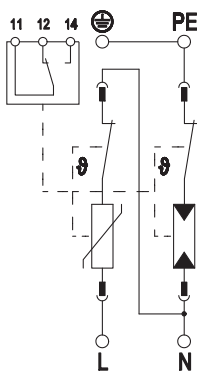
Lightning current combination arrester, type 1+2

- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-1+NPE+FS-320	320	1+N/PE	IP20	1	31.100	5093560

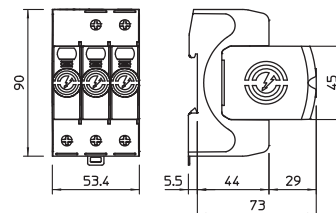
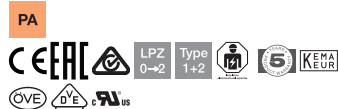
Connection options



V50-1+NPE+FS-320		Type 1+2
SPD to EN 61643-11		Class I-II
SPD to IEC 61643-11		Type 4
SPD to UL 1449		
Nominal voltage AC (50/60 Hz)	U_n	230 V
Maximum continuous voltage AC	U_C	320 V
Nominal discharge current (8/20 μ s)	$I_{n/L-N}$	30 kA
Maximum discharge current (8/20 μ s)	I_{max}	50 kA
Lightning surge current (10/350 μ s)	I_{imp}	12.5 kA
Lightning surge current (10/350)	I_{total}	25 kA
Arrester surge current (8/20 μ s) [total]	I_{total}	80 kA
Protection level [L-N]	U_p	1.4 kV
Combined voltage protection level [L-PE]	$U_{p/L-PE}$	2.5 kV
Residual voltage [L-N] @ 1 kA	U_{res}	0,9 kV
Residual voltage [L-N] @ 5 kA	U_{res}	1,0 kV
Max. mains-side overcurrent protection		160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection		50 kA eff
Operating temperature range	T_u	-40 - +80 °C
Protection rating		IP20
Approvals		UL, KEMA, ÖVE, VDE
FM contacts		Changeover
Switching power AC		230 V; 0,5 A
Switching power DC		230 V; 0,1 A / 75 V; 0,5 A
Connection cross-section, FM terminals		0,5 - 1,5 mm ²
Connection cross-section, FM terminals		21 - 16 AWG
Conductor cross-section, flexible (fine-wire)		1,5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)		1,5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)		16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)		16 - 2 AWG



Combination arrester V50, 3-pole 320 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-3-320	320	3	IP20	1	48.900	5093542

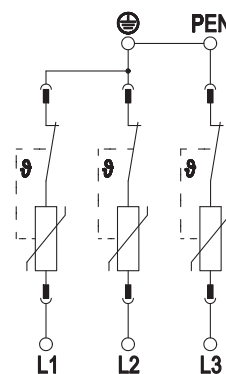
Lightning current combination arrester, type 1+2

- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

V50-3-320	
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_c 320 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Lightning surge current (10/350)	I_{total} 37.5 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 120 kA
Protection level [L-N]	U_p 1.4 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,9 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,0 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

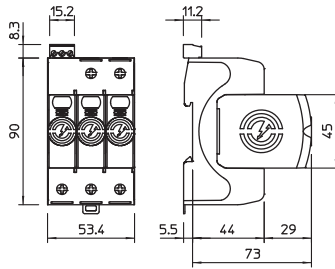
Connection options



PA



Combination arrester V50, 3-pole with FS 320 V



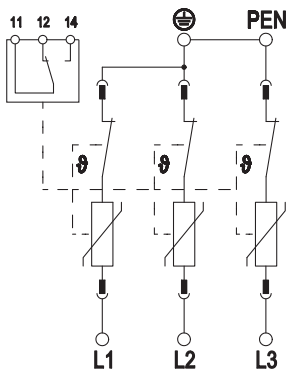
Lightning current combination arrester, type 1+2

- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-3+FS-320	320	3	IP20	1	49.300	5093548

Connection options

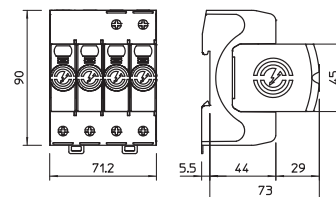


V50-3+FS-320

SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_C 320 V
Nominal discharge current (8/20 μ s)	$I_{n/L-N}$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Lightning surge current (10/350)	I_{total} 37.5 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 120 kA
Protection level [L-N]	U_p 1.4 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0.9 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1.0 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE
FM contacts	Changeover
Switching power AC	230 V; 0,5 A
Switching power DC	230 V; 0,1 A / 75 V; 0,5 A
Connection cross-section, FM terminals	0,5 - 1,5 mm ²
Connection cross-section, FM terminals	21 - 16 AWG
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



Combination arrester V50, 3-pole + NPE 320 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-3+NPE-320	320	3+N/PE	IP20	1	61.200	5093554

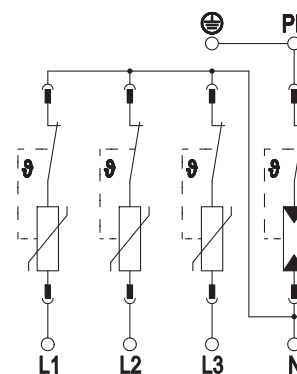
Lightning current combination arrester, type 1+2

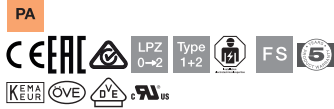
- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

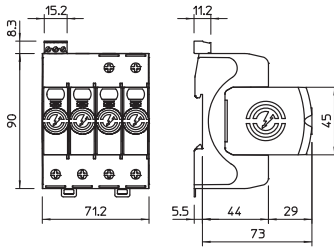
V50-3+NPE-320	
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_c 320 V
Nominal discharge current (8/20 μ s)	I_n / L-N 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Lightning surge current (10/350)	I_{total} 50 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 80 kA
Protection level [L-N]	U_p 1.4 kV
Combined voltage protection level [L-PE]	$U_{d/L-PE}$ 2.5 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,9 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,0 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

Connection options





Combination arrester V50, 3-pole + NPE with FS 320 V



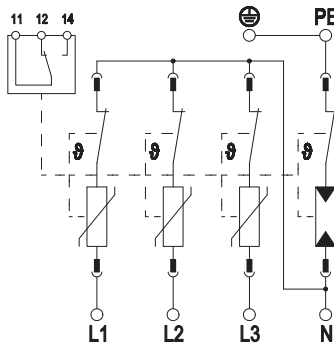
Lightning current combination arrester, type 1+2

- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-3+NPE+FS-320	320	3+N/PE	IP20	1	61.700	5093562

Connection options



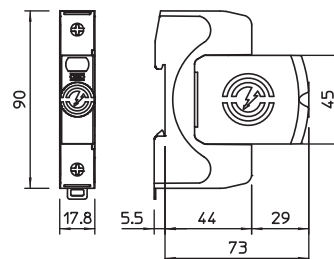
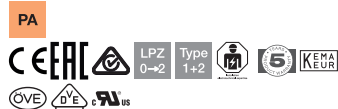
V50-3+NPE+FS-320	
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I-II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_C 320 V
Nominal discharge current (8/20 μ s)	$I_{n/L-N}$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Lightning surge current (10/350)	I_{total} 50 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 80 kA
Protection level [L-N]	U_p 1.4 kV
Combined voltage protection level [L-PE]	$U_{p/L-PE}$ 2.5 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,9 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,0 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE
FM contacts	Changeover
Switching power AC	230 V; 0,5 A
Switching power DC	230 V; 0,1 A / 75 V; 0,5 A
Connection cross-section, FM terminals	0,5 - 1,5 mm ²
Connection cross-section, FM terminals	21 - 16 AWG
Conductor cross-section, flexible (fine-wire)	1,5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1,5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

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Surge protection



Combination arrester V50, 1-pole 385 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-1-385	385	1	IP20	1	18.300	5093572

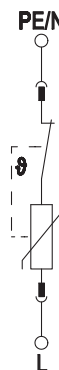
Lightning current combination arrester, type 1+2

- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

V50-1-385	
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 350 V
Maximum continuous voltage AC	U_c 385 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Protection level [L-N]	U_p 1.7 kV
Residual voltage [L-N] @ 1 kA	U_{res} 1,1 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,2 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

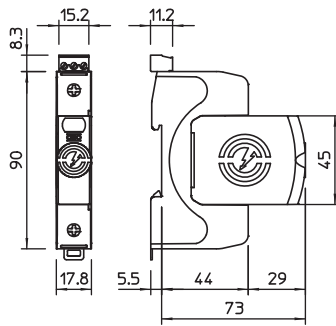
Connection options



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Combination arrester V50, 1-pole with FS 385 V



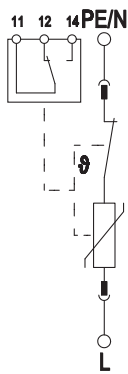
Lightning current combination arrester, type 1+2

- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-1+FS-385	385	1	IP20	1	18.500	5093578

Connection options

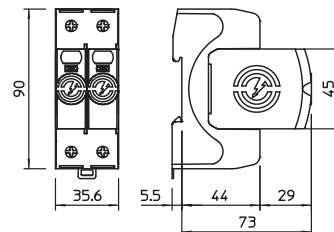


V50-1+FS-385

SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 350 V
Maximum continuous voltage AC	U_C 385 V
Nominal discharge current (8/20 μ s)	$I_n/L-N$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Protection level [L-N]	U_p 1.7 kV
Residual voltage [L-N] @ 1 kA	U_{res} 1,1 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,2 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE
FM contacts	Changeover
Switching power AC	230 V; 0,5 A
Switching power DC	230 V; 0,1 A / 75 V; 0,5 A
Connection cross-section, FM terminals	0,5 - 1,5 mm ²
Connection cross-section, FM terminals	21 - 16 AWG
Conductor cross-section, flexible (fine-wire)	1,5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1,5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



Combination arrester V50, 1-pole + NPE 385 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-1+NPE-385	385	1+N/PE	IP20	1	32.200	5093584

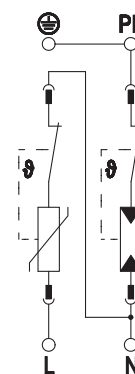
Lightning current combination arrester, type 1+2

- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

V50-1+NPE-385	
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_c 385 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Lightning surge current (10/350)	I_{total} 25 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 80 kA
Protection level [L-N]	U_p 1.7 kV
Combined voltage protection level [L-PE]	$U_{d/L-PE}$ 2.5 kV
Residual voltage [L-N] @ 1 kA	U_{res} 1,1 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,2 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

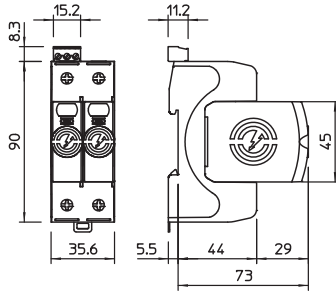
Connection options



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Combination arrester V50, 1-pole + NPE with FS 385 V



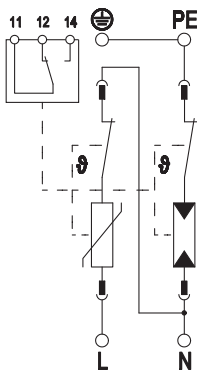
Lightning current combination arrester, type 1+2

- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-1+NPE+FS-385	385	1+N/PE	IP20	1	32.500	5093590

Connection options

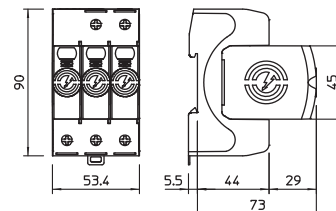
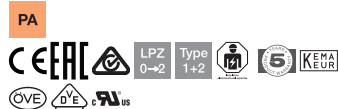


V50-1+NPE+FS-385

SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_C 385 V
Nominal discharge current (8/20 μ s)	$I_{n/L-N}$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Lightning surge current (10/350)	I_{total} 25 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 80 kA
Protection level [L-N]	U_p 1.7 kV
Combined voltage protection level [L-PE]	$U_{p/L-PE}$ 2.5 kV
Residual voltage [L-N] @ 1 kA	U_{res} 1,1 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,2 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE
FM contacts	Changeover
Switching power AC	230 V; 0,5 A
Switching power DC	230 V; 0,1 A / 75 V; 0,5 A
Connection cross-section, FM terminals	0,5 - 1,5 mm ²
Connection cross-section, FM terminals	21 - 16 AWG
Conductor cross-section, flexible (fine-wire)	1,5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1,5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



Combination arrester V50, 3-pole 385 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-3-385	385	3	IP20	1	52.200	5093574

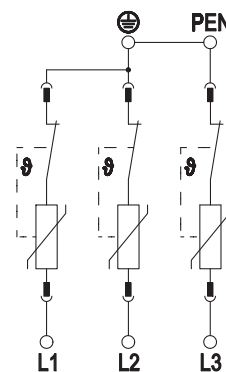
Lightning current combination arrester, type 1+2

- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

V50-3-385	
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 350 V
Maximum continuous voltage AC	U_c 385 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Lightning surge current (10/350)	I_{total} 37.5 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 120 kA
Protection level [L-N]	U_p 1.7 kV
Residual voltage [L-N] @ 1 kA	U_{res} 1,1 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,2 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

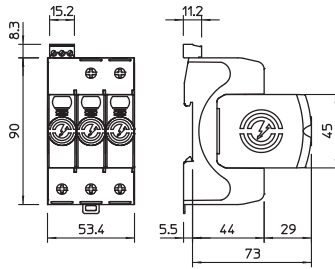
Connection options



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Combination arrester V50, 3-pole with FS 385 V



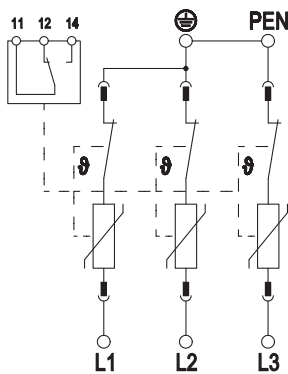
Lightning current combination arrester, type 1+2

- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-3+FS-385	385	3	IP20	1	52.600	5093580

Connection options

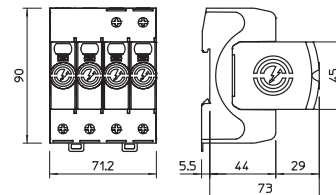


V50-3+FS-385

SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 350 V
Maximum continuous voltage AC	U_C 385 V
Nominal discharge current (8/20 μ s)	$I_{n/L-N}$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Lightning surge current (10/350)	I_{total} 37.5 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 120 kA
Protection level [L-N]	U_p 1.7 kV
Residual voltage [L-N] @ 1 kA	U_{res} 1,1 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,2 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE
FM contacts	Changeover
Switching power AC	230 V; 0,5 A
Switching power DC	230 V; 0,1 A / 75 V; 0,5 A
Connection cross-section, FM terminals	0,5 - 1,5 mm ²
Connection cross-section, FM terminals	21 - 16 AWG
Conductor cross-section, flexible (fine-wire)	1,5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1,5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



Combination arrester V50, 3-pole + NPE 385 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-3+NPE-385	385	3+N/PE	IP20	1	64.500	5093586

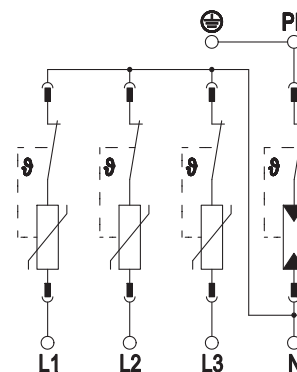
Lightning current combination arrester, type 1+2

- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

V50-3+NPE-385	
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_C 385 V
Nominal discharge current (8/20 μ s)	I_n / L-N 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Lightning surge current (10/350)	I_{total} 50 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 80 kA
Protection level [L-N]	U_p 1.7 kV
Combined voltage protection level [L-PE]	$U_{d/L-PE}$ 2.5 kV
Residual voltage [L-N] @ 1 kA	U_{res} 1,1 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,2 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

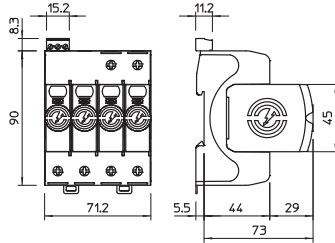
Connection options



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Combination arrester V50, 3-pole + NPE with FS 385 V



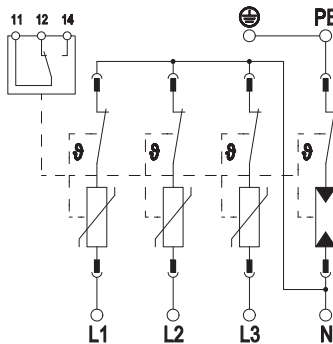
Lightning current combination arrester, type 1+2

- For lightning current equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity of 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total
- Modular, plug-in arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling (FS) variants have a potential-free changeover contact for remote signalling

Application: Lightning current equipotential bonding for buildings of class III and IV.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-3+NPE+FS-385	385	3+N/PE	IP20	1	65.000	5093592

Connection options

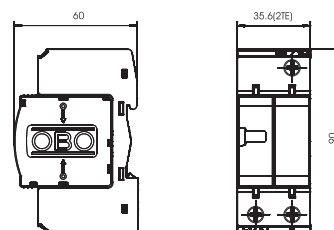


V50-3+NPE+FS-385

SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I-II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_C 385 V
Nominal discharge current (8/20 μ s)	$I_{n/L-N}$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Lightning surge current (10/350)	I_{total} 50 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 80 kA
Protection level [L-N]	U_p 1.7 kV
Combined voltage protection level [L-PE]	$U_{p/L-PE}$ 2.5 kV
Residual voltage [L-N] @ 1 kA	U_{res} 1,1 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,2 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE
FM contacts	Changeover
Switching power AC	230 V; 0,5 A
Switching power DC	230 V; 0,1 A / 75 V; 0,5 A
Connection cross-section, FM terminals	0,5 - 1,5 mm ²
Connection cross-section, FM terminals	21 - 16 AWG
Conductor cross-section, flexible (fine-wire)	1,5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1,5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



Lightning current and surge arrester, 1-pole + NPE



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V50-B+C 1+NPE	280	1+NPE	1	31.300	5093653

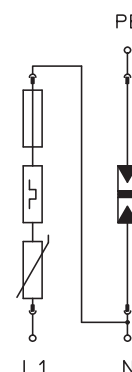
Combination arrester, lightning and surge arrester type 1+2 to DIN EN 61643-11.

- For lightning protection equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity 12.5 kA (10/350) per pole and 50 kA (10/350) in total
- Universally suitable for TN and TT systems
- With new Multibase base with multi-connection terminals
- Complete unit, consisting of upper part and base, pre-mounted and ready for connection
- Arrester, connectable with dynamic cut-off unit
- With visual function display
- Protection level < 1.3 kV
- Encapsulated, non-extinguishing zinc oxide varistor arrester for use in distributor housings
- Labelled connections

Application: Equipotential bonding in buildings, even those with external lightning protection of the Classes III and IV, and in standard distributor housings.

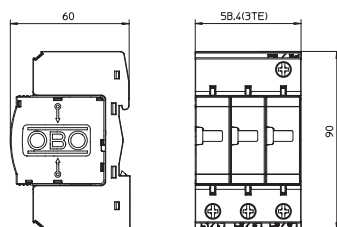
V50-B+C 1+NPE		
Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	280 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0-2
Impulse discharge current (10/350)	I_{imp}	12.5 kA
Lightning surge current (10/350)	I_{total}	25 kA
Nominal discharge current (8/20)	I_n	30 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	50 kA
Maximum discharge current (8/20 μ s)	I_{max}	50 kA
Protection level	U_p	< 1,3 kV
Response time	t_A	<25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		2
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²

Connection options





Lightning current and surge arrester, 3-pole



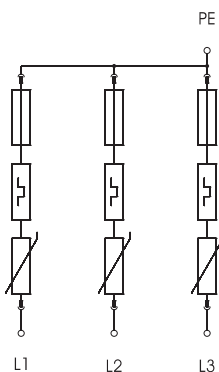
Combination arrester, lightning and surge arrester type 1+2 to DIN EN 61643-11.

- For lightning protection equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity 12.5 kA (10/350) per pole
- For TN-C systems
- With new Multibase base with multi-connection terminals
- Complete unit, consisting of upper part and base, pre-mounted and ready for connection
- Plug-in arrester with dynamic cut-off unit
- With visual function display
- Protection level < 1.3 kV
- Encapsulated, non-extinguishing zinc oxide varistor arrester for use in distributor housings
- Labelled connections

Application: Lightning protection equipotential bonding in buildings, even those with external lightning protection of Class III and IV, and in standard distributor housings.

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V50-B+C 3-280	280	3-pole	1	42.300	5093627

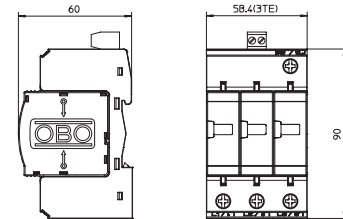
Connection options



V50-B+C 3-280		
Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	280 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0-2
Impulse discharge current (10/350)	I_{imp}	12.5 kA
Lightning surge current (10/350)	I_{total}	37.5 kA
Nominal discharge current (8/20)	I_n	30 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	90 kA
Maximum discharge current (8/20 μ s)	I_{max}	50 kA
Protection level	U_p	< 1,3 kV
Response time	t_A	<25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		3
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²



Lightning current and surge arrester, 3-pole with remote signalling



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V50-B+C 3+FS280	280	3-pole + FS	1	43.000	5093643

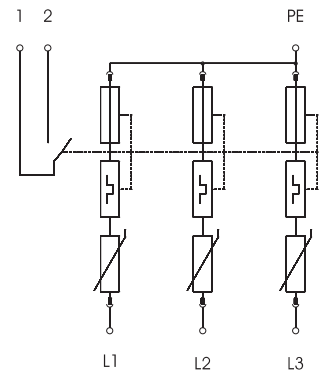
Combination arrester, lightning and surge arrester type 1+2 to DIN EN 61643-11.

- For lightning protection equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity 12.5 kA (10/350) per pole
- Universally suitable for TN-C systems
- With new Multibase base with multi-connection terminals
- Complete unit, consisting of upper part and base, pre-mounted and ready for connection
- Arrester, connectable with dynamic cut-off unit
- With visual function display
- Protection level < 1,3 kV
- Encapsulated, non-extinguishing zinc oxide varistor arrester for use in distributor housings
- Labelled connections
- FS variant with remote signalling contact (potential-free NO contact)

Application: Equipotential bonding in buildings, even those with external lightning protection of Class III and IV, and in standard distributor housings.

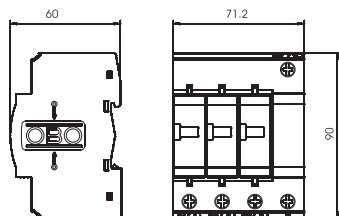
V50-B+C 3+FS280		
Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	280 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0→2
Impulse discharge current (10/350)	I_{imp}	12.5 kA
Lightning surge current (10/350)	I_{total}	37.5 kA
Nominal discharge current (8/20)	I_n	30 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	90 kA
Maximum discharge current (8/20 μ s)	I_{max}	50 kA
Protection level	U_p	< 1,3 kV
Response time	t_A	<25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		3
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²

Connection options





Lightning current and surge arrester, 3-pole + NPE



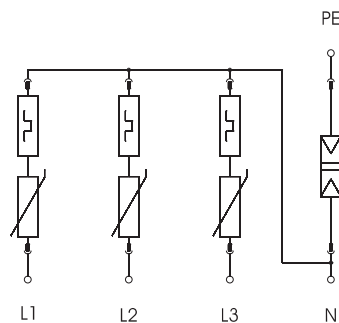
Combination arrester, lightning and surge arrester type 1+2 to DIN EN 61643-11.

- For lightning protection equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity 12.5 kA (10/350) per pole and 50 kA (10/350) in total
- Universally suitable for TN and TT systems
- With new Multibase base with multi-connection terminals
- Complete unit, consisting of upper part and base, pre-mounted and ready for connection
- Arrester, connectable with dynamic cut-off unit
- With visual function display
- Protection level < 1.3 kV
- Encapsulated, non-extinguishing zinc oxide varistor arrester for use in distributor housings
- Labelled connections

Application: Equipotential bonding in buildings, even those with external lightning protection of the Classes III and IV, and in standard distributor housings.

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V50-B+C 3+NPE	280	3+NPE	1	55.000	5093654

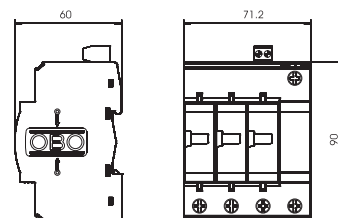
Connection options



V50-B+C 3+NPE		
Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	280 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0-2
Impulse discharge current (10/350)	I_{imp}	12.5 kA
Lightning surge current (10/350)	I_{total}	50 kA
Nominal discharge current (8/20)	I_n	30 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	50 kA
Maximum discharge current (8/20 μ s)	I_{max}	50 kA
Protection level	U_o	< 1,3 kV
Response time	t_A	<25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		4
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²



Lightning current and surge arrester, 3-pole + NPE with remote signalling



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V50-B+C 3+NPE+FS	280	3+NPE+FS	1	55.000	5093662

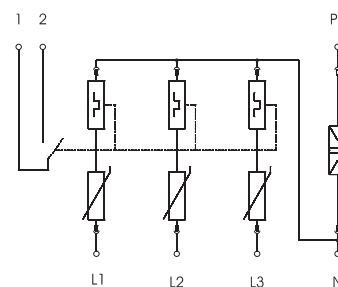
Combination arrester, lightning and surge arrester type 1+2 to DIN EN 61643-11.

- For lightning protection equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity 12.5 kA (10/350) per pole
- Universally suitable for TN and TT systems
- With Multibase base with multi-connection terminals
- Complete unit, consisting of upper part and base, pre-mounted and ready for connection
- Arrester, connectable with dynamic cut-off unit
- With visual function display
- Protection level < 1.3
- Encapsulated, non-extinguishing zinc oxide varistor arrester for use in distributor housings
- Labelled connections
- FS variant with remote signalling contact (potential-free NO contact)

Application: Equipotential bonding in buildings, even those with external lightning protection of Class III and IV, and in standard distributor housings.

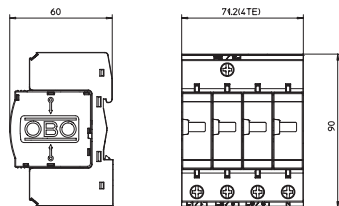
V50-B+C 3+NPE+FS		
Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	280 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0-2
Impulse discharge current (10/350)	I_{imp}	12.5 kA
Lightning surge current (10/350)	I_{total}	50 kA
Nominal discharge current (8/20)	I_n	30 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	50 kA
Maximum discharge current (8/20 μ s)	I_{max}	50 kA
Protection level	U_p	< 1,3 kV
Response time	t_A	<25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		4
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²

Connection options





Lightning current and surge arrester, 4-pole



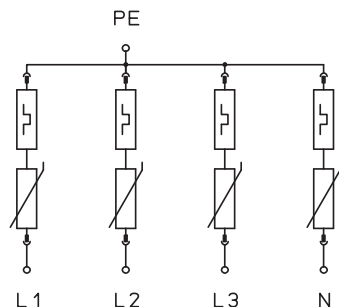
Combination arrester, lightning and surge arrester type 1+2 to DIN EN 61643-11.

- For lightning protection equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity 12.5 kA (10/350) per pole
- For TN-C systems
- With new Multibase base with multi-connection terminals
- Complete unit, consisting of upper part and base, pre-mounted and ready for connection
- Plug-in arrester with dynamic cut-off unit
- With visual function display
- Protection level < 1.3 kV
- Encapsulated, non-extinguishing zinc oxide varistor arrester for use in distributor housings
- Labelled connections

Application: Lightning protection equipotential bonding in buildings, even those with external lightning protection of Class III and IV, and in standard distributor housings.

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V50-B+C 4	280	4-pole	1	53.000	5093631

Connection options

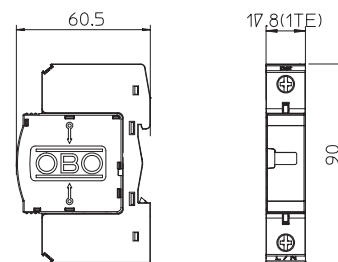


V50-B+C 4		
Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	280 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0-2
Impulse discharge current (10/350)	I_{imp}	12.5 kA
Lightning surge current (10/350)	I_{total}	50 kA
Nominal discharge current (8/20)	I_n	30 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	120 kA
Maximum discharge current (8/20 μ s)	I_{max}	50 kA
Protection level	U_p	< 1,3 kV
Response time	t_A	<25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		4
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²





Combination arrester V25, 1-pole 280 V



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V25-B+C 1-280	280	1-pole	1	15.300	5094418

Combination arrester, lightning and surge arrester type 1+2

- Complete unit consisting of upper part and base, pre-mounted and ready for connection
- For TN systems
- Plug-in arrester with dynamic cut-off function
- With visual function display
- Protection level decoded: 705: Value: RAM1; kV
- Encapsulated, non-extinguishing zinc oxide varistor arrester for use in standard distributor housings
- Labelled connections

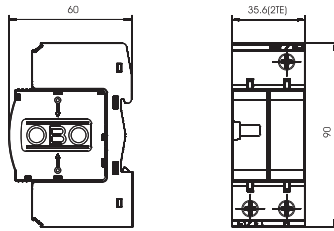
Application example: Buildings with open-wire power supply or for setting up lightning protection equipotential bonding in residential buildings.

V25-B+C 1-280		
Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	280 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0-2
Impulse discharge current (10/350)	I_{imp}	7 kA
Lightning surge current (10/350)	I_{total}	7 kA
Nominal discharge current (8/20)	I_n	30 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	30 kA
Maximum discharge current (8/20 μ s)	I_{max}	50 kA
Protection level	U_D	< 0,9 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		160 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		1
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²

Connection options



Combination arrester V25, 1-pole + NPE 280 V



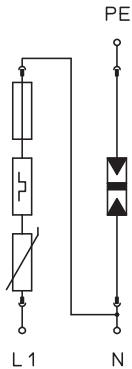
Combination arrester, lightning and surge arrester type 1+2

- Complete unit consisting of upper part and base, pre-mounted and ready for connection
- Universally suitable for TN-S and TT systems
- Plug-in arrester with dynamic cut-off unit
- Visual function display
- Voltage protection level < 0.9 kV
- Encapsulated, non-extinguishing zinc oxide varistor arrester for use in standard distributor housings
- Labelled connections

Application example: Buildings with open-wire power supply or for setting up lightning protection equipotential bonding in residential buildings.

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V25-B+C 1+NPE	280	1-pole complete with NPE	1	28.000	5094457

Connection options

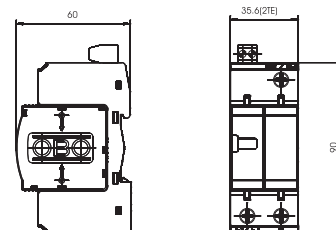


V25-B+C 1+NPE

Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	280 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0-2
Impulse discharge current (10/350)	I_{imp}	7 kA
Lightning surge current (10/350)	I_{total}	14 kA
Nominal discharge current (8/20)	I_n	30 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$	60 kA
Maximum discharge current (8/20 μ s)	I_{max}	50 kA
Protection level	U_o	< 0,9 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		160 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		2
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²



Combination arrester V25, 1-pole + NPE 280 V with remote signalling



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V25-B+C 1+NPE+FS	280	1+NPE with FS	1	27.500	5094444

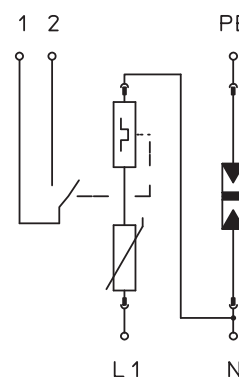
Combination arrester, lightning and surge arrester type 1+2

- Complete unit consisting of upper part and base, pre-mounted and ready for connection
- Universally suitable for TN and TT systems
- With remote signalling and potential-free NO contact for function monitoring
- Plug-in arrester with dynamic cut-off unit
- Visual function display
- Voltage protection level < 0.9 kV
- Encapsulated, non-extinguishing zinc oxide varistor arrester for use in standard distributor housings
- Labelled connections
- FS variant with remote signalling contact (potential-free NO contact)

Application example: Buildings with open-wire power supply or for setting up lightning protection equipotential bonding in residential buildings.

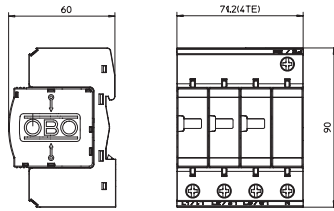
V25-B+C 1+NPE+FS		
Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	280 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0→2
Impulse discharge current (10/350)	I_{imp}	7 kA
Lightning surge current (10/350)	I_{total}	14 kA
Nominal discharge current (8/20)	I_n	30 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	60 kA
Maximum discharge current (8/20 μs)	I_{max}	50 kA
Protection level	U_p	< 0,9 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		160 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		2
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²

Connection options





Combination arrester V25, 3-pole + NPE 280 V



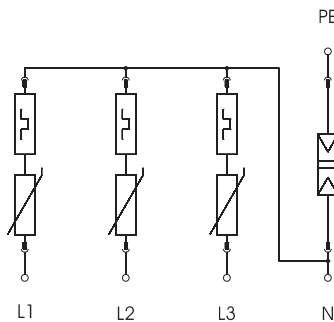
Combination arrester, lightning and surge arrester type 1+2

- Complete unit consisting of upper part and base, pre-mounted and ready for connection
- Universally suitable for TN-S and TT systems
- Plug-in arrester with dynamic cut-off unit
- Visual function display
- Voltage protection level < 0.9 kV
- Encapsulated, non-extinguishing zinc oxide varistor arrester for use in standard distributor housings
- Labelled connections

Application example: Buildings with open-wire power supply or for setting up lightning protection equipotential bonding in residential buildings.

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V25-B+C 3+NPE	280	3-pole complete with NPE	1	51.000	5094463

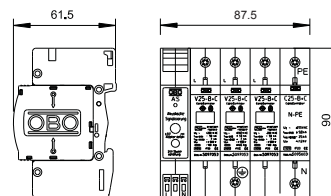
Connection options



V25-B+C 3+NPE		
Nominal voltage	U_N	230 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0-2
Impulse discharge current (10/350)	I_{imp}	7 kA
Lightning surge current (10/350)	I_{total}	25 kA
Nominal discharge current (8/20)	I_n	30 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	50 kA
Protection level	U_b	< 0,9 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		160 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		4
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²



Combination arrester V25, 3-pole + NPE, with acoustic signalling



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V25-B+C 3+NPE+AS	280	3+NPE	1	70.000	5097432

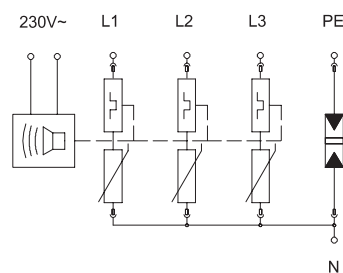
Combination arrester consisting of lightning current and surge arrester type 1+2

- Complete unit consisting of cover and base, pre-mounted and ready for connection
- Suitable for TN-S and TT network systems
- With audible signalling for function monitoring, signal tone can be turned off for 24 h
- Plug-in arrester with dynamic cut-off unit
- With visual function display
- Voltage protection level < 0.9 kV
- Encapsulated, non-extinguishing zinc oxide varistor arrester for use in standard distributor housings
- Labelled connections

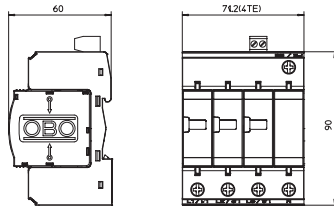
Application example: Buildings with open-wire power supply or for setting up lightning protection equipotential bonding in residential buildings.

V25-B+C 3+NPE+AS		
Nominal voltage	U_N	230 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0-2
Impulse discharge current (10/350)	I_{imp}	7 kA
Lightning surge current (10/350)	I_{total}	25 kA
Nominal discharge current (8/20)	I_n	30 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	120 kA
Maximum discharge current (8/20 μ s)	I_{max}	50 kA
Protection level	U_p	< 0,9 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		160 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		5
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²

Connection options



Combination arrester V25, 3-pole + NPE 280 V with remote signalling



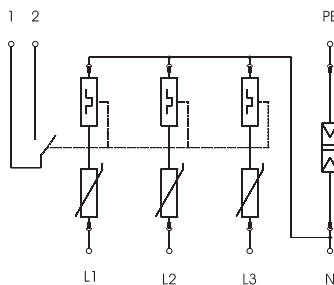
Combination arrester, lightning and surge arrester type 1+2

- Complete unit consisting of upper part and base, pre-mounted and ready for connection
- Universally suitable for TN and TT systems
- With remote signalling and potential-free NO contact for function monitoring
- Plug-in arrester with dynamic cut-off unit
- Visual function display
- Voltage protection level < 0.9 kV
- Encapsulated, non-extinguishing zinc oxide varistor arrester for use in standard distributor housings
- Labelled connections
- FS variant with remote signalling contact (potential-free NO contact)

Application example: Buildings with open-wire power supply or for setting up lightning protection equipotential bonding in residential buildings.

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V25-B+C 3+NPE-FS	280	3+NPE with FS	1	52.500	5094510

Connection options

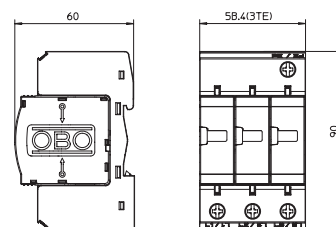


V25-B+C 3+NPE-FS

Nominal voltage	U_N	230 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0-2
Impulse discharge current (10/350)	I_{imp}	7 kA
Lightning surge current (10/350)	I_{total}	25 kA
Nominal discharge current (8/20)	I_n	30 kA
Arrester surge current (8/20) [total]	$I_{total 8/20}$	50 kA
Protection level	U_p	< 0,9 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		160 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		3
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²



Combination arrester V25, 3-pole 280 V



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V25-B+C 3-280	280	3-pole	1	42.500	5094423

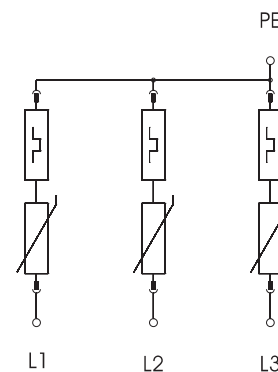
Combination arrester, lightning and surge arrester type 1+2

- Complete unit consisting of upper part and base, pre-mounted and ready for connection
- For TN systems
- Plug-in arrester with dynamic cut-off function
- With visual function display
- Protection level decoded: 705: Value: RAM1; kV
- Encapsulated, non-extinguishing zinc oxide varistor arrester for use in standard distributor housings
- Labelled connections

Application example: Buildings with open-wire power supply or for setting up lightning protection equipotential bonding in residential buildings.

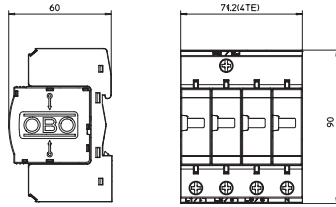
V25-B+C 3-280		
Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	280 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0-2
Impulse discharge current (10/350)	I_{imp}	7 kA
Lightning surge current (10/350)	I_{total}	21 kA
Nominal discharge current (8/20)	I_n	30 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	90 kA
Maximum discharge current (8/20 μ s)	I_{max}	50 kA
Protection level	U_D	< 0,9 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		160 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		3
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²

Connection options





Combination arrester V25, 4-pole 280 V



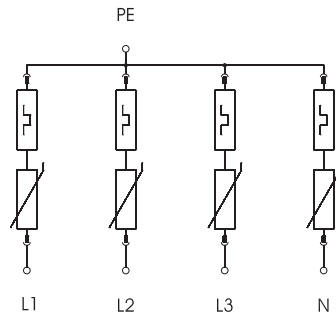
Combination arrester, lightning and surge arrester type 1+2

- Complete unit consisting of upper part and base, pre-mounted and ready for connection
- For TN systems
- Plug-in arrester with dynamic cut-off unit
- With visual function display
- Protection level decoded:705:Value:RAM1; kV
- Encapsulated, non-extinguishing zinc oxide varistor arrester for use in standard distributor housings
- Labelled connections

Application example: Buildings with open-wire power supply or for setting up lightning protection equipotential bonding in residential buildings.

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V25-B+C 4-280	280	4-pole	1	53.000	5094426

Connection options

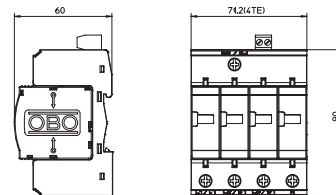


V25-B+C 4-280

Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	280 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0-2
Impulse discharge current (10/350)	I_{imp}	7 kA
Lightning surge current (10/350)	I_{total}	25 kA
Nominal discharge current (8/20)	I_n	30 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	120 kA
Maximum discharge current (8/20 μ s)	I_{max}	50 kA
Protection level	U_o	< 0,9 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		160 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		4
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²



Combination arrester V25, 4-pole 280 V with remote signalling



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V25-B+C 4-FS280	280	4-pole with FS	1	53.200	5094493

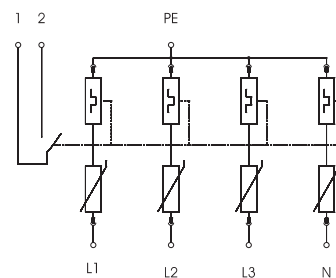
Combination arrester, lightning and surge arrester type 1+2

- Complete unit consisting of upper part and base, pre-mounted and ready for connection
- Suitable for TN networks
- With remote signalling and potential-free NO contact for function monitoring
- Voltage protection level < 0.9 kV
- Plug-in arrester with dynamic cut-off unit
- Visual function display
- Encapsulated, non-extinguishing zinc oxide varistor arrester for use in standard distributor housings
- Labelled connections
- FS variant with remote signalling contact (potential-free NO contact)

Application example: Buildings with open-wire power supply or for setting up lightning protection equipotential bonding in residential buildings.

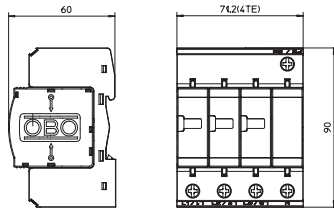
V25-B+C 4-FS280		
Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	280 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0→2
Impulse discharge current (10/350)	I_{imp}	7 kA
Lightning surge current (10/350)	I_{total}	25 kA
Nominal discharge current (8/20)	I_n	30 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	120 kA
Maximum discharge current (8/20 μ s)	I_{max}	50 kA
Protection level	U_p	< 0,9 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		160 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		4
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²

Connection options





Combination arrester V25, 3-pole + NPE 385 V



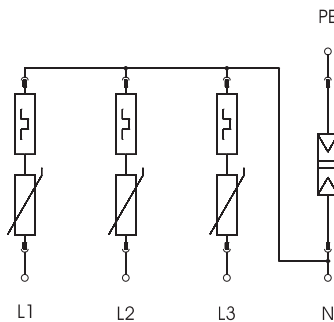
Combination arrester, lightning and surge arrester type 1+2

- Complete unit consisting of upper part and base, pre-mounted and ready for connection
- Universally suitable for TN-S and TT systems
- Plug-in arrester with dynamic cut-off unit
- Visual function display
- Voltage protection level < 1.5 kV
- Encapsulated, non-extinguishing zinc oxide varistor arrester for use in standard distributor housings
- Labelled connections

Application example: Buildings with open-wire power supply or for setting up lightning protection equipotential bonding in residential buildings.

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V25-B+C 3NPE385	385	3-pole with NPE; 385 V	1	53.700	5094478

Connection options



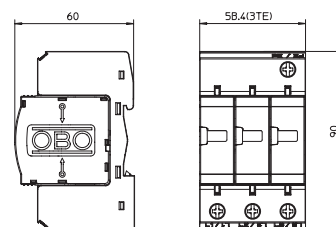
V25-B+C 3NPE385

Nominal voltage	U_N	350 V
Max. continuous operating voltage	U_C	385 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0-2
Impulse discharge current (10/350)	I_{imp}	7 kA
Lightning surge current (10/350)	I_{total}	25 kA
Nominal discharge current (8/20)	I_n	30 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	120 kA
Maximum discharge current (8/20 μ s)	I_{max}	50 kA
Protection level	U_o	< 1,6 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		160 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		4
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²





Combination arrester V25, 3-pole 385 V



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V25-B+C 3-385	385	3-pole complete	1	42.000	5094437

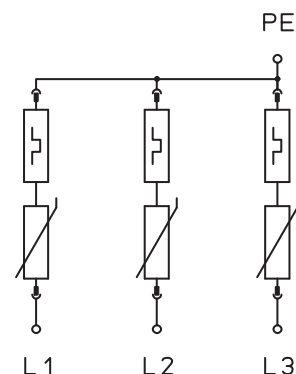
Combination arrester, lightning and surge arrester type 1+2

- Complete unit consisting of upper part and base, pre-mounted and ready for connection
- For TN systems
- Plug-in arrester with dynamic cut-off function
- With visual function display
- Voltage protection level < 1.5 kV
- Encapsulated, non-extinguishing zinc oxide varistor arrester for use in standard distributor housings
- Labelled connections

Application example: Buildings with open-wire power supply or for setting up lightning protection equipotential bonding in residential buildings.

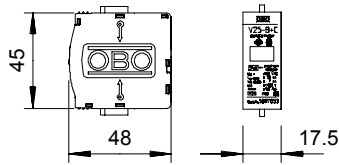
V25-B+C 3-385		
Nominal voltage	U_N	350 V
Max. continuous operating voltage	U_C	385 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0-2
Impulse discharge current (10/350)	I_{imp}	7 kA
Lightning surge current (10/350)	I_{total}	21 kA
Nominal discharge current (8/20)	I_n	30 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	90 kA
Maximum discharge current (8/20 μ s)	I_{max}	50 kA
Protection level	U_D	<1,5 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		160 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		3
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²

Connection options





CombiController V25B, plug-in arrester 385 V



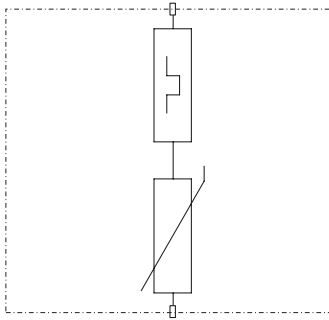
Combination arrester – type 1+2

- Plug-in arrester can be separated from base without tools and current cut-off in base
- Including thermal and dynamic cut-off unit and visual fault display
- High current conductivity and long service life

Highest continuous voltage

Type	V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V25B 0 SO-385	385	1-pole	30	9.500	5097057

Connection options



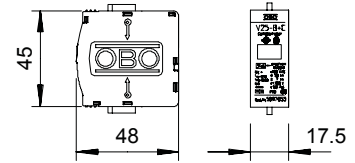
V25B 0 SO-385

Nominal voltage	U_N	230 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0-2
Impulse discharge current (10/350)	I_{imp}	25 kA
Nominal discharge current (8/20)	I_n	30 kA
Protection level	U_p	<1,5 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		160 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		1
Protection rating		IP20





CombiController V25, plug-in arrester 385 V



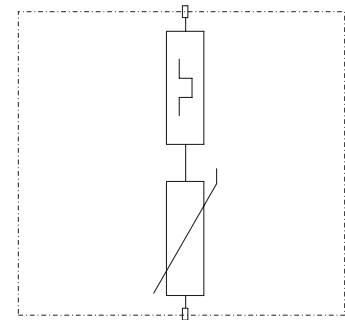
Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V25-B+C 0-385	385	1-pole	30	9.500	5097063

Combination arrester – type 1+2

- Plug-in arrester can be separated from base without tools and current cut-off in base
- Including thermal and dynamic cut-off unit and visual fault display
- High current conductivity and long service life

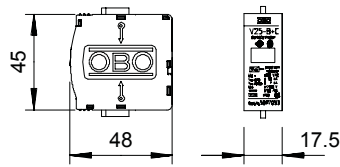
V25-B+C 0-385		
Nominal voltage	U_N	350 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0-2
Impulse discharge current (10/350)	I_{imp}	7 kA
Lightning surge current (10/350)	I_{total}	7 kA
Nominal discharge current (8/20)	I_n	30 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	30 kA
Protection level	U_p	< 1,5 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		160 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		1
Protection rating		IP20

Connection options





Plug-in arrester, total spark gap between N and PE 255 V

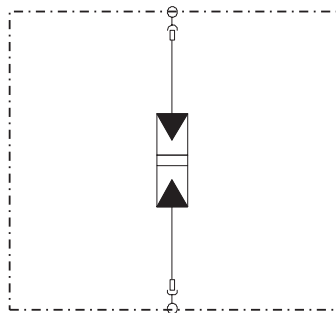


Plug-in total discharge gap for use between neutral lines (N) and protector (PE) Suitable for use in combination with:

- CombiController, type V 25-B+C
- SurgeController, type V 20-C
- SurgeController, type V 10-C

Type	V	Version	Pack Piece	Weight kg/100 pc.	Item no.
C 25-B+C 0	255	NPE	1	5.300	5095603

Connection options

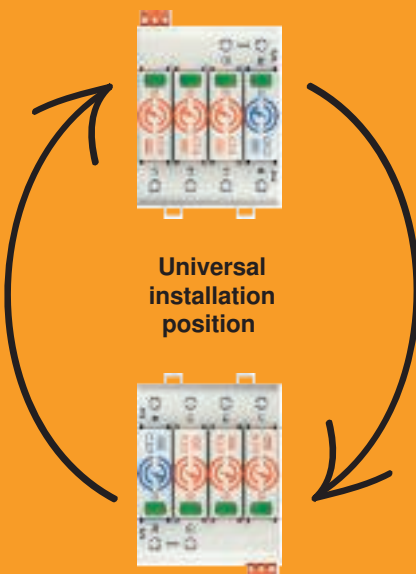


C 25-B+C 0	
Nominal voltage	U_N 230 V
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
Lightning protection zone LPZ	0→2
Lightning impulse current (10/350) (N-PE)	I_{imp} 25 kA
Nominal discharge current (8/20)	I_n 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Protection level	U_p <1,2 kV
Response time	t_A < 100 ns
Follow current quenching capacity (eff) [N-PE]	I_{fi} 0.1 kA
Maximum back-up fuse	160 A
Temperature range	ϑ -40 - +80 °C
Division unit TE (17.5 mm)	1
Protection rating	IP20



Surge arrester V20

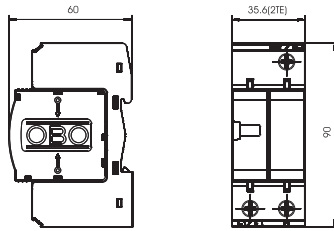
Surge protection energy technology, type 2 arrester



- Type 2 SPD: $I_n = 20 \text{ kA (L-N) / 40 \text{ kA (N-PE)}$, up to 60 kA
- Protection level: $< 1.5 \text{ kV}$, usable in coordination with type 3 SPD
- Exceeds the increased requirements according to VDE 0100-443
- Quality according to EN 61643-11 certified by an external testing institute
- Universally usable for industry, offices, commercial and residential buildings
- Locking function with vibration protection
- System protection up to 160 A usable without separate fusing
- Can be installed universally through 90° labelling
- Voltage variants: 75 V, 150 V, 280 V, 320 V, 385 V, 440 V, 550 V
- Optional remote signalling, potential-free changeover contact
- Variants in one to four-pole versions
- Operating instructions always available online via QR code



Surge arrester, 1-pole + NPE 280 V



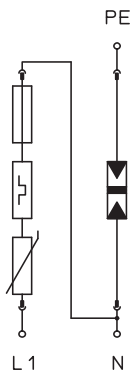
Surge arrester, type 2

- Complete unit consisting of upper part and base, pre-mounted and ready for connection
- Suitable for TN and TT network systems
- Plug-in upper part; upper part can be separated from base without tools
- Incl. thermal and dynamic cut-off unit
- With visual display of defects
- High current conductivity and long service life
- Labelled connections

Application example: Residential buildings, single-family homes and industrial

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V20-C 1+NPE-280	280	1+NPE	1	22.300	5094650

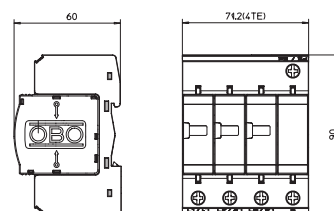
Connection options



V20-C 1+NPE-280		
Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	280 V
SPD to EN 61643-11		Type 2
SPD to IEC 61643-11		Class II
Lightning protection zone LPZ		1→2
Nominal discharge current (8/20)	I_n	20 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$	40 kA
Maximum discharge current (8/20 μ s)	I_{max}	40 kA
Protection level	U_p	< 1,3 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		2
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²



Surge arrester, 3-pole + NPE 280 V



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V20-C 3+NPE-280	280	3+NPE	1	41.700	5094656

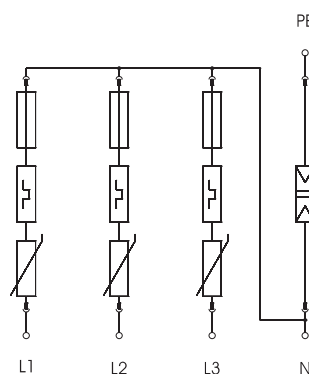
Surge arrester, type 2

- Complete unit consisting of upper part and base, pre-mounted and ready for connection
- Suitable for TN and TT network systems
- Plug-in upper part; upper part can be separated from base without tools
- Incl. thermal and dynamic cut-off unit
- With visual display of defects
- High current conductivity and long service life
- Labelled connections

Application example: Residential buildings, single-family homes and industrial

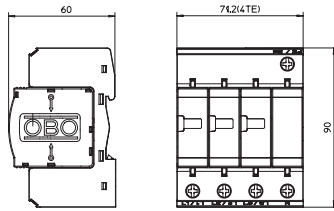
V20-C 3+NPE-280			
Nominal voltage	U_N	230 V	
Max. continuous operating voltage	U_C	280 V	
SPD to EN 61643-11		Type 2	
SPD to IEC 61643-11		Class II	
Lightning protection zone LPZ		1→2	
Nominal discharge current (8/20)	I_n	20 kA	
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$	50 kA	
Maximum discharge current (8/20 μ s)	I_{max}	40 kA	
Protection level	U_p	< 1,3 kV	
Response time	t_A	< 25 ns	
Maximum back-up fuse		125 A	
Temperature range	ϑ	-40 - +80 °C	
Division unit TE (17.5 mm)		4	
Protection rating		IP20	
Connection cross-section, rigid		2.5 - 35 mm ²	
Connection cross-section, multi-wire		2.5 - 35 mm ²	
Connection cross-section, flexible		2.5 - 25 mm ²	

Connection options





Surge arrester, 3-pole + NPE 385 V



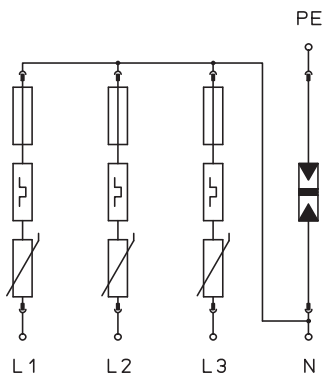
Surge arrester, type 2

- Complete unit consisting of upper part and base, pre-mounted and ready for connection
- Suitable for TN and TT network systems
- Plug-in upper part; upper part can be separated from base without tools
- Incl. thermal and dynamic cut-off unit
- With visual display of defects
- High current conductivity and long service life
- Labelled connections

Application example: Residential buildings, single-family homes and industrial

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V20-C 3+NPE-385	385	3+NPE	1	42.600	5094668

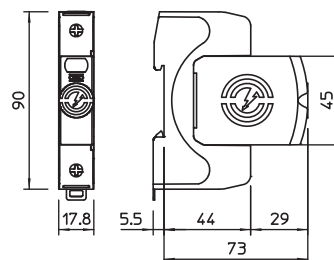
Connection options



V20-C 3+NPE-385		
Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	385 V
SPD to EN 61643-11		Type 2
SPD to IEC 61643-11		Class II
Lightning protection zone LPZ		1→2
Nominal discharge current (8/20)	I_n	20 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$	80 kA
Maximum discharge current (8/20 μ s)	I_{max}	40 kA
Protection level	U_p	< 1,7 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		4
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²



Surge arrester V20, 1-pole, 150 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-1-150	150	1	IP20	1	11.900	5095151

Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

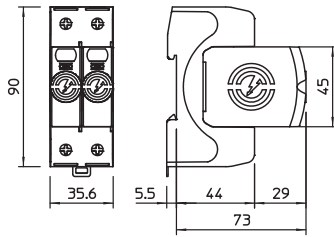
V20-1-150	
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 120 V
Maximum continuous voltage AC	U_c 150 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 40 kA
Protection level [L-N]	U_p 0.8 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,5 kV
Residual voltage [L-N] @ 5 kA	U_{res} 0,6 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

Connection options





Surge arrester V20, 1-pole+ NPE, 150 V



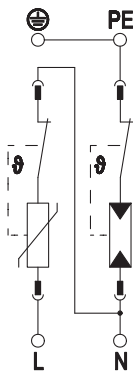
Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-1+NPE-150	150	1+N/PE	IP20	1	23.300	5095231

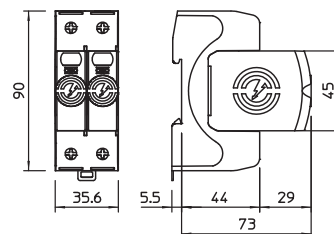
Connection options



V20-1+NPE-150	
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 120 V
Maximum continuous voltage AC	U_c 150 V
Nominal discharge current (8/20 μ s)	$I_{n/L-N}$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 60 kA
Protection level [L-N]	U_b 0.8 kV
Combined voltage protection level [L-PE]	$U_{b/L-PE}$ 1.2 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,5 kV
Residual voltage [L-N] @ 5 kA	U_{res} 0,6 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



Surge arrester V20, 2-pole, 150 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-2-150	150	2	IP20	1	23.600	5095152

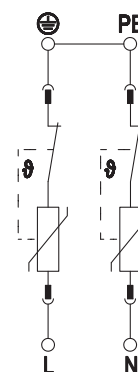
Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

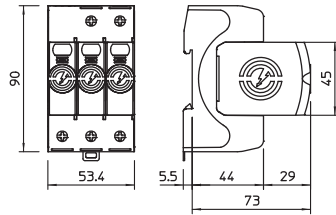
V20-2-150	
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 120 V
Maximum continuous voltage AC	U_c 150 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 80 kA
Protection level [L-N]	U_p 0.8 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,5 kV
Residual voltage [L-N] @ 5 kA	U_{res} 0,6 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

Connection options





Surge arrester V20, 2-pole + NPE, 150 V



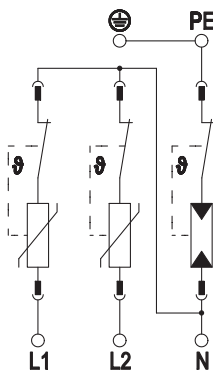
Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-2+NPE-150	150	2+N/PE	IP20	1	32.800	5095232

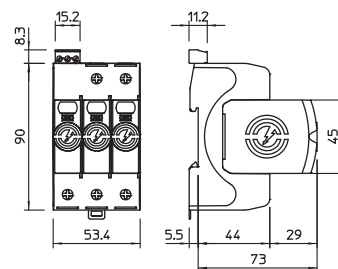
Connection options



V20-2+NPE-150	
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 120 V
Maximum continuous voltage AC	U_c 150 V
Nominal discharge current (8/20 μ s)	$I_{n/L-N}$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 60 kA
Protection level [L-N]	U_b 0.8 kV
Combined voltage protection level [L-PE]	$U_{b/L-PE}$ 1.2 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,5 kV
Residual voltage [L-N] @ 5 kA	U_{res} 0,6 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



Surge arrester V20, 2-pole + NPE and FS, 150 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-2+NPE+FS-150	150	2+N/PE	IP20	1	33.200	5095322

Surge arrester, type 2

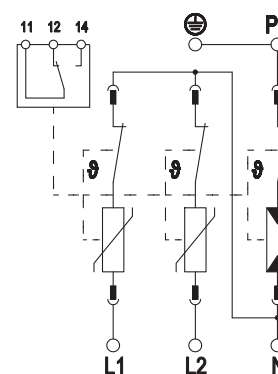
- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

V20-2+NPE+FS-150

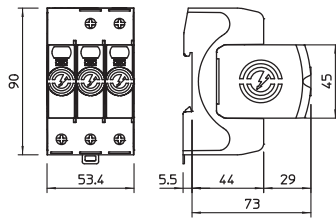
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 120 V
Maximum continuous voltage AC	U_c 150 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 60 kA
Protection level [L-N]	U_p 0.8 kV
Combined voltage protection level [L-PE]	$U_{p/L-PE}$ 1.2 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,5 kV
Residual voltage [L-N] @ 5 kA	U_{res} 0,6 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
FM contacts	Changeover
Switching power AC	230 V; 0,5 A
Switching power DC	230 V; 0,1 A / 75 V; 0,5 A
Connection cross-section, FM terminals	0,5 - 1,5 mm ²
Connection cross-section, FM terminals	21 - 16 AWG
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

Connection options





Surge arrester V20, 3-pole, 150 V



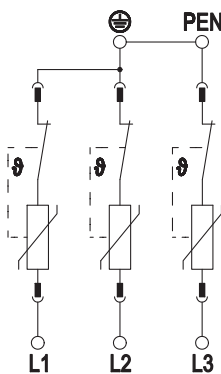
Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-3-150	150	3	IP20	1	33.000	5095153

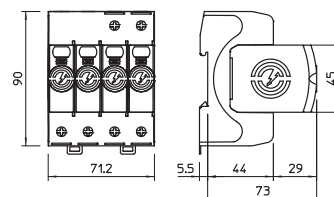
Connection options



V20-3-150	
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 120 V
Maximum continuous voltage AC	U_c 150 V
Nominal discharge current (8/20 μ s)	$I_{n/L-N}$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 120 kA
Protection level [L-N]	U_b 0.8 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,5 kV
Residual voltage [L-N] @ 5 kA	U_{res} 0,6 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



Surge arrester V20, 3-pole + NPE, 150 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-3+NPE-150	150	3+N/PE	IP20	1	42.700	5095233

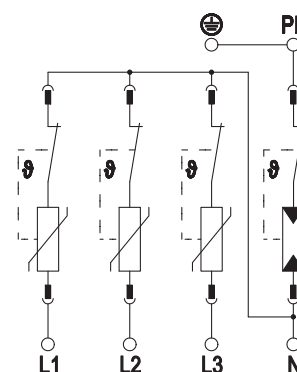
Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

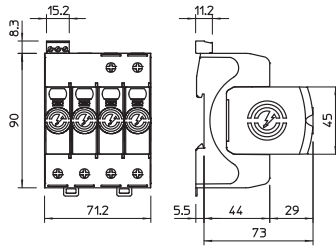
V20-3+NPE-150	
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 120 V
Maximum continuous voltage AC	U_c 150 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 60 kA
Protection level [L-N]	U_p 0.8 kV
Combined voltage protection level [L-PE]	$U_{p/L-PE}$ 1.2 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,5 kV
Residual voltage [L-N] @ 5 kA	U_{res} 0,6 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

Connection options





Surge arrester V20, 3-pole+ NPE and FS, 150 V



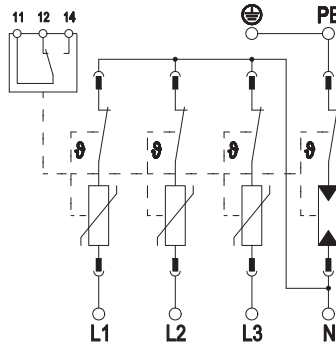
Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-3+NPE+FS-150	150	3+N/PE	IP20	1	43.300	5095321

Connection options

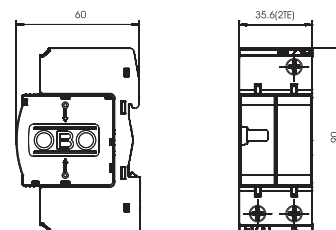


V20-3+NPE+FS-150

SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 120 V
Maximum continuous voltage AC	U_c 150 V
Nominal discharge current (8/20 μ s)	$I_{n/L-N}$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 60 kA
Protection level [L-N]	U_b 0.8 kV
Combined voltage protection level [L-PE]	$U_{b/L-PE}$ 1.2 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,5 kV
Residual voltage [L-N] @ 5 kA	U_{res} 0,6 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
FM contacts	Changeover
Switching power AC	230 V; 0,5 A
Switching power DC	230 V; 0,1 A / 75 V; 0,5 A
Connection cross-section, FM terminals	0,5 - 1,5 mm ²
Connection cross-section, FM terminals	21 - 16 AWG
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



Surge arrester V10 1-pole + NPE 280 V



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V10-C 1+NPE-280	280	1 + NPE	1	22.200	5093418

Surge arrester, type 2+3

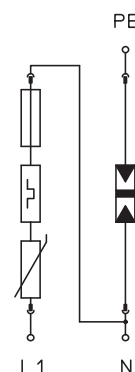
- Complete unit consisting of upper part and base, pre-mounted and ready for connection
- Suitable for TN-S and TT network systems
- Incl. thermal and dynamic cut-off unit
- With visual display of defects
- High current conductivity and long service life
- Labelled connections

Application example: Residential buildings, single-family homes

V10-C 1+NPE-280

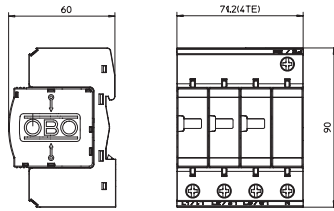
Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	280 V
SPD to EN 61643-11		Type 2+3
SPD to IEC 61643-11		Class II+III
Lightning protection zone LPZ		1→3
Nominal discharge current (8/20)	I_n	10 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$	20 kA
Maximum discharge current (8/20 μ s)	I_{max}	20 kA
Protection level	U_p	< 1,1 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		2
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 35 mm ²

Connection options





Surge arrester V10 3-pole + NPE 280 V



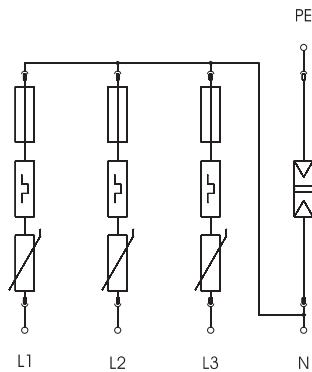
Surge arrester, type 2+3

- Complete unit consisting of upper part and base, pre-mounted and ready for connection
- Suitable for TN-S and TT network systems
- Incl. thermal and dynamic cut-off unit
- With visual display of defects
- High current conductivity and long service life
- Labelled connections

Application example: Residential buildings, single-family homes

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V10-C 3+NPE	280	3 + NPE	1	37.800	5094920

Connection options

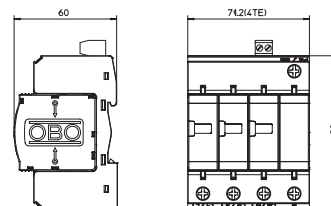


V10-C 3+NPE		
Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	280 V
SPD to EN 61643-11		Type 2+3
SPD to IEC 61643-11		Class II+III
Lightning protection zone LPZ		1→3
Nominal discharge current (8/20)	I_n	10 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$	40 kA
Maximum discharge current (8/20 μ s)	I_{max}	20 kA
Protection level	U_p	< 1,1 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		4
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²



Surge arrester V10 3-pole + NPE with remote signalling 280 V

Surge protection



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V10-C 3+NPE+FS	280	3+NPE	1	37.900	5094931

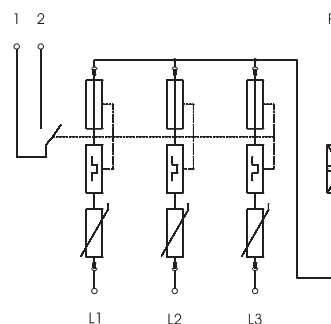
Surge arrester, type 2+3

- Complete unit consisting of upper part and base, pre-mounted and ready for connection
- Suitable for TN-S and TT network systems
- Incl. thermal and dynamic cut-off unit
- With visual display of defects
- Version ...-FS with remote signalling and potential-free NO contact for function monitoring
- High current conductivity and long service life
- Labelled connections

Application example: Residential buildings, single-family homes

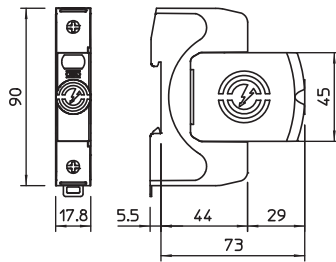
V10-C 3+NPE+FS			
Nominal voltage	U_N	230 V	
Max. continuous operating voltage	U_C	280 V	
SPD to EN 61643-11		Type 2+3	
SPD to IEC 61643-11		Class II+III	
Lightning protection zone LPZ		1-3	
Nominal discharge current (8/20)	I_n	10 kA	
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$	40 kA	
Maximum discharge current (8/20 μ s)	I_{max}	20 kA	
Protection level	U_p	< 1,1 kV	
Response time	t_A	<25 ns	
Maximum back-up fuse		125 A	
Temperature range	ϑ	-40 - +80 °C	
Division unit TE (17.5 mm)		4	
Protection rating		IP20	
Connection cross-section, rigid		2.5 - 35 mm ²	
Connection cross-section, multi-wire		2.5 - 35 mm ²	
Connection cross-section, flexible		2.5 - 25 mm ²	

Connection options





Surge arrester V20, 1-pole, 280 V



Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-1-280	280	1	IP20	1	12.900	5095161

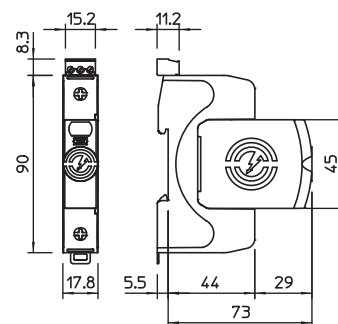
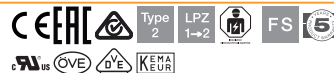
Connection options



V20-1-280	
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_c 280 V
Nominal discharge current (8/20 μ s)	$I_{n/L-N}$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 40 kA
Protection level [L-N]	U_b 1.3 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,8 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,0 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



Surge arrester V20, 1-pole with remote signalling, 280 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-1+FS-280	280	1	IP20	1	13.100	5095281

Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

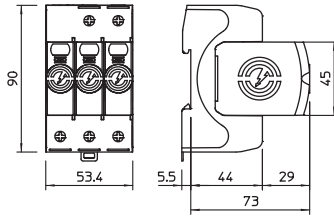
V20-1+FS-280	
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_c 280 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 40 kA
Protection level [L-N]	U_p 1.3 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,8 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,0 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
FM contacts	Changeover
Switching power AC	230 V; 0,5 A
Switching power DC	230 V; 0,1 A / 75 V; 0,5 A
Connection cross-section, FM terminals	0,5 - 1,5 mm ²
Connection cross-section, FM terminals	21 - 16 AWG
Conductor cross-section, flexible (fine-wire)	1,5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1,5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

Connection options





Surge arrester V20, 1-pole + NPE, 280 V



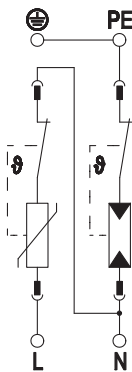
Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-1+NPE-280	280	1+N/PE	IP20	1	24.300	5095251

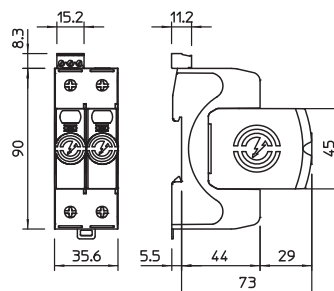
Connection options



V20-1+NPE-280	
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_c 280 V
Nominal discharge current (8/20 μ s)	$I_{n/L-N}$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 60 kA
Protection level [L-N]	U_b 1.3 kV
Combined voltage protection level [L-PE]	$U_{D/L-PE}$ 1.5 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,8 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,0 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



Surge arrester V20, 1-pole + NPE and remote signalling, 280 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-1+NPE+FS-280	280	1+N/PE	IP20	1	24.600	5095331

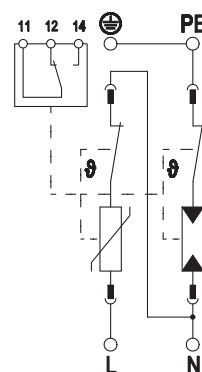
Surge arrester, type 2

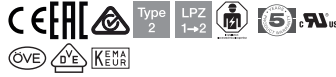
- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

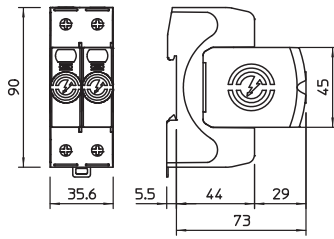
V20-1+NPE+FS-280	
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_c 280 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 60 kA
Protection level [L-N]	U_p 1.3 kV
Combined voltage protection level [L-PE]	$U_{d/L-PE}$ 1.5 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,8 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,0 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
FM contacts	Changeover
Switching power AC	230 V; 0,5 A
Switching power DC	230 V; 0,1 A / 75 V; 0,5 A
Connection cross-section, FM terminals	0,5 - 1,5 mm ²
Connection cross-section, FM terminals	21 - 16 AWG
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

Connection options





Surge arrester V20, 2-pole, 280 V



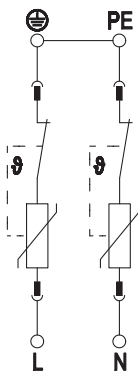
Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-2-280	280	2	IP20	1	25.600	5095162

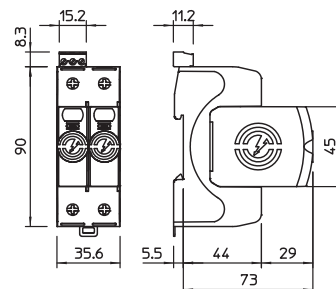
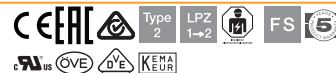
Connection options



V20-2-280	
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_c 280 V
Nominal discharge current (8/20 μ s)	$I_{n/L-N}$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 80 kA
Protection level [L-N]	U_b 1.3 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,8 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,0 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



Surge arrester V20, 2-pole with remote signaling, 280 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-2+FS-280	280	2	IP20	1	25.900	5095282

Surge arrester, type 2

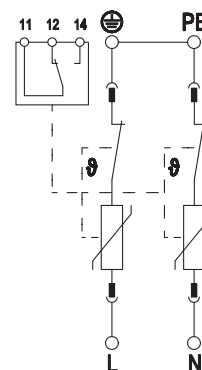
- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

V20-2+FS-280

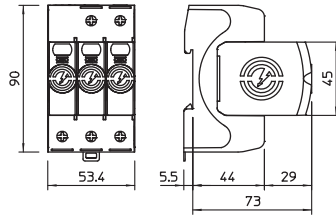
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_c 280 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 80 kA
Protection level [L-N]	U_p 1.3 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,8 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,0 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
FM contacts	Changeover
Switching power AC	230 V; 0,5 A
Switching power DC	230 V; 0,1 A / 75 V; 0,5 A
Connection cross-section, FM terminals	0,5 - 1,5 mm ²
Connection cross-section, FM terminals	21 - 16 AWG
Conductor cross-section, flexible (fine-wire)	1,5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1,5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

Connection options





Surge arrester V20, 2-pole + NPE, 280 V



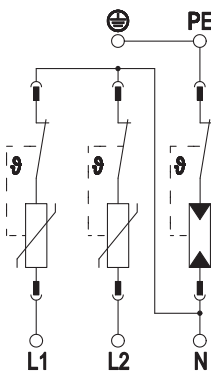
Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-2+NPE-280	280	2+N/PE	IP20	1	34.600	5095252

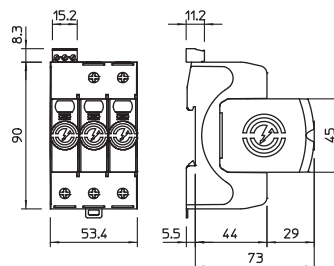
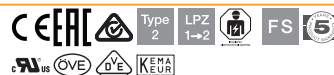
Connection options



V20-2+NPE-280	
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_c 280 V
Nominal discharge current (8/20 μ s)	$I_{n/L-N}$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 60 kA
Protection level [L-N]	U_b 1.3 kV
Combined voltage protection level [L-PE]	$U_{b/L-PE}$ 1.5 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,8 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,0 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



Surge arrester V20, 2-pole + NPE and remote signalling, 280 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-2+NPE+FS-280	280	2+N/PE	IP20	1	34.800	5095332

Surge arrester, type 2

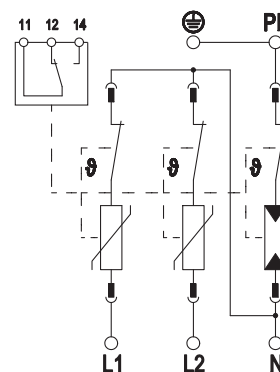
- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

V20-2+NPE+FS-280

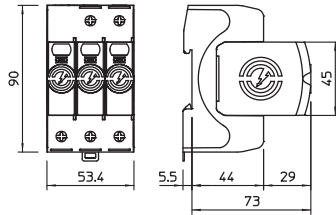
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_c 280 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 60 kA
Protection level [L-N]	U_p 1.3 kV
Combined voltage protection level [L-PE]	$U_{d/L-PE}$ 1.5 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,8 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,0 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
FM contacts	Changeover
Switching power AC	230 V; 0,5 A
Switching power DC	230 V; 0,1 A / 75 V; 0,5 A
Connection cross-section, FM terminals	0,5 - 1,5 mm ²
Connection cross-section, FM terminals	21 - 16 AWG
Conductor cross-section, flexible (fine-wire)	1,5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1,5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

Connection options





Surge arrester V20, 3-pole, 280 V



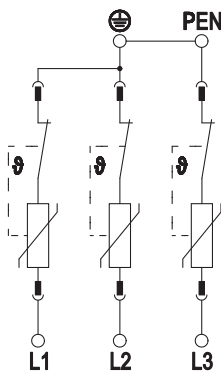
Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-3-280	280	3	IP20	1	36.000	5095163

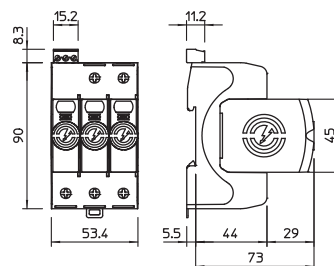
Connection options



V20-3-280	
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_c 280 V
Nominal discharge current (8/20 μ s)	$I_{n/L-N}$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 120 kA
Protection level [L-N]	U_b 1.3 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,8 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,0 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



Surge arrester V20, 3-pole with remote signalling, 280 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-3+FS-280	280	3	IP20	1	36.400	5095283

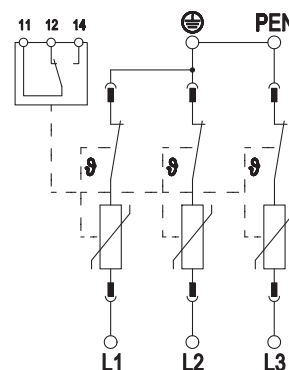
Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

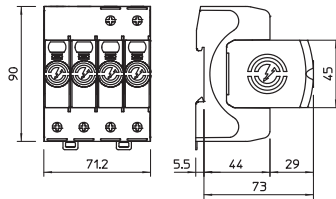
V20-3+FS-280	
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_c 280 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 120 kA
Protection level [L-N]	U_p 1.3 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,8 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,0 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
FM contacts	Changeover
Switching power AC	230 V; 0,5 A
Switching power DC	230 V; 0,1 A / 75 V; 0,5 A
Connection cross-section, FM terminals	0,5 - 1,5 mm ²
Connection cross-section, FM terminals	21 - 16 AWG
Conductor cross-section, flexible (fine-wire)	1,5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1,5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

Connection options





Surge arrester V20, 3-pole + NPE, 280 V



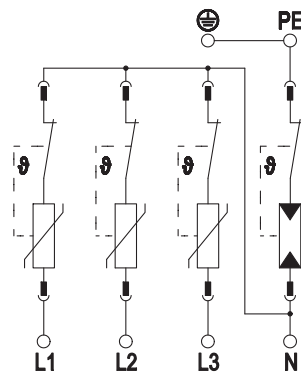
Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-3+NPE-280	280	3+N/PE	IP20	1	45.800	5095253

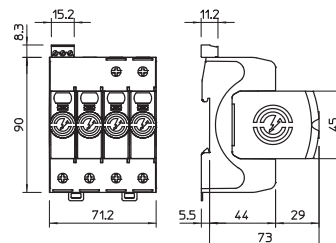
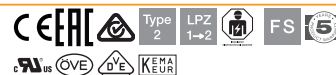
Connection options



V20-3+NPE-280	
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_c 280 V
Nominal discharge current (8/20 μ s)	$I_{n/L-N}$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 60 kA
Protection level [L-N]	U_b 1.3 kV
Combined voltage protection level [L-PE]	$U_{b/L-PE}$ 1.5 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,8 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,0 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



Surge arrester V20, 3-pole + NPE and remote signalling, 280 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-3+NPE+FS-280	280	3+N/PE	IP20	1	46.300	5095333

Surge arrester, type 2

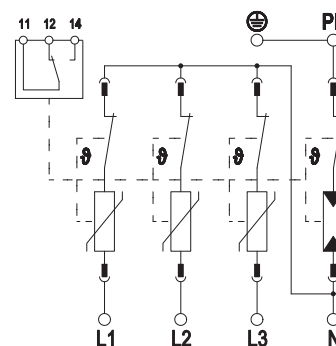
- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

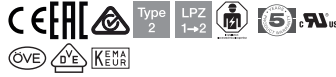
Application: Equipotential bonding in main and sub-distributions.

V20-3+NPE+FS-280

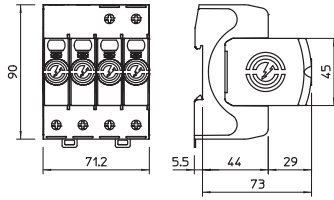
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_c 280 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 60 kA
Protection level [L-N]	U_p 1.3 kV
Combined voltage protection level [L-PE]	$U_{d/L-PE}$ 1.5 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,8 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,0 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
FM contacts	Changeover
Switching power AC	230 V; 0,5 A
Switching power DC	230 V; 0,1 A / 75 V; 0,5 A
Connection cross-section, FM terminals	0,5 - 1,5 mm ²
Connection cross-section, FM terminals	21 - 16 AWG
Conductor cross-section, flexible (fine-wire)	1,5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1,5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

Connection options





Surge arrester V20, 4-pole, 280 V



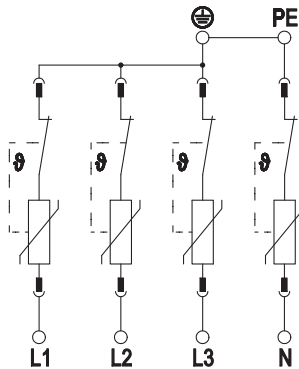
Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-4-280	280	4	IP20	1	47.000	5095164

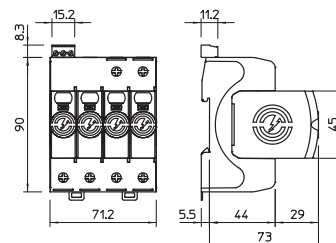
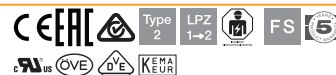
Connection options



V20-4-280	
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_c 280 V
Nominal discharge current (8/20 μ s)	$I_{n/L-N}$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 160 kA
Protection level [L-N]	U_b 1.3 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,8 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,0 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



Surge arrester V20, 4-pole with remote signalling, 280 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-4+FS-280	280	4	IP20	1	47.500	5095284

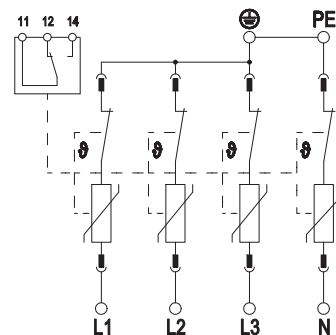
Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

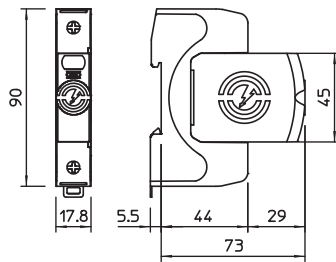
V20-4+FS-280	
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_C 280 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 160 kA
Protection level [L-N]	U_p 1.3 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,8 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,0 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
FM contacts	Changeover
Switching power AC	230 V; 0,5 A
Switching power DC	230 V; 0,1 A / 75 V; 0,5 A
Connection cross-section, FM terminals	0,5 - 1,5 mm ²
Connection cross-section, FM terminals	21 - 16 AWG
Conductor cross-section, flexible (fine-wire)	1,5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1,5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

Connection options





Surge arrester V20, 1-pole, 320 V



Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-1-320	320	1	IP20	1	13.000	5095171

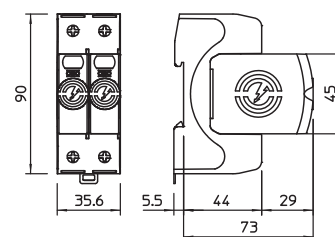
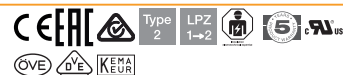
Connection options



V20-1-320	
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_c 320 V
Nominal discharge current (8/20 μ s)	$I_{n/L-N}$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 40 kA
Protection level [L-N]	U_b 1.4 kV
Residual voltage [L-N] @ 1 kA	U_{res} 1,0 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,2 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



Surge arrester V20, 1-pole + NPE, 320 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-1+NPE-320	320	1+N/PE	IP20	1	24.400	5095261

Surge arrester, type 2

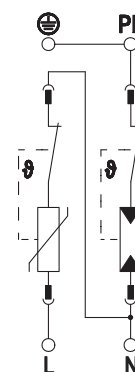
- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

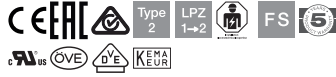
Application: Equipotential bonding in main and sub-distributions.

V20-1+NPE-320

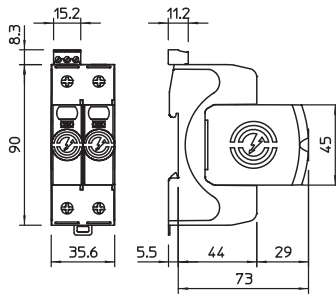
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_c 320 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 60 kA
Protection level [L-N]	U_p 1.4 kV
Combined voltage protection level [L-PE]	$U_{p/L-PE}$ 1.7 kV
Residual voltage [L-N] @ 1 kA	U_{res} 1,0 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,2 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

Connection options





Surge arrester V20, 1-pole + NPE and remote signalling, 320 V



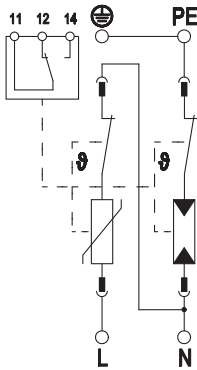
Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-1+NPE+FS-320	320	1+N/PE	IP20	1	24.700	5095341

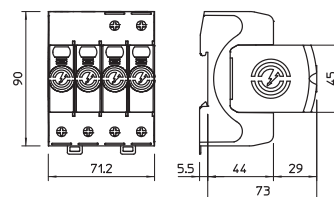
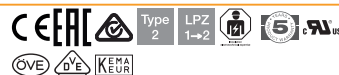
Connection options



V20-1+NPE+FS-320	
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_c 320 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 60 kA
Protection level [L-N]	U_b 1.4 kV
Combined voltage protection level [L-PE]	$U_{D/L-PE}$ 1.7 kV
Residual voltage [L-N] @ 1 kA	U_{res} 1,0 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,2 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
FM contacts	Changeover
Switching power AC	230 V; 0,5 A
Switching power DC	230 V; 0,1 A / 75 V; 0,5 A
Connection cross-section, FM terminals	0,5 - 1,5 mm ²
Connection cross-section, FM terminals	21 - 16 AWG
Conductor cross-section, flexible (fine-wire)	1,5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1,5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



Surge arrester V20, 3-pole + NPE, 320 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-3+NPE-320	320	3+N/PE	IP20	1	46.100	5095263

Surge arrester, type 2

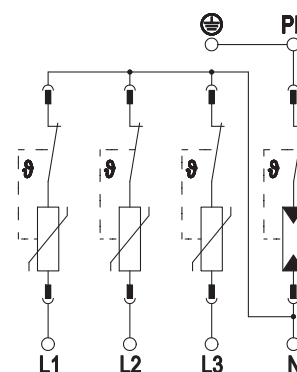
- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

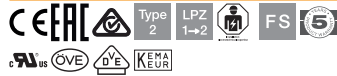
Application: Equipotential bonding in main and sub-distributions.

V20-3+NPE-320

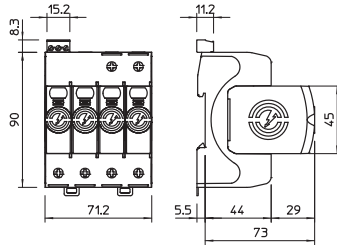
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_c 320 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 60 kA
Protection level [L-N]	U_p 1.4 kV
Combined voltage protection level [L-PE]	$U_{p/L-PE}$ 1.7 kV
Residual voltage [L-N] @ 1 kA	U_{res} 1,0 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,2 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

Connection options





Surge arrester V20, 3-pole + NPE and remote signalling, 320 V



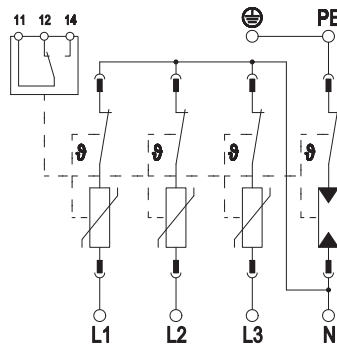
Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-3+NPE+FS-320	320	3+N/PE	IP20	1	46.600	5095343

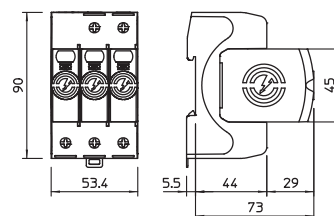
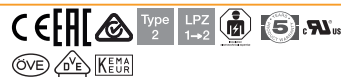
Connection options



V20-3+NPE+FS-320	
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_c 320 V
Nominal discharge current (8/20 μ s)	$I_{n/L-N}$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 60 kA
Protection level [L-N]	U_b 1.4 kV
Combined voltage protection level [L-PE]	$U_{D/L-PE}$ 1.7 kV
Residual voltage [L-N] @ 1 kA	U_{res} 1,0 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,2 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
FM contacts	Changeover
Switching power AC	230 V; 0,5 A
Switching power DC	230 V; 0,1 A / 75 V; 0,5 A
Connection cross-section, FM terminals	0,5 - 1,5 mm ²
Connection cross-section, FM terminals	21 - 16 AWG
Conductor cross-section, flexible (fine-wire)	1,5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1,5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



Surge arrester V20, 3-pole, 320 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-3-320	320	3	IP20	1	36.300	5095173

Surge arrester, type 2

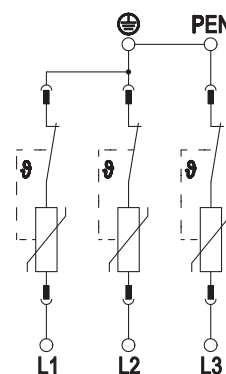
- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

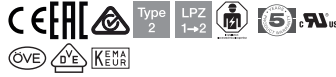
Application: Equipotential bonding in main and sub-distributions.

V20-3-320

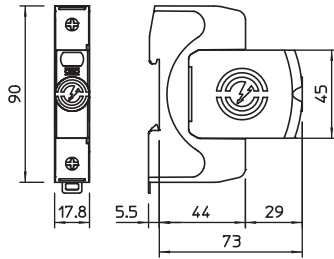
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_c 320 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 120 kA
Protection level [L-N]	U_p 1.4 kV
Residual voltage [L-N] @ 1 kA	U_{res} 1,0 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,2 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

Connection options





Surge arrester V20, 1-pole, 385 V



Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-1-385	385	1	IP20	1	13.300	5095191

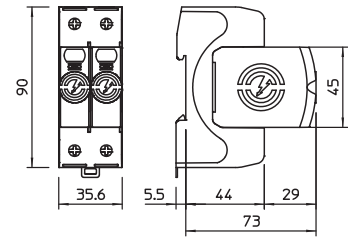
Connection options



V20-1-385	
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 350 V
Maximum continuous voltage AC	U_c 385 V
Nominal discharge current (8/20 μ s)	$I_{n/L-N}$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 40 kA
Protection level [L-N]	U_b 1.7 kV
Residual voltage [L-N] @ 1 kA	U_{res} 1.2 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1.4 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



Surge arrester V20, 1-pole + NPE, 385 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-1+NPE-385	385	1+N/PE	IP20	1	24.700	5095271

Surge arrester, type 2

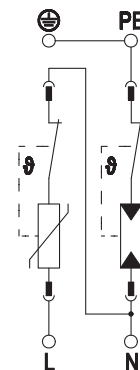
- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

V20-1+NPE-385

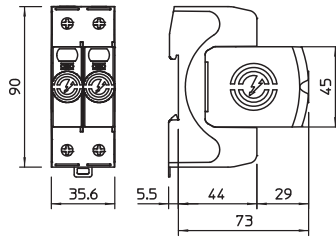
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 350 V
Maximum continuous voltage AC	U_c 385 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 60 kA
Protection level [L-N]	U_p 1.7 kV
Combined voltage protection level [L-PE]	$U_{p/L-PE}$ 1.9 kV
Residual voltage [L-N] @ 1 kA	U_{res} 1,2 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,4 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

Connection options





Surge arrester V20, 2-pole, 385 V



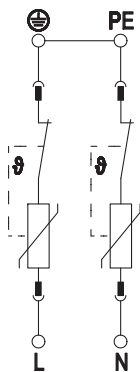
Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-2-385	385	2	IP20	1	26.400	5095192

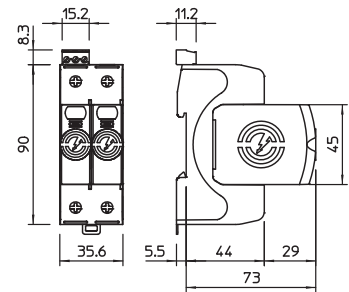
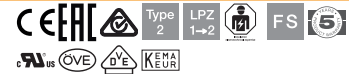
Connection options



V20-2-385	
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 350 V
Maximum continuous voltage AC	U_c 385 V
Nominal discharge current (8/20 μ s)	$I_{n/L-N}$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 80 kA
Protection level [L-N]	U_b 1.7 kV
Residual voltage [L-N] @ 1 kA	U_{res} 1.2 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1.4 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



Surge arrester V20, 2-pole with remote signaling, 385 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-2+FS-385	385	2	IP20	1	26.700	5095302

Surge arrester, type 2

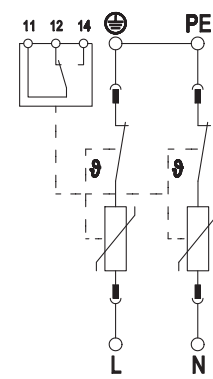
- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

V20-2+FS-385

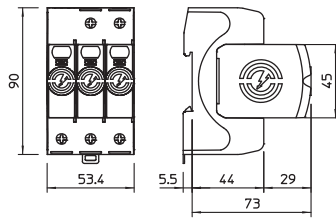
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 350 V
Maximum continuous voltage AC	U_c 385 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 80 kA
Protection level [L-N]	U_p 1.7 kV
Residual voltage [L-N] @ 1 kA	U_{res} 1,2 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,4 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
FM contacts	Changeover
Switching power AC	230 V; 0,5 A
Switching power DC	230 V; 0,1 A / 75 V; 0,5 A
Connection cross-section, FM terminals	0,5 - 1,5 mm ²
Connection cross-section, FM terminals	21 - 16 AWG
Conductor cross-section, flexible (fine-wire)	1,5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1,5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

Connection options





Surge arrester V20, 3-pole, 385 V



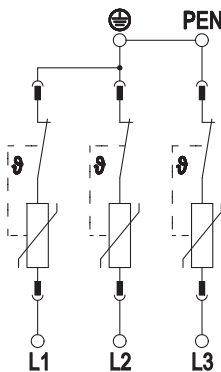
Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-3-385	385	3	IP20	1	35.600	5095193

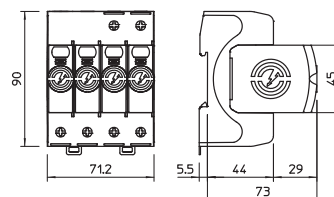
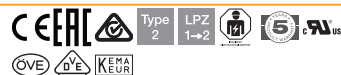
Connection options



V20-3-385	
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 350 V
Maximum continuous voltage AC	U_c 385 V
Nominal discharge current (8/20 μ s)	$I_{n/L-N}$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 120 kA
Protection level [L-N]	U_b 1.7 kV
Residual voltage [L-N] @ 1 kA	U_{res} 1.2 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1.4 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



Surge arrester V20, 3-pole + NPE, 385 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-3+NPE-385	385	3+N/PE	IP20	1	47.000	5095273

Surge arrester, type 2

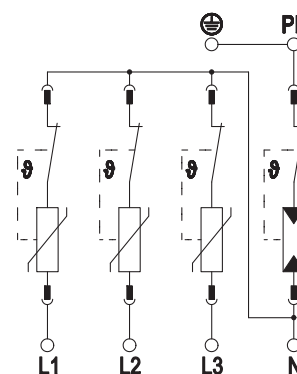
- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

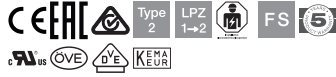
Application: Equipotential bonding in main and sub-distributions.

V20-3+NPE-385

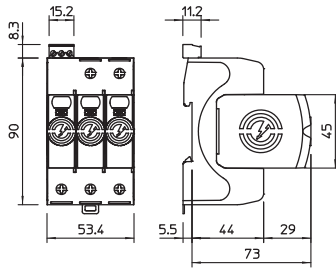
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 350 V
Maximum continuous voltage AC	U_c 385 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 60 kA
Protection level [L-N]	U_p 1.7 kV
Combined voltage protection level [L-PE]	$U_{p/L-PE}$ 1.9 kV
Residual voltage [L-N] @ 1 kA	U_{res} 1,2 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,4 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

Connection options





Surge arrester V20, 3-pole with remote signaling, 385 V



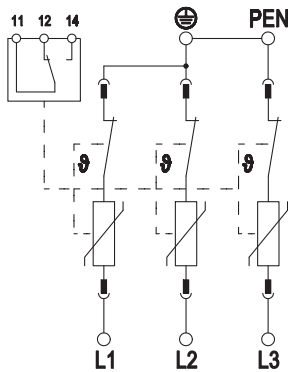
Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-3+FS-385	385	3	IP20	1	37.600	5095303

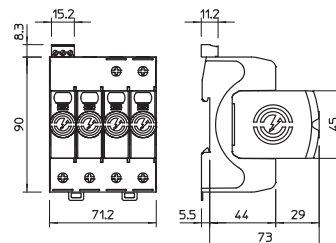
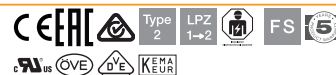
Connection options



V20-3+FS-385	
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 350 V
Maximum continuous voltage AC	U_c 385 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 120 kA
Protection level [L-N]	U_b 1.7 kV
Residual voltage [L-N] @ 1 kA	U_{res} 1.2 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1.4 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
FM contacts	Changeover
Switching power AC	230 V; 0,5 A
Switching power DC	230 V; 0,1 A / 75 V; 0,5 A
Connection cross-section, FM terminals	0,5 - 1,5 mm ²
Connection cross-section, FM terminals	21 - 16 AWG
Conductor cross-section, flexible (fine-wire)	1,5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1,5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



Surge arrester V20, 3-pole + NPE and remote signalling, 385 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-3+NPE+FS-385	385	3+N/PE	IP20	1	47.500	5095353

Surge arrester, type 2

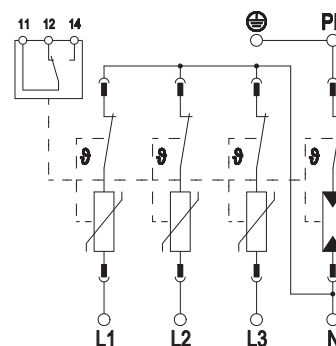
- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

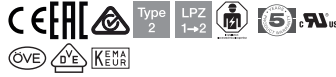
Application: Equipotential bonding in main and sub-distributions.

V20-3+NPE+FS-385

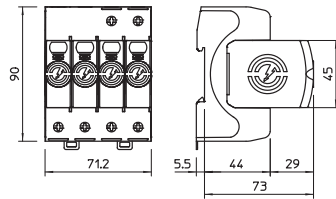
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 350 V
Maximum continuous voltage AC	U_c 385 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 60 kA
Protection level [L-N]	U_p 1.7 kV
Combined voltage protection level [L-PE]	$U_{d/L-PE}$ 1.9 kV
Residual voltage [L-N] @ 1 kA	U_{res} 1,2 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,4 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
FM contacts	Changeover
Switching power AC	230 V; 0,5 A
Switching power DC	230 V; 0,1 A / 75 V; 0,5 A
Connection cross-section, FM terminals	0,5 - 1,5 mm ²
Connection cross-section, FM terminals	21 - 16 AWG
Conductor cross-section, flexible (fine-wire)	1,5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1,5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

Connection options





Surge arrester V20, 4-pole, 385 V



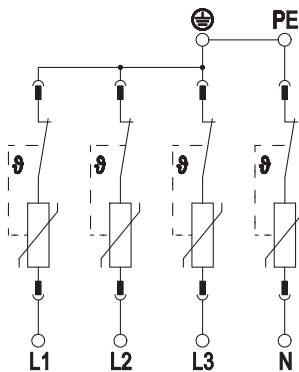
Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-4-385	385	4	IP20	1	48.600	5095194

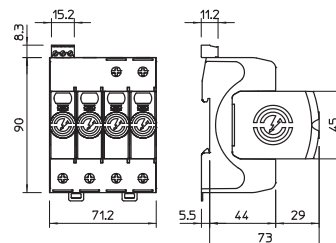
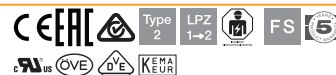
Connection options



V20-4-385	
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 350 V
Maximum continuous voltage AC	U_c 385 V
Nominal discharge current (8/20 μ s)	$I_{n/L-N}$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 160 kA
Protection level [L-N]	U_p 1.7 kV
Residual voltage [L-N] @ 1 kA	U_{res} 1.2 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1.4 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



Surge arrester V20, 4-pole with remote signalling, 385 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V20-4+FS-385	385	4	IP20	1	49.100	5095304

Surge arrester, type 2

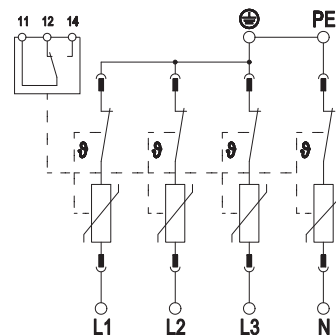
- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic to UL 94 V-0
- The remote signalling variants (FS) have a potential-free changeover contact for remote signalling

Application: Equipotential bonding in main and sub-distributions.

V20-4+FS-385

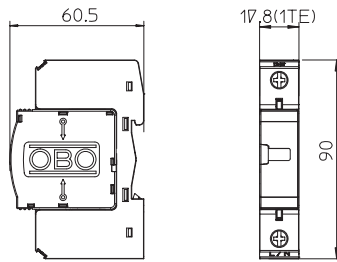
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 350 V
Maximum continuous voltage AC	U_C 385 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 20 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 160 kA
Protection level [L-N]	U_p 1.7 kV
Residual voltage [L-N] @ 1 kA	U_{res} 1,2 kV
Residual voltage [L-N] @ 5 kA	U_{res} 1,4 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, ÖVE, VDE, KEMA
FM contacts	Changeover
Switching power AC	230 V; 0,5 A
Switching power DC	230 V; 0,1 A / 75 V; 0,5 A
Connection cross-section, FM terminals	0,5 - 1,5 mm ²
Connection cross-section, FM terminals	21 - 16 AWG
Conductor cross-section, flexible (fine-wire)	1,5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1,5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

Connection options





Surge arrester, 1-pole 150 V



Surge arrester, type 2

- For surge protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Arresting capacity to 40 kA (8/20) per pole
- Plug-in arrester with dynamic cut-off unit and visual function display
- High-performance varistor technology

Application: Equipotential bonding (LPZ 1 to 2) in main and sub-distributors.

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V20-C 1-150	150	1-pole	1	11.300	5094677

Connection options

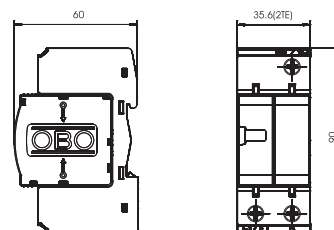


V20-C 1-150

Nominal voltage	U_N	130 V
Max. continuous operating voltage	U_C	150 V
SPD to EN 61643-11		Type 2
SPD to IEC 61643-11		Class II
Lightning protection zone LPZ		1→2
Nominal discharge current (8/20)	I_n	20 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$	20 kA
Maximum discharge current (8/20 μ s)	I_{max}	40 kA
Protection level	U_p	< 0,8 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		1
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²



Surge arrester, 1-pole + NPE 150 V



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V20-C 1+NPE-150	150	1+NPE	1	21.500	5094639

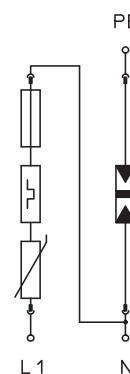
Surge arrester, type 2

- Complete unit consisting of upper part and base, pre-mounted and ready for connection
- Suitable for TN and TT network systems
- Plug-in upper part; upper part can be separated from base without tools
- Incl. thermal and dynamic cut-off unit
- With visual display of defects
- High current conductivity and long service life
- Labelled connections

Application example: Residential buildings, single-family homes and industrial

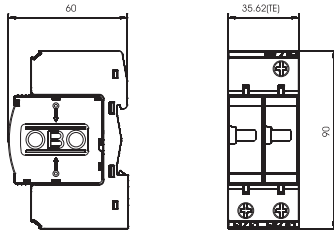
V20-C 1+NPE-150			
Nominal voltage	U_N		130 V
Max. continuous operating voltage	U_C		150 V
SPD to EN 61643-11			Type 2
SPD to IEC 61643-11			Class II
Lightning protection zone LPZ			1→2
Nominal discharge current (8/20)	I_n		20 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$		40 kA
Maximum discharge current (8/20 μ s)	I_{max}		40 kA
Protection level	U_p		< 0,8 kV
Response time	t_A		< 25 ns
Maximum back-up fuse			125 A
Temperature range	ϑ		-40 - +80 °C
Division unit TE (17.5 mm)			2
Protection rating			IP20
Connection cross-section, rigid			2.5 - 35 mm ²
Connection cross-section, multi-wire			2.5 - 35 mm ²
Connection cross-section, flexible			2.5 - 25 mm ²

Connection options





Surge arrester, 2-pole 150 V



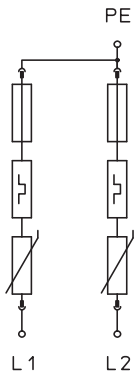
Surge arrester, type 2

- For surge protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Arresting capacity to 40 kA (8/20) per pole
- Plug-in arrester with dynamic cut-off unit and visual function display
- High-performance varistor technology

Application: Equipotential bonding (LPZ 1 to 2) in main and sub-distributors.

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V20-C 2-150	150	2-pole	1	21.300	5094679

Connection options

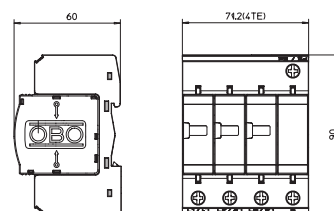


V20-C 2-150

Nominal voltage	U_N	130 V
Max. continuous operating voltage	U_C	150 V
SPD to EN 61643-11		Type 2
SPD to IEC 61643-11		Class II
Lightning protection zone LPZ		1→2
Nominal discharge current (8/20)	I_n	20 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	40 kA
Maximum discharge current (8/20 μ s)	I_{max}	40 kA
Protection level	U_p	< 0,8 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		2
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²



Surge arrester, 3-pole + NPE 150 V



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V20-C 3+NPE-150	150	3+NPE	1	39.600	5094644

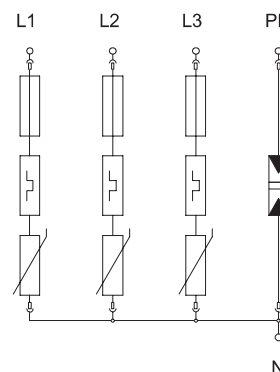
Surge arrester, type 2

- Complete unit consisting of upper part and base, pre-mounted and ready for connection
- Suitable for TN and TT network systems
- Plug-in upper part; upper part can be separated from base without tools
- Incl. thermal and dynamic cut-off unit
- With visual display of defects
- High current conductivity and long service life
- Labelled connections

Application example: Residential buildings, single-family homes and industrial

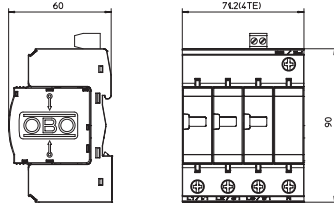
V20-C 3+NPE-150		
Nominal voltage	U_N	130 V
Max. continuous operating voltage	U_C	150 V
SPD to EN 61643-11		Type 2
SPD to IEC 61643-11		Class II
Lightning protection zone LPZ		1→2
Nominal discharge current (8/20)	I_n	20 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$	80 kA
Maximum discharge current (8/20 μ s)	I_{max}	40 kA
Protection level	U_p	< 0,8 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		4
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²

Connection options





Surge arrester, 3-pole + NPE with remote signaling 150 V



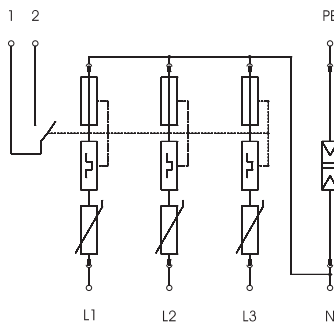
Surge arrester, type 2

- Complete unit consisting of upper part and base, pre-mounted and ready for connection
- Suitable for TN and TT network systems
- Plug-in cover; cover can be separated from base without tools
- With remote signalling and potential-free NO contact for function monitoring
- Incl. thermal and dynamic cut-off unit
- With visual display of defects
- High current conductivity and long service life
- Labelled connections

Application example: Residential buildings, single-family homes and industrial

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V 20-C 3+NPE+FS	150	3+NPE +FS	1	41.300	5094764

Connection options

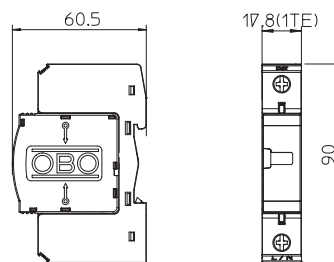


V 20-C 3+NPE+FS		
Nominal voltage	U_N	130 V
Max. continuous operating voltage	U_C	150 V
SPD to EN 61643-11		Type 2
SPD to IEC 61643-11		Class II
Lightning protection zone LPZ		1→2
Nominal discharge current (8/20)	I_n	20 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	80 kA
Maximum discharge current (8/20 μ s)	I_{max}	40 kA
Protection level	U_p	< 0,8 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		4
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²





Surge arrester, 1-pole 280 V



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V20-C 1-280	280	1-pole	1	12.000	5094618

Surge arrester, type 2

- For surge protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Arresting capacity to 40 kA (8/20) per pole
- Plug-in arrester with dynamic cut-off unit and visual function display
- High-performance varistor technology

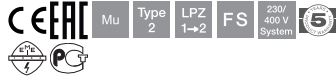
Application: Equipotential bonding (LPZ 1 to 2) in main and sub-distributors.

V20-C 1-280

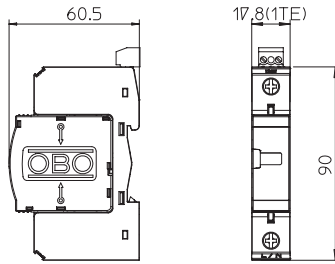
Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	280 V
SPD to EN 61643-11		Type 2
SPD to IEC 61643-11		Class II
Lightning protection zone LPZ		1-2
Nominal discharge current (8/20)	I_n	20 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$	20 kA
Maximum discharge current (8/20 μ s)	I_{max}	40 kA
Protection level	U_p	< 1,3 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		1
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²

Connection options





Surge arrester, 1-pole with remote signalling 280 V



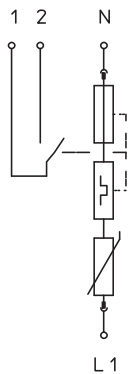
Surge arrester, type 2

- Complete unit consisting of cover and base, pre-mounted and ready for connection
- Suitable for TN network systems
- Plug-in upper part; upper part can be separated from base without tools
- With remote signalling and potential-free NO contact for function monitoring
- Incl. thermal and dynamic cut-off unit
- With visual display of defects
- High current conductivity and long service life
- Labelled connections

Application example: Residential buildings, single-family homes and industrial

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V20-C 1+FS-280	280	1-pole + FS	1	12.400	5094727

Connection options

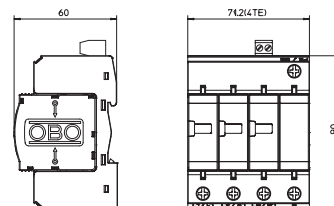
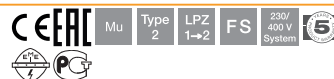


V20-C 1+FS-280

Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	280 V
SPD to EN 61643-11		Type 2
SPD to IEC 61643-11		Class II
Lightning protection zone LPZ		1→2
Nominal discharge current (8/20)	I_n	20 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	20 kA
Maximum discharge current (8/20 μ s)	I_{max}	40 kA
Protection level	U_p	< 1,3 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		1
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²



Surge arrester, 1-pole + NPE with remote signalling 280 V



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V20-C 1+NPE+FS	280	1+NPE+FS	1	22.500	5094760

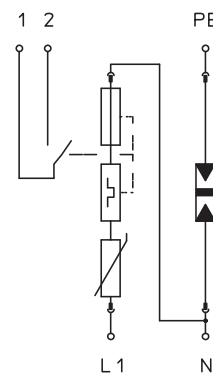
Surge arrester, type 2

- Complete unit consisting of upper part and base, pre-mounted and ready for connection
- Suitable for TN and TT network systems
- Plug-in cover; cover can be separated from base without tools
- With remote signalling and potential-free NO contact for function monitoring
- Incl. thermal and dynamic cut-off unit
- With visual display of defects
- High current conductivity and long service life
- Labelled connections

Application example: Residential buildings, single-family homes and industrial

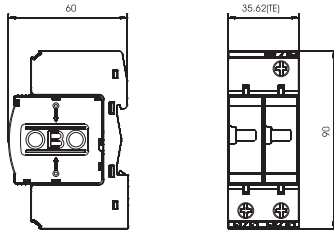
V20-C 1+NPE+FS			
Nominal voltage	U_N		230 V
Max. continuous operating voltage	U_C		280 V
SPD to EN 61643-11			Type 2
SPD to IEC 61643-11			Class II
Lightning protection zone LPZ			1→2
Nominal discharge current (8/20)	I_n		20 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$		40 kA
Maximum discharge current (8/20 μ s)	I_{max}		40 kA
Protection level	U_p		< 1,3 kV
Response time	t_A		< 25 ns
Maximum back-up fuse			125 A
Temperature range	ϑ		-40 - +80 °C
Division unit TE (17.5 mm)			2
Protection rating			IP20
Connection cross-section, rigid			2.5 - 35 mm ²
Connection cross-section, multi-wire			2.5 - 35 mm ²
Connection cross-section, flexible			2.5 - 25 mm ²

Connection options





Surge arrester, 2-pole 280 V



Surge arrester, type 2

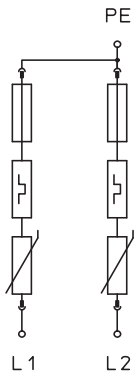
- For surge protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Arresting capacity to 40 kA (8/20) per pole
- Plug-in arrester with dynamic cut-off unit and visual function display
- High-performance varistor technology

Application: Equipotential bonding (LPZ 1 to 2) in main and sub-distributors.

Highest continuous voltage

Type	V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V20-C 2-280	280	2-pole	1	22.700	5094621

Connection options

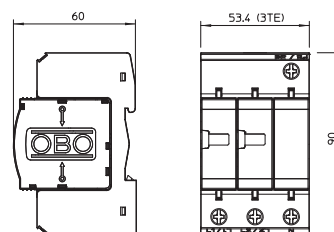


V20-C 2-280

Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	280 V
SPD to EN 61643-11		Type 2
SPD to IEC 61643-11		Class II
Lightning protection zone LPZ		1→2
Nominal discharge current (8/20)	I_n	20 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	40 kA
Maximum discharge current (8/20 μ s)	I_{max}	40 kA
Protection level	U_p	< 1,3 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		2
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²



Surge arrester, 2-pole + NPE 280 V



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V20-C 2+NPE-280	280	2+NPE	1	32.300	5094653

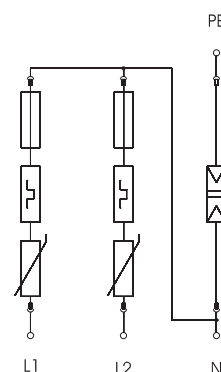
Surge arrester, type 2

- Complete unit consisting of upper part and base, pre-mounted and ready for connection
- Suitable for TN and TT network systems
- Plug-in upper part; upper part can be separated from base without tools
- Incl. thermal and dynamic cut-off unit
- With visual display of defects
- High current conductivity and long service life
- Labelled connections

Application example: Residential buildings, single-family homes and industrial

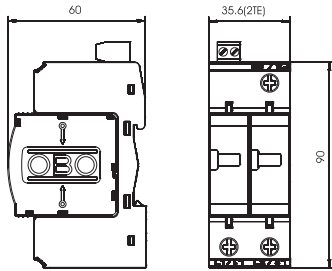
V20-C 2+NPE-280			
Nominal voltage	U_N		230 V
Max. continuous operating voltage	U_C		280 V
SPD to EN 61643-11			Type 2
SPD to IEC 61643-11			Class II
Lightning protection zone LPZ			1→2
Nominal discharge current (8/20)	I_n		20 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$		60 kA
Maximum discharge current (8/20 μ s)	I_{max}		40 kA
Protection level	U_p		< 1,3 kV
Response time	t_A		< 25 ns
Maximum back-up fuse			125 A
Temperature range	ϑ		-40 - +80 °C
Division unit TE (17.5 mm)			3
Protection rating			IP20
Connection cross-section, rigid			2.5 - 35 mm ²
Connection cross-section, multi-wire			2.5 - 35 mm ²
Connection cross-section, flexible			2.5 - 25 mm ²

Connection options





Surge arrester, 2-pole with remote signalling 280 V



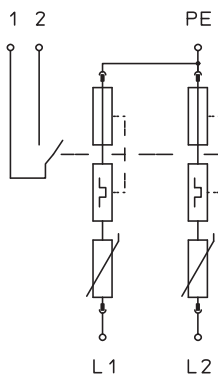
Surge arrester, type 2

- Complete unit consisting of cover and base, pre-mounted and ready for connection
- Suitable for TN network systems
- Plug-in upper part; upper part can be separated from base without tools
- With remote signalling and potential-free NO contact for function monitoring
- Incl. thermal and dynamic cut-off unit
- With visual display of defects
- High current conductivity and long service life
- Labelled connections

Application example: Residential buildings, single-family homes and industrial

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V20-C 2+FS-280	280	2-pole + FS	1	22.500	5094632

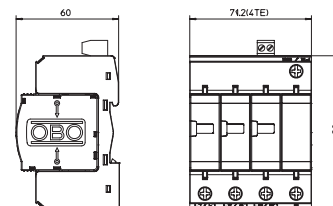
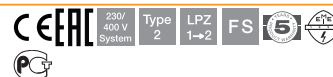
Connection options



V20-C 2+FS-280	
Nominal voltage	U_N 230 V
Max. continuous operating voltage	U_C 280 V
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
Lightning protection zone LPZ	1→2
Nominal discharge current (8/20)	I_n 20 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$ 40 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Protection level	U_p < 1,3 kV
Response time	t_A < 25 ns
Maximum back-up fuse	125 A
Temperature range	ϑ -40 - +80 °C
Division unit TE (17.5 mm)	2
Protection rating	IP20
Connection cross-section, rigid	2.5 - 35 mm ²
Connection cross-section, multi-wire	2.5 - 35 mm ²
Connection cross-section, flexible	2.5 - 25 mm ²



Surge arrester, 2-pole + NPE with remote signalling 280 V



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V20-C 2+NPE+FS	280	2+NPE+FS	1	32.500	5094762

Surge arrester, type 2

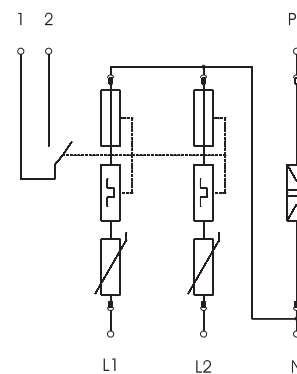
- Complete unit consisting of upper part and base, pre-mounted and ready for connection
- Suitable for TN and TT network systems
- Plug-in cover; cover can be separated from base without tools
- With remote signalling and potential-free NO contact for function monitoring
- Incl. thermal and dynamic cut-off unit
- With visual display of defects
- High current conductivity and long service life
- Labelled connections

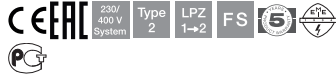
Application example: Residential buildings, single-family homes and industrial

V20-C 2+NPE+FS

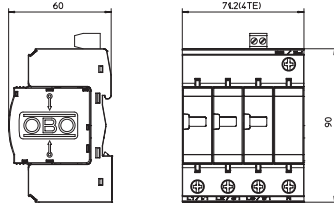
Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	280 V
SPD to EN 61643-11		Type 2
SPD to IEC 61643-11		Class II
Lightning protection zone LPZ		1→2
Nominal discharge current (8/20)	I_n	20 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$	60 kA
Maximum discharge current (8/20 μ s)	I_{max}	40 kA
Protection level	U_p	< 1,3 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		3
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²

Connection options





Surge arrester, 3-pole + NPE with remote signaling 280 V



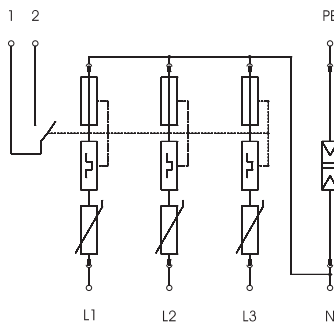
Surge arrester, type 2

- Complete unit consisting of upper part and base, pre-mounted and ready for connection
- Suitable for TN and TT network systems
- Plug-in cover; cover can be separated from base without tools
- With remote signalling and potential-free NO contact for function monitoring
- Incl. thermal and dynamic cut-off unit
- With visual display of defects
- High current conductivity and long service life
- Labelled connections

Application example: Residential buildings, single-family homes and industrial

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V20-C 3+NPE+FS	280	3+NPE+FS	1	43.300	5094765

Connection options

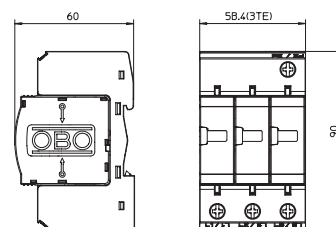


V20-C 3+NPE+FS		
Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	280 V
SPD to EN 61643-11		Type 2
SPD to IEC 61643-11		Class II
Lightning protection zone LPZ		1→2
Nominal discharge current (8/20)	I_n	20 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$	50 kA
Maximum discharge current (8/20 μ s)	I_{max}	40 kA
Protection level	U_p	< 1,3 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		4
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²





Surge arrester, 3-pole 280 V



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V20-C 3-280	280	3-pole	1	33.500	5094624

Surge arrester, type 2

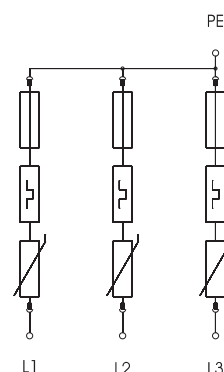
- For surge protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Arresting capacity to 40 kA (8/20) per pole
- Plug-in arrester with dynamic cut-off unit and visual function display
- High-performance varistor technology

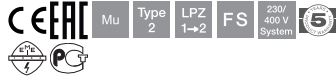
Application: Equipotential bonding (LPZ 1 to 2) in main and sub-distributors.

V20-C 3-280

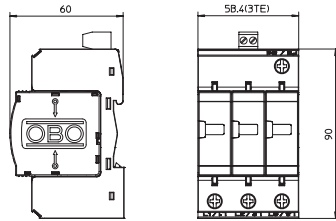
Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	280 V
SPD to EN 61643-11		Type 2
SPD to IEC 61643-11		Class II
Lightning protection zone LPZ		1-2
Nominal discharge current (8/20)	I_n	20 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$	60 kA
Maximum discharge current (8/20 μ s)	I_{max}	40 kA
Protection level	U_p	< 1,3 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		3
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²

Connection options





Surge arrester, 3-pole with remote signalling 280 V



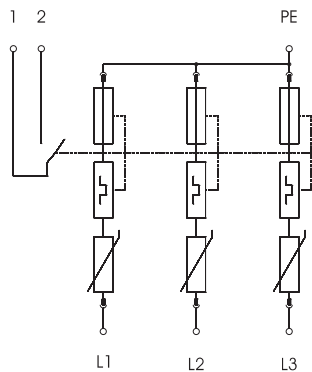
Surge arrester, type 2

- Complete unit consisting of cover and base, pre-mounted and ready for connection
- Suitable for TN network systems
- Plug-in upper part; upper part can be separated from base without tools
- With remote signalling and potential-free NO contact for function monitoring
- Incl. thermal and dynamic cut-off unit
- With visual display of defects
- High current conductivity and long service life
- Labelled connections

Application example: Residential buildings, single-family homes and industrial

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V20-C 3+FS-280	280	3-pole + FS	1	33.700	5094731

Connection options

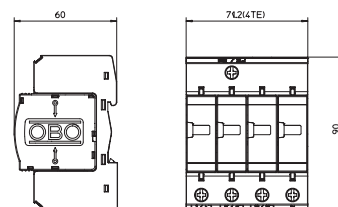


V20-C 3+FS-280	
Nominal voltage	U_N 230 V
Max. continuous operating voltage	U_C 280 V
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
Lightning protection zone LPZ	1→2
Nominal discharge current (8/20)	I_n 20 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$ 60 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Protection level	U_p < 1,3 kV
Response time	t_A < 25 ns
Maximum back-up fuse	125 A
Temperature range	ϑ -40 - +80 °C
Division unit TE (17.5 mm)	3
Protection rating	IP20
Connection cross-section, rigid	2.5 - 35 mm ²
Connection cross-section, multi-wire	2.5 - 35 mm ²
Connection cross-section, flexible	2.5 - 25 mm ²





Surge arrester, 4-pole 280 V



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V20-C 4-280	280	4-pole	1	43.000	5094627

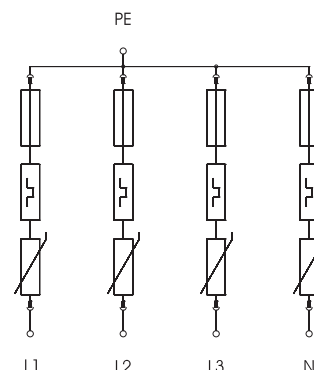
Surge arrester, type 2

- For surge protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Arresting capacity to 40 kA (8/20) per pole
- Plug-in arrester with dynamic cut-off unit and visual function display
- High-performance varistor technology

Application: Equipotential bonding (LPZ 1 to 2) in main and sub-distributors.

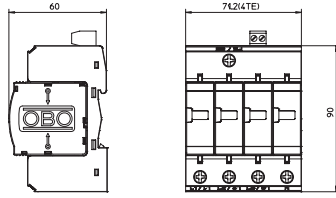
V20-C 4-280		
Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	280 V
SPD to EN 61643-11		Type 2
SPD to IEC 61643-11		Class II
Lightning protection zone LPZ		1-2
Nominal discharge current (8/20)	I_n	20 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$	80 kA
Maximum discharge current (8/20 μ s)	I_{max}	40 kA
Protection level	U_p	< 1,3 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		4
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²

Connection options





Surge arrester, 4-pole with remote signalling 280 V



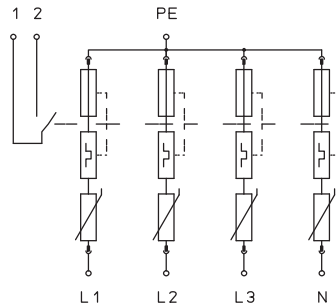
Surge arrester, type 2

- Complete unit consisting of cover and base, pre-mounted and ready for connection
- Suitable for TN network systems
- Plug-in upper part; upper part can be separated from base without tools
- With remote signalling and potential-free NO contact for function monitoring
- Incl. thermal and dynamic cut-off unit
- With visual display of defects
- High current conductivity and long service life
- Labelled connections

Application example: Residential buildings, single-family homes and industrial

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V20-C 4+FS-280	280	4-pole + FS	1	43.000	5094734

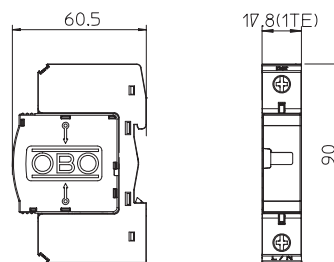
Connection options



V20-C 4+FS-280	
Nominal voltage	U_N 230 V
Max. continuous operating voltage	U_C 280 V
SPD to EN 61643-11	Type 2
SPD to IEC 61643-11	Class II
Lightning protection zone LPZ	1→2
Nominal discharge current (8/20)	I_n 20 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$ 80 kA
Maximum discharge current (8/20 μ s)	I_{max} 40 kA
Protection level	U_p < 1,3 kV
Response time	t_A < 25 ns
Maximum back-up fuse	125 A
Temperature range	ϑ -40 - +80 °C
Division unit TE (17.5 mm)	4
Protection rating	IP20
Connection cross-section, rigid	2.5 - 35 mm ²
Connection cross-section, multi-wire	2.5 - 35 mm ²
Connection cross-section, flexible	2.5 - 25 mm ²



Surge arrester, 1-pole 385 V



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V20-C 1-385	385	1-pole	1	12.500	5094703

Surge arrester, type 2

- For surge protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Arresting capacity to 40 kA (8/20) per pole
- Plug-in arrester with dynamic cut-off unit and visual function display
- High-performance varistor technology

Application: Equipotential bonding (LPZ 1 to 2) in main and sub-distributors.

V20-C 1-385

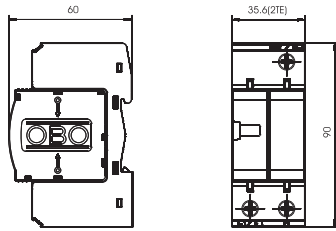
Nominal voltage	U_N	350 V
Max. continuous operating voltage	U_C	385 V
SPD to EN 61643-11		Type 2
SPD to IEC 61643-11		Class II
Lightning protection zone LPZ		1→2
Nominal discharge current (8/20)	I_n	20 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$	20 kA
Maximum discharge current (8/20 μ s)	I_{max}	40 kA
Protection level	U_p	< 1,7 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		1
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²

Connection options





Surge arrester, 1-pole + NPE 385 V



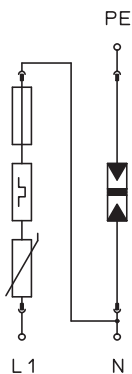
Surge arrester, type 2

- Complete unit consisting of upper part and base, pre-mounted and ready for connection
- Suitable for TN and TT network systems
- Plug-in upper part; upper part can be separated from base without tools
- Incl. thermal and dynamic cut-off unit
- With visual display of defects
- High current conductivity and long service life
- Labelled connections

Application example: Residential buildings, single-family homes and industrial

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V20-C 1+NPE-385	385	1+NPE	1	23.300	5094666

Connection options

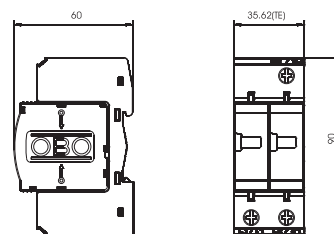


V20-C 1+NPE-385		
Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	385 V
SPD to EN 61643-11		Type 2
SPD to IEC 61643-11		Class II
Lightning protection zone LPZ		1→2
Nominal discharge current (8/20)	I_n	20 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$	40 kA
Maximum discharge current (8/20 μ s)	I_{max}	40 kA
Protection level	U_p	< 1,7 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		2
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²





Surge arrester, 2-pole 385 V



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V20-C 2-385	385	2-pole	1	23.700	5094704

Surge arrester, type 2

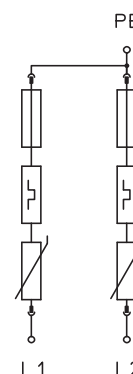
- For surge protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Arresting capacity to 40 kA (8/20) per pole
- Plug-in arrester with dynamic cut-off unit and visual function display
- High-performance varistor technology

Application: Equipotential bonding (LPZ 1 to 2) in main and sub-distributors.

V20-C 2-385

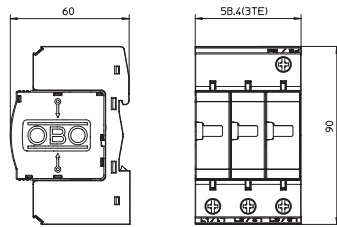
Nominal voltage	U_N	350 V
Max. continuous operating voltage	U_C	385 V
SPD to EN 61643-11		Type 2
SPD to IEC 61643-11		Class II
Lightning protection zone LPZ		1-2
Nominal discharge current (8/20)	I_n	20 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$	40 kA
Maximum discharge current (8/20 μ s)	I_{max}	40 kA
Protection level	U_p	< 1,7 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		2
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²

Connection options





Surge arrester, 3-pole 385 V



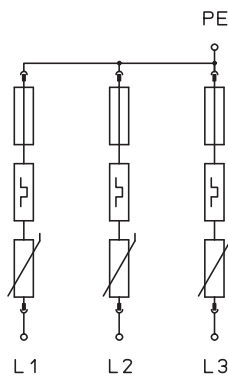
Surge arrester, type 2

- For surge protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Arresting capacity to 40 kA (8/20) per pole
- Plug-in arrester with dynamic cut-off unit and visual function display
- High-performance varistor technology

Application: Equipotential bonding (LPZ 1 to 2) in main and sub-distributors.

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V20-C 3-385	385	3-pole	1	34.500	5094705

Connection options

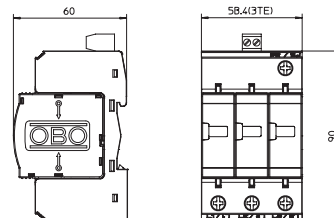


V20-C 3-385

Nominal voltage	U_N	350 V
Max. continuous operating voltage	U_C	385 V
SPD to EN 61643-11		Type 2
SPD to IEC 61643-11		Class II
Lightning protection zone LPZ		1→2
Nominal discharge current (8/20)	I_n	20 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	60 kA
Maximum discharge current (8/20 μ s)	I_{max}	40 kA
Protection level	U_p	< 1,7 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		3
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²



Surge arrester, 3-pole with remote signalling 385 V



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V20-C 3+FS-385	385	3-pole + FS	1	34.700	5094780

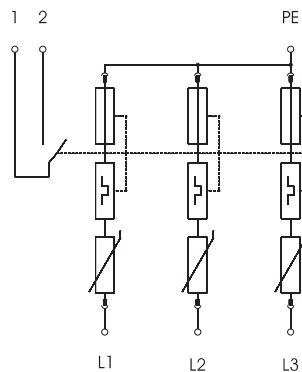
Surge arrester, type 2

- Complete unit consisting of upper part and base, pre-mounted and ready for connection
- Suitable for TN network systems
- Plug-in cover; cover can be separated from base without tools
- With remote signalling and potential-free NO contact for function monitoring
- Incl. thermal and dynamic cut-off unit
- With visual display of defects
- High current conductivity and long service life
- Labelled connections

Application example: Residential buildings, single-family homes and industrial

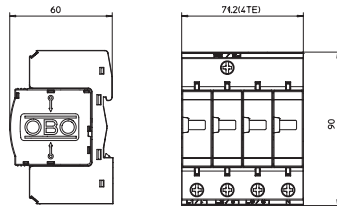
V20-C 3+FS-385			
Nominal voltage	U_N		350 V
Max. continuous operating voltage	U_C		385 V
SPD to EN 61643-11			Type 2
SPD to IEC 61643-11			Class II
Lightning protection zone LPZ			1→2
Nominal discharge current (8/20)	I_n		20 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$		60 kA
Maximum discharge current (8/20 μ s)	I_{max}		40 kA
Protection level	U_p		< 1,7 kV
Response time	t_A		< 25 ns
Maximum back-up fuse			125 A
Temperature range	ϑ		-40 - +80 °C
Division unit TE (17.5 mm)			3
Protection rating			IP20
Connection cross-section, rigid			2.5 - 35 mm ²
Connection cross-section, multi-wire			2.5 - 35 mm ²
Connection cross-section, flexible			2.5 - 25 mm ²

Connection options





Surge arrester, 4-pole 385 V



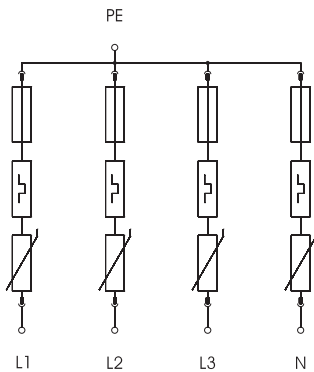
Surge arrester, type 2

- For surge protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Arresting capacity to 40 kA (8/20) per pole
- Plug-in arrester with dynamic cut-off unit and visual function display
- High-performance varistor technology

Application: Equipotential bonding (LPZ 1 to 2) in main and sub-distributors.

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V20-C 4-385	385	4-pole	1	44.000	5094708

Connection options

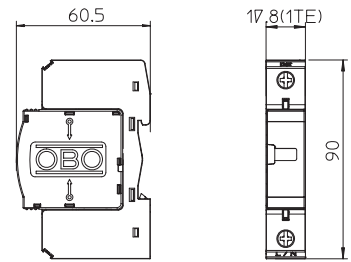


V20-C 4-385

Nominal voltage	U_N	350 V
Max. continuous operating voltage	U_C	385 V
SPD to EN 61643-11		Type 2
SPD to IEC 61643-11		Class II
Lightning protection zone LPZ		1→2
Nominal discharge current (8/20)	I_n	20 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$	80 kA
Maximum discharge current (8/20 μ s)	I_{max}	40 kA
Protection level	U_p	< 1,7 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		4
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²



Surge Controller V20 1pole 320V



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V20-C 1-320	320	1-pole	1	12.500	5094684

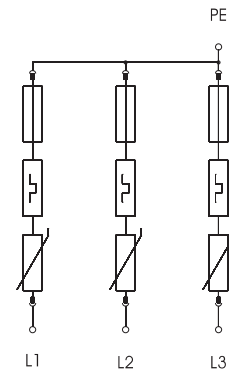
Surge arrester, type 2, 320 V

- For surge protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Arresting capacity to 40 kA (8/20) per pole
- Arrester, connectable with dynamic cut-off unit and visual function display
- Encapsulated, non-extinguishing zinc oxide varistor arrester for use in distributor housings

Application: Equipotential bonding (LPZ 1 to 2) in main and sub-distributors.

V20-C 1-320		
Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	320 V
SPD to EN 61643-11		Type 2
SPD to IEC 61643-11		Class II
Lightning protection zone LPZ		1→2
Nominal discharge current (8/20)	I_n	20 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$	20 kA
Maximum discharge current (8/20 μ s)	I_{max}	40 kA
Protection level	U_p	< 1,4 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		1
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²

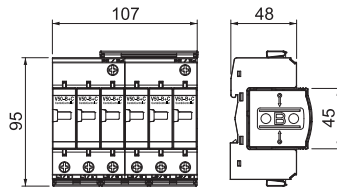
Connection options



PA

Type	LPZ	230V / 400V System
1	0→2	

Twin Combi Controller V50 B+C 3



Combination arrester, lightning arrester, type 1+2

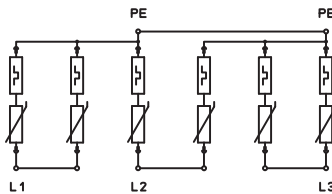
- Voltage protection level < 1.3 kV allows device protection
- For lightning protection equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity 20 kA (10/350) per phase and up to 60 kA (10/350) in total
- Arresting current 50 kA (8/20)
- Arrester backup fuse up to 125 A gL/gG

Application: Buildings with external lightning protection.

Highest continuous voltage

Type	V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V50-B+C 3 TCC	280	Other	1	81.600	5093600

Connection options

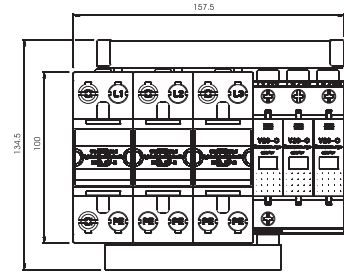


V50-B+C 3 TCC

Nominal voltage	U_N	230 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class II
Lightning protection zone LPZ		0→2
Impulse discharge current (10/350)	I_{imp}	20 kA
Lightning surge current (10/350)	I_{total}	50 kA
Nominal discharge current (8/20)	I_n	50 kA
Maximum discharge current (8/20 μ s)	I_{max}	80 kA
Protection level	U_p	<1,3 kV
Response time	t_A	<25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		6
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 35 mm ²



Protection set MCD + V20, leakage current-free, 3-pole



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
PS3-VA TNC	255	3-pole	1	162.000	5089768

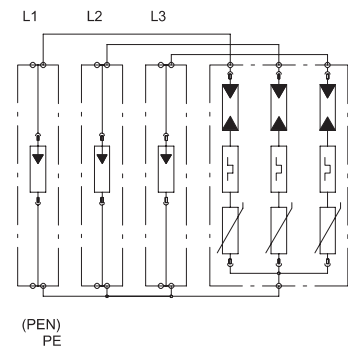
Protection set VA, lightning and surge arrester combination, type 1+2

- For lightning protection equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity to 50 kA (10/350) per pole and up to 125 kA (10/350) N-PE
- Leakage current-free
- Plug-in arrester, incl. connecting bridges, labelled connection terminals
- Encapsulated, non-extinguishing arrester for use in distributor housings

Application: Industrial systems with special requirements.

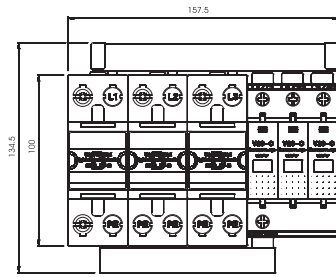
PS3-VA TNC		
Nominal voltage	U_N	230 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0-2
Impulse discharge current (10/350)	I_{imp}	100 kA
Lightning surge current (10/350)	I_{total}	100 kA
Nominal discharge current (8/20)	I_n	100 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	100 kA
Maximum discharge current (8/20 μ s)	I_{max}	100 kA
Protection level	U_p	<1,3 kV
Response time	t_A	<25 ns
Follow current quenching capacity (eff) [N-PE]	I_{fi}	25 kA
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +85 °C
Division unit TE (17.5 mm)		10
Protection rating		IP20
Connection cross-section, rigid		10 - 50 mm ²
Connection cross-section, multi-wire		10 - 35 mm ²
Connection cross-section, flexible		10 - 25 mm ²

Connection options





Protection set MCD + V20 3-pole



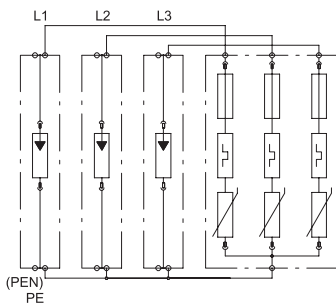
Protection set, lightning and surge arrester combination, type 1+2

- For lightning protection equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity to 50 kA (10/350) per pole
- Arrester, connectable, incl. connecting bridges, labelled connection terminals
- Encapsulated, non-extinguishing arrester for use in distributor housings

Application: Mobile telecommunications systems and industrial systems with special requirements.

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
PS3-B+C TNC	255	3-pole	1	158.000	5089754

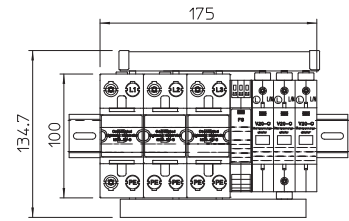
Connection options



PS3-B+C TNC	
Nominal voltage	U_N 230 V
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
Lightning protection zone LPZ	0→2
Impulse discharge current (10/350)	I_{imp} 50 kA
Lightning surge current (10/350)	I_{total} 100 kA
Nominal discharge current (8/20)	I_n 50 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$ 100 kA
Maximum discharge current (8/20 μ s)	I_{max} 100 kA
Protection level	U_o < 1,7 kV
Response time	t_A < 25 ns
Maximum back-up fuse	125 A
Temperature range	ϑ -40 - +85 °C
Division unit TE (17.5 mm)	10
Protection rating	IP20
Connection cross-section, rigid	10 - 50 mm ²
Connection cross-section, multi-wire	10 - 35 mm ²
Connection cross-section, flexible	10 - 25 mm ²



Protection set MCD + V20 3-pole



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
PS3-B+C-320	320	3-pole	1	160.000	5089755

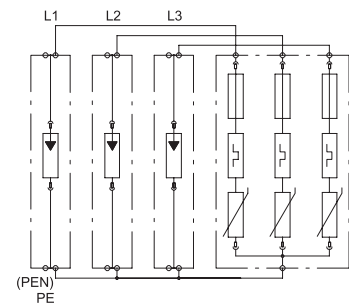
Protection set, lightning and surge arrester combination, type 1+2

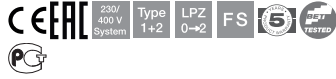
- For lightning protection equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity to 50 kA (10/350) per pole
- Arrester, connectable, incl. connecting bridges, labelled connection terminals
- Encapsulated, non-extinguishing arrester for use in distributor housings

Application: Mobile telecommunications systems and industrial systems with special requirements.

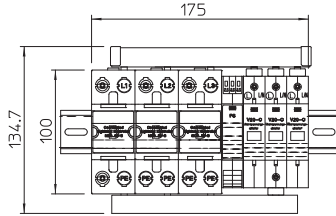
PS3-B+C-320		
Nominal voltage	U_N	230 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0-2
Impulse discharge current (10/350)	I_{imp}	50 kA
Lightning surge current (10/350)	I_{total}	100 kA
Nominal discharge current (8/20)	I_n	100 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	100 kA
Maximum discharge current (8/20 μ s)	I_{max}	100 kA
Protection level	U_p	< 1,7 kV
Response time	t_A	<25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +85 °C
Division unit TE (17.5 mm)		10
Protection rating		IP20
Connection cross-section, rigid		10 - 50 mm ²
Connection cross-section, multi-wire		10 - 35 mm ²
Connection cross-section, flexible		10 - 25 mm ²

Connection options





Protection set MCD + V20 3-pole with remote signalling



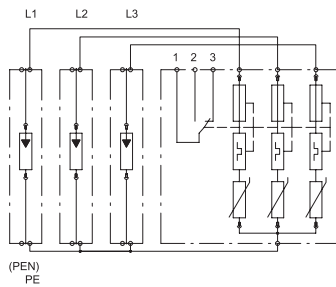
Protection set, lightning and surge arrester type 1+2

- Arresting capacity 100 kA 10/350 μ s, BET-tested
- Pre-mounted and ready for connection, incl. connecting bridges, labelled connection terminals
- With remote signalling and potential-free NO contact for function monitoring
- For use in TN-C network systems

Note: Max. backup fuse (required only if not already fitted in network) 125 A gL/gG.

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
PS3-B+C TNC+FS	255	3-pole	1	163.000	5089756

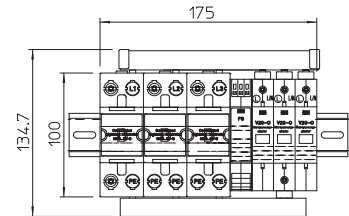
Connection options



PS3-B+C TNC+FS		
Nominal voltage	U_N	230 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0-2
Impulse discharge current (10/350)	I_{imp}	50 kA
Lightning surge current (10/350)	I_{total}	100 kA
Nominal discharge current (8/20)	I_n	50 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	100 kA
Maximum discharge current (8/20 μ s)	I_{max}	100 kA
Protection level	U_d	<1,7 kV
Response time	t_A	<25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +85 °C
Division unit TE (17.5 mm)		10
Protection rating		IP20
Connection cross-section, rigid		10 - 50 mm ²
Connection cross-section, multi-wire		10 - 35 mm ²
Connection cross-section, flexible		10 - 25 mm ²



Protection set MCD + V20 3-pole with remote signalling



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
PS3-B+C-320+FS	320	3-pole	1	170.000	5089757

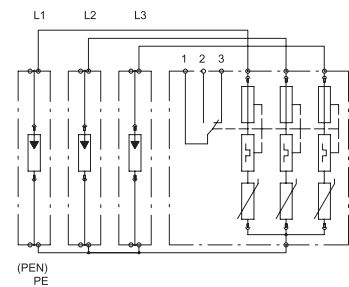
Protection set, lightning and surge arrester combination, type 1+2

- For lightning protection equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity to 50 kA (10/350) per pole
- Arrester, connectable, incl. connecting bridges, labelled connection terminals
- Encapsulated, non-extinguishing arrester for use in distributor housings

Application: Mobile telecommunications systems and industrial systems with special requirements.

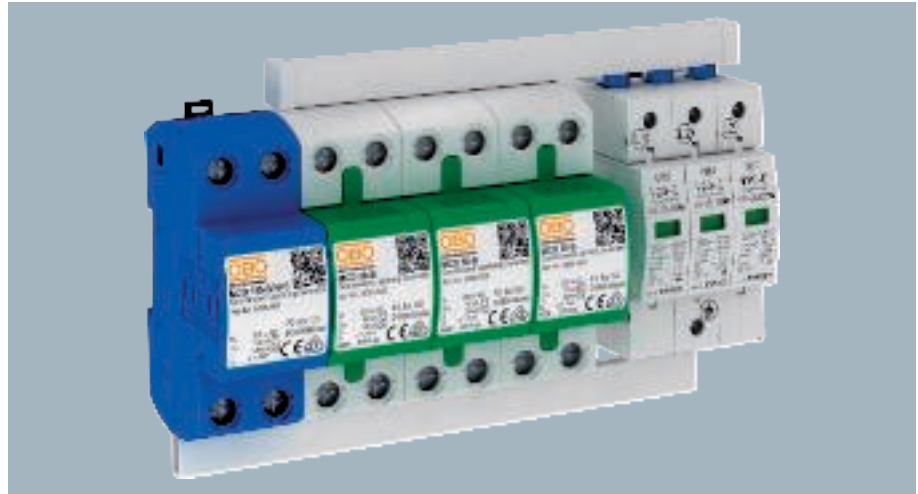
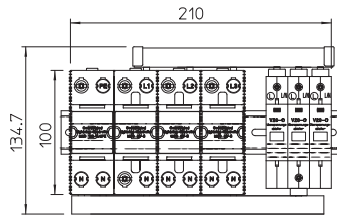
PS3-B+C-320+FS		
Nominal voltage	U_N	230 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0→2
Impulse discharge current (10/350)	I_{imp}	50 kA
Lightning surge current (10/350)	I_{total}	100 kA
Nominal discharge current (8/20)	I_n	100 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	100 kA
Maximum discharge current (8/20 μ s)	I_{max}	100 kA
Protection level	U_p	<1,7 kV
Response time	t_A	<25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		10
Protection rating		IP20
Connection cross-section, rigid		10 - 50 mm ²
Connection cross-section, multi-wire		10 - 35 mm ²
Connection cross-section, flexible		10 - 25 mm ²

Connection options





Protection set MCD + V20 3-pole + NPE



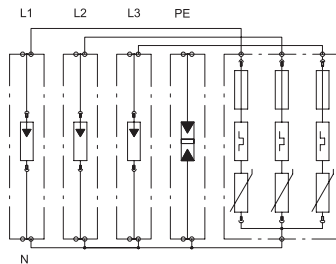
Protection set, lightning and surge arrester combination, type 1+2

- For lightning protection equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current arresting capacity to 50 kA (10/350) per pole and up to 125 kA (10/350) N-PE
- Arrester, connectable, including connecting bridges, labelled connection terminals
- Encapsulated, non-extinguishing arrester for use in distributor housings

Application: Mobile telecommunications systems and industrial systems with special requirements.

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
PS4-B+C TT+TNS	255	3 + NPE	1	206.000	5089761

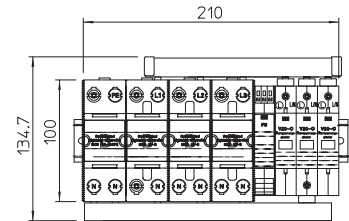
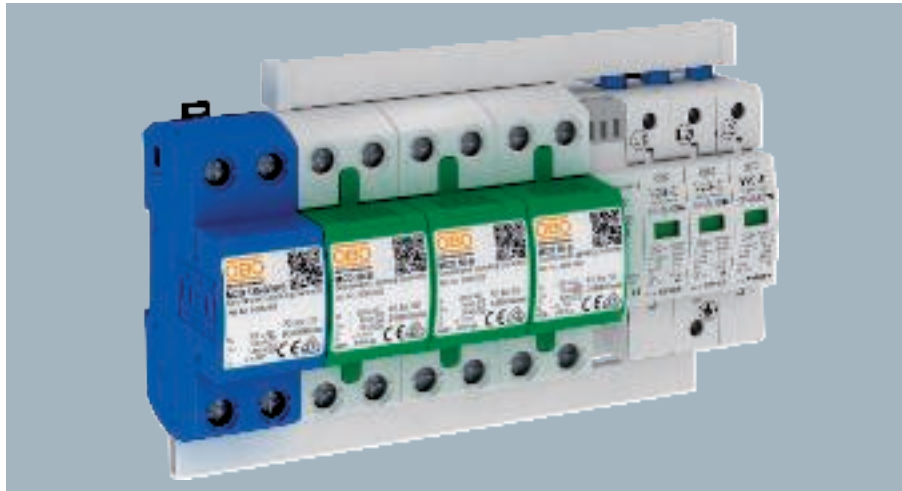
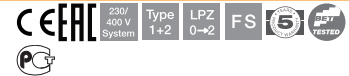
Connection options



PS4-B+C TT+TNS		
Nominal voltage	U_N	230 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0→2
Impulse discharge current (10/350)	I_{imp}	50 kA
Lightning surge current (10/350)	I_{total}	100 kA
Nominal discharge current (8/20)	I_n	50 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	100 kA
Maximum discharge current (8/20 μ s)	I_{max}	100 kA
Protection level	U_D	<1,3 kV
Protection level (N-PE)		<1,5 kV
Response time	t_A	<25 ns
Follow current quenching capacity (eff) [N-PE]	I_{fi}	25 kA
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +85 °C
Division unit TE (17.5 mm)		12
Protection rating		IP20
Connection cross-section, rigid		10 - 50 mm ²
Connection cross-section, multi-wire		10 - 35 mm ²
Connection cross-section, flexible		10 - 25 mm ²



Protection set MCD + V20 3-pole + NPE with remote signalling



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
PS4-B+C TNS+FS	255	3+NPE	1	211.000	5089763

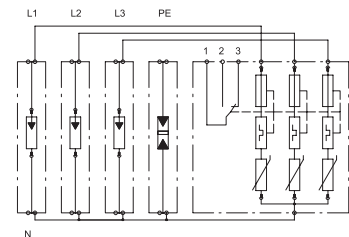
Protection set, lightning and surge arrester type 1+2

- Arresting capacity 100 kA 10/350 μ s, BET-tested
- Pre-mounted and ready for connection, incl. connecting bridges, labelled connection terminals
- With remote signalling and potential-free NO contact for function monitoring
- For use in TN-S and TT network system

Note: Max. backup fuse (required only if not already fitted in network) 125 A gL/gG.

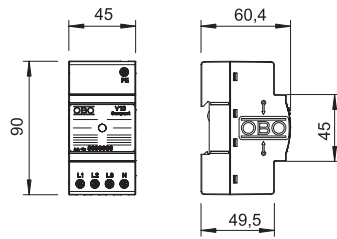
PS4-B+C TNS+FS		
Nominal voltage	U_N	230 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0-2
Impulse discharge current (10/350)	I_{imp}	50 kA
Lightning surge current (10/350)	I_{total}	100 kA
Nominal discharge current (8/20)	I_n	50 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	100 kA
Maximum discharge current (8/20 μ s)	I_{max}	100 kA
Protection level	U_p	<1,3 kV
Response time	t_A	<25 ns
Follow current quenching capacity (eff) [N-PE]	I_{fi}	25 kA
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +85 °C
Division unit TE (17.5 mm)		12
Protection rating		IP20
Connection cross-section, rigid		10 - 50 mm ²
Connection cross-section, multi-wire		10 - 35 mm ²
Connection cross-section, flexible		10 - 25 mm ²

Connection options





Surge arrester V10 Compact 150 V



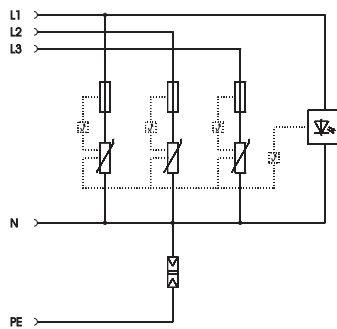
Surge protective device, compact module, type 2+3

- Surge protection in sub-distributors to VDE 0100-443 (IEC 60364-4-44)
- Arresting capacity up to 60 kA (8/20) in total
- Integrated 3+1 solution for TN and TT network systems on 45 mm module width
- High-performance varistor technology
- Incl. thermal and dynamic cut-off unit and visual function display

Application: Sub/storey distribution as well as device protection in rotational current systems.

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V10 COMPACT 150	150	3 + NPE	1	15.800	5093378

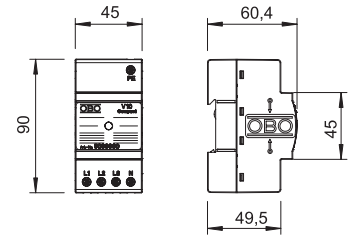
Connection options



V10 COMPACT 150		
Nominal voltage	U_N	120 V
Max. continuous operating voltage	U_C	150 V
SPD to EN 61643-11		Type 2+3
SPD to IEC 61643-11		Class II+III
Lightning protection zone LPZ		1→3
Nominal discharge current (8/20)	I_n	10 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	60 kA
Maximum discharge current (8/20 μ s)	I_{max}	20 kA
Protection level	U_p	< 0,7 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		63 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		1.5
Protection rating		IP20
Connection cross-section, rigid		2.5 - 10 mm ²
Connection cross-section, multi-wire		2.5 - 10 mm ²
Connection cross-section, flexible		2.5 - 10 mm ²



Surge arrester V10 Compact 255 V



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V10 COMPACT 255	255	3+NPE	1	15.800	5093380

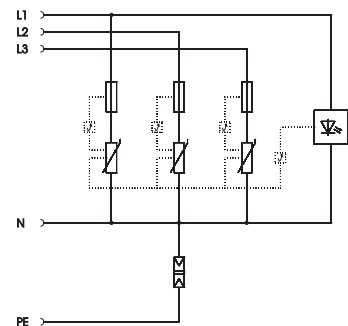
Surge protective device, compact module, type 2+3

- Surge protection in sub-distributors to VDE 0100-443 (IEC 60364-4-44)
- Arresting capacity up to 60 kA (8/20) in total
- Integrated 3+1 solution for TN and TT network systems on 45 mm module width
- High-performance varistor technology
- Incl. thermal and dynamic cut-off unit and visual function display

Application: Sub/storey distribution as well as device protection in rotational current systems.

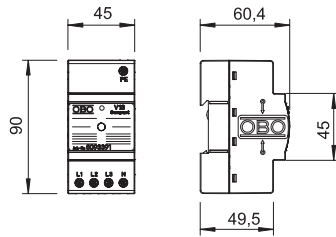
V10 COMPACT 255		
Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	255 V
SPD to EN 61643-11		Type 2+3
SPD to IEC 61643-11		Class II+III
Lightning protection zone LPZ		1→3
Nominal discharge current (8/20)	I_n	10 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$	60 kA
Maximum discharge current (8/20 μ s)	I_{max}	20 kA
Protection level	U_p	< 1,1 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		63 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		1.5
Protection rating		IP20
Connection cross-section, rigid		2.5 - 10 mm ²
Connection cross-section, multi-wire		2.5 - 10 mm ²
Connection cross-section, flexible		2.5 - 10 mm ²

Connection options





Surge arrester V10 Compact with audible signalling 255 V



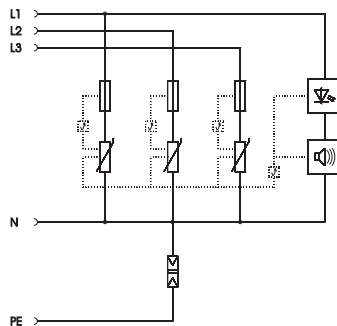
Surge protective device, compact module, type 2+3

- Surge protection in sub-distributors to VDE 0100-443 (IEC 60364-4-44)
- Arresting capacity up to 60 kA (8/20) in total
- Integrated 3+1 solution for TN and TT network systems on 45 mm module width
- High-performance varistor technology
- Including thermic and dynamic cut-off unit and visual function display
- ...-AS version with additional acoustic defect signalling (switchable)

Application: Sub/storey distribution as well as device protection in rotational current systems.

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V10 COMPACT-AS	255	3+NPE	1	15.800	5093391

Connection options

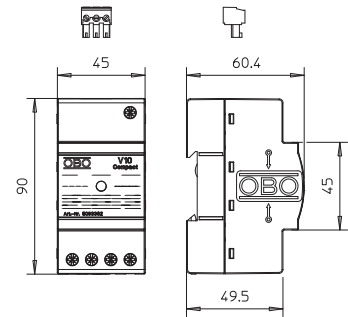


V10 COMPACT-AS

Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	255 V
SPD to EN 61643-11		Type 2+3
SPD to IEC 61643-11		Class II+III
Lightning protection zone LPZ		1→3
Nominal discharge current (8/20)	I_n	10 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$	60 kA
Maximum discharge current (8/20 μ s)	I_{max}	20 kA
Protection level	U_p	< 1,1 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		63 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		1.5
Protection rating		IP20
Connection cross-section, rigid		2.5 - 10 mm ²
Connection cross-section, multi-wire		2.5 - 10 mm ²
Connection cross-section, flexible		2.5 - 10 mm ²



Surge arrester V10 Compact with remote signalling 255 V



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V10 COMPACT-FS	255	3+NPE	1	17.300	5093382

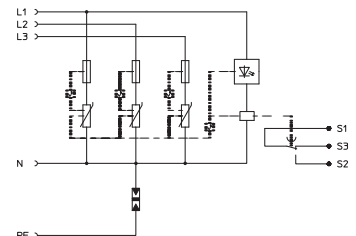
Surge protective device, compact module, type 2+3

- Surge protection in sub-distributors to VDE 0100-443 (IEC 60364-4-44)
- Arresting capacity up to 60 kA (8/20) in total
- Integrated 3+1 solution for TN and TT network systems on 45 mm module width
- High-performance varistor technology
- Including thermic and dynamic cut-off unit and visual function display
- ...-FS version with potential-free changeover contact for remote signalling

Application: Sub/storey distribution as well as device protection in rotational current systems.

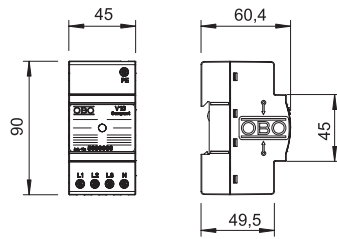
V10 COMPACT-FS			
Nominal voltage	U_N		230 V
Max. continuous operating voltage	U_C		255 V
SPD to EN 61643-11			Type 2+3
SPD to IEC 61643-11			Class II+III
Lightning protection zone LPZ			1→3
Nominal discharge current (8/20)	I_n		10 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$		60 kA
Maximum discharge current (8/20 μ s)	I_{max}		20 kA
Protection level	U_p		< 1,1 kV
Response time	t_A		< 25 ns
Maximum back-up fuse			63 A
Temperature range	ϑ		-40 - +80 °C
Division unit TE (17.5 mm)			1.5
Protection rating			IP20
Connection cross-section, rigid			2.5 - 10 mm ²
Connection cross-section, multi-wire			2.5 - 10 mm ²
Connection cross-section, flexible			2.5 - 10 mm ²

Connection options





Surge arrester V10 Compact 385 V



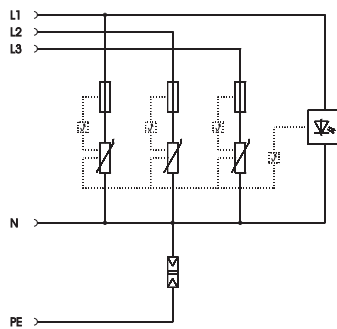
Surge protective device, compact module, type 2+3

- Surge protection in sub-distributors to VDE 0100-443 (IEC 60364-4-44)
- Arresting capacity up to 60 kA (8/20) in total
- Integrated 3+1 solution for TN and TT network systems on 45 mm module width
- High-performance varistor technology
- Incl. thermal and dynamic cut-off unit and visual function display

Application: Sub/storey distribution as well as device protection in rotational current systems.

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V10 COMPACT 385	385	3 + NPE	1	16.800	5093384

Connection options

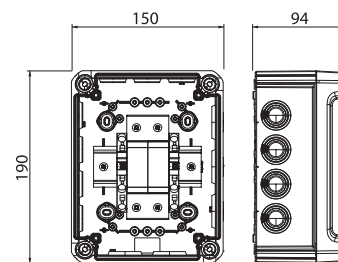


V10 COMPACT 385

Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	385 V
SPD to EN 61643-11		Type 2+3
SPD to IEC 61643-11		Class II+III
Lightning protection zone LPZ		1→3
Nominal discharge current (8/20)	I_n	10 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$	60 kA
Maximum discharge current (8/20 μ s)	I_{max}	20 kA
Protection level	U_p	< 1,5 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		63 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		1.5
Protection rating		IP20
Connection cross-section, rigid		2.5 - 10 mm ²
Connection cross-section, multi-wire		2.5 - 10 mm ²
Connection cross-section, flexible		2.5 - 10 mm ²



Combination arrester V50, 1-pole + NPE 280 V



Type	Max. continuous voltage AC V	Pole version	Pack Piece	Weight kg/100 pc.	Item no.
VG-V50-1+NPE-280	280	1+N/PE	1	81.000	5093594

Lightning current combination arrester, type 1+2 to DIN EN 61643-11

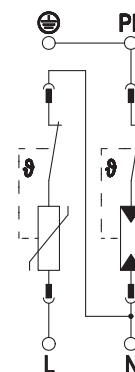
- For lightning protection equipotential bonding to VDE 0185-305 (IEC 62305)
- Complete unit, pre-mounted and ready for connection in polycarbonate housing (IP66)
- Lightning current arresting capacity 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total

Application: Lightning protection equipotential bonding for buildings of Class III and IV.

If there is a danger of condensation forming through wind, ice, temperature or sunlight, further measures may be necessary!

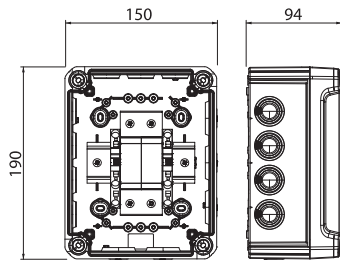
VG-V50-1+NPE-280	
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_c 280 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Lightning surge current (10/350)	I_{total} 25 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 50 kA
Protection level [L-N]	U_p 1.3 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,7 kV
Residual voltage [L-N] @ 5 kA	U_{res} 0,8 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP66
Approvals	UL, ÖVE, VDE
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG

Connection options





Combination arrester V50, 3-pole + NPE 280 V



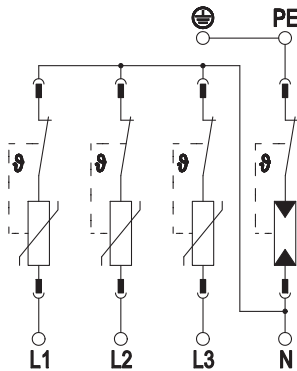
Lightning current combination arrester, type 1+2 to DIN EN 61643-11

- For lightning protection equipotential bonding to VDE 0185-305 (IEC 62305)
- Complete unit, pre-mounted and ready for connection in polycarbonate housing (IP66)
- Lightning current arresting capacity 12.5 kA (10/350) per pole and up to 50 kA (10/350) in total

Application: Lightning protection equipotential bonding for buildings of Class III and IV.
If there is a danger of condensation forming through wind, ice, temperature or sunlight, further measures may be necessary!

Type	Max. continuous voltage AC V	Pole version	Pack Piece	Weight kg/100 pc.	Item no.
VG-V50-3+NPE-280	280	3+N/PE	1	110.000	5093596

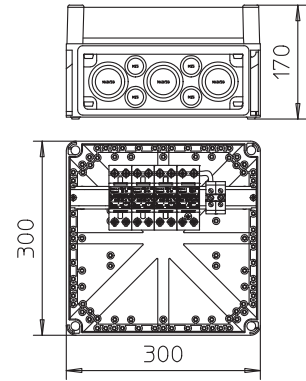
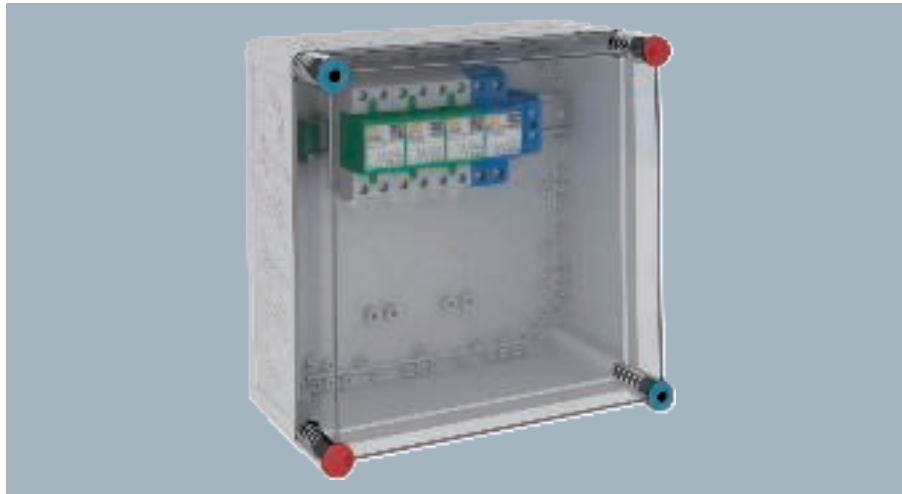
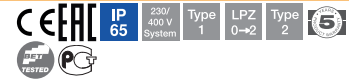
Connection options



VG-V50-3+NPE-280	
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I-II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_C 280 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Lightning surge current (10/350)	I_{total} 50 kA
Arrester surge current (8/20 μ s) [total]	I_{total} 50 kA
Protection level [L-N]	U_p 1.3 kV
Residual voltage [L-N] @ 1 kA	U_{res} 0,7 kV
Residual voltage [L-N] @ 5 kA	U_{res} 0,8 kV
Max. mains-side overcurrent protection	160 A gL/gG
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP66
Approvals	UL, ÖVE, VDE
Conductor cross-section, flexible (fine-wire)	1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)	1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)	16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)	16 - 2 AWG



VG housing with MCD 50-B/3+1



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
MCD 50-B 3+1-VG	255	3+NPE	1	290.000	5096875

Combination arrester, pre-installed in IP65 housing for use in TN-S and TT networks.

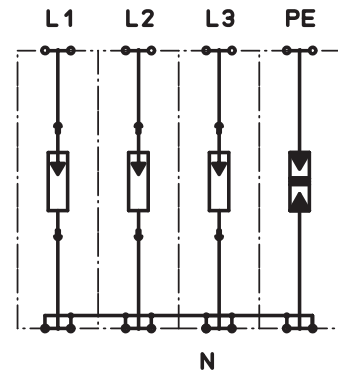
VG...: Lightning arrester system solution type 1+2 according to DIN EN 61643-11.

- LightningController MCD 50-B and MCD 125-B/NPE mounted in insulating housing IP65, sealable housing
- Pulse current 125 kA (10/350 μs), BET-tested
- Conforms to requirements of VDE-AR-N 4100
- Protection level < 1.7 kV (L-N) and < 1.5 kV (N-PE)
- Encapsulated, non-extinguishing discharge gap
- Suitable for TN-S and TT network systems

Application example: The system solution is used in the pre-meter area according to VDE-AR-N 4100.

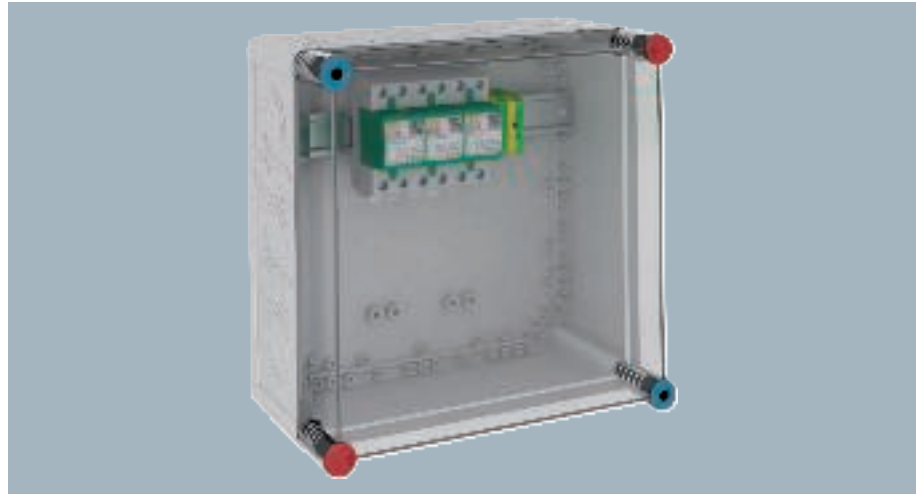
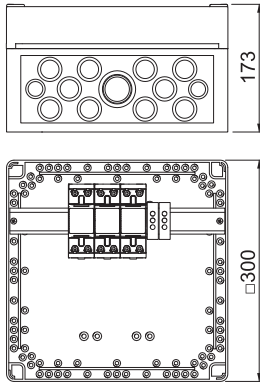
MCD 50-B 3+1-VG	
Nominal voltage	U_N 230 V
Max. continuous operating voltage	U_C 255 V
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
Lightning protection zone LPZ	0-2
Impulse discharge current (10/350)	I_{imp} 50 kA
Lightning surge current (10/350)	I_{total} 125 kA
Nominal discharge current (8/20)	I_n 50 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$ 125 kA
Protection level	U_d < 1,7 kV
Protection level (N-PE)	< 1,5 kV
Response time	t_A <100 ns
Follow current quenching capacity leff	$I_{fi eff}$ 10 kA
Follow current quenching capacity (eff) [N-PE]	I_{fi} 25 kA
Maximum back-up fuse	500 A
Temperature range	ϑ -40 - +85 °C
Division unit TE (17.5 mm)	8
Protection rating	IP54
Connection cross-section, rigid	10 - 50 mm ²
Connection cross-section, multi-wire	10 - 35 mm ²
Connection cross-section, flexible	10 - 25 mm ²

Connection options





VG housing with MCD 50-B/3



Combination arrester, pre-installed in IP65 housing for use in TN-C networks.

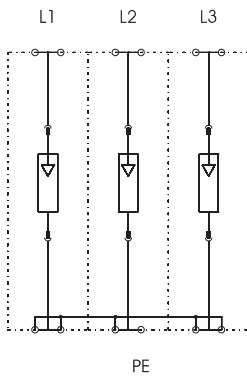
VG...: Combination arrester system solution, type 1+2, according to EN 61643-11.

- LightningController MCD 50-B mounted in insulating housing IP 65, sealable housing
- Pulse current 150 kA 10/350 μ s / 50 kA (10/350) per pole, BET-tested
- Protection level < 1.7 kV
- Encapsulated, non-extinguishing spark gaps
- Suitable for TN-C network systems

Application example: The system solution is used in the pre-meter area according to VDE-AR-N 4100.

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
MCD 50-B 3-VG	255	3-pole	1	315.000	5096874

Connection options



MCD 50-B 3-VG

Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	255 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0-2
Impulse discharge current (10/350)	I_{imp}	50 kA
Lightning surge current (10/350)	I_{total}	150 kA
Nominal discharge current (8/20)	I_n	50 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	150 kA
Protection level	U_p	< 1,7 kV
Response time	t_A	<100 ns
Follow current quenching capacity leff	$I_{fi,eff}$	10 kA
Maximum back-up fuse		500 A
Temperature range	ϑ	-40 - +85 °C
Division unit TE (17.5 mm)		6
Protection rating		IP54
Connection cross-section, rigid		10 - 50 mm ²
Connection cross-section, multi-wire		10 - 35 mm ²
Connection cross-section, flexible		10 - 25 mm ²



Compact surge protection

Surge protection module type 2+3 to DIN EN 61643-11 for 230/400 V power grids to protect LED lighting and/or the LED driver.

Application in:

- Cable fuse box in the street lighting pole
- Junction boxes
- Cable ducts
- Underfloor systems
- Electrical equipment

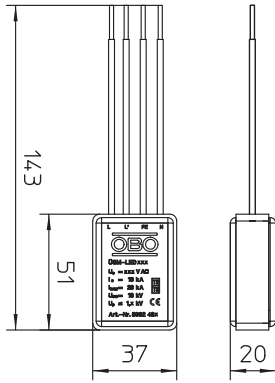
Surge protective devices type 2+3

- With function display and switch-off of the load current circuit should the SPD fail
- Small construction size for installation in the pole connection box or in front of the driver
- Reduction of the surge voltage to below 1,300 V (protection level)
- Optionally available as IP65 version





Surge protection for LED systems 230V



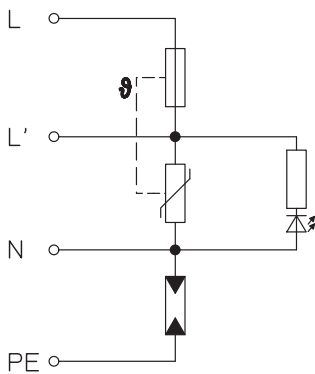
Surge protection module type 2+3 to DIN EN 61643-11 for 230/400 V power grids. Appropriate for the protection of LED lighting.

- With visual function display
- Small size for the installation in the pole or in the LED lamp head
- 1+NPE protective circuit with a maximum discharge capacity of 20 kA
- Surge limitation under 1,300 V or 1,000 V @ 5 kA
- Available with or without cut-off function of the lamp in case of malfunction

Application: Universally deployable in all lighting systems

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
ÜSM-LED 230	255	1+NPE	1	3.500	5092480

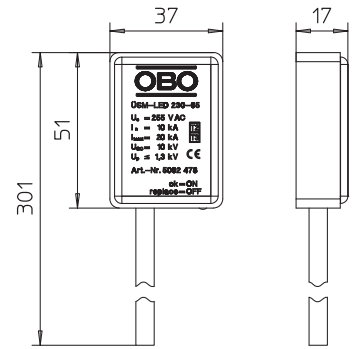
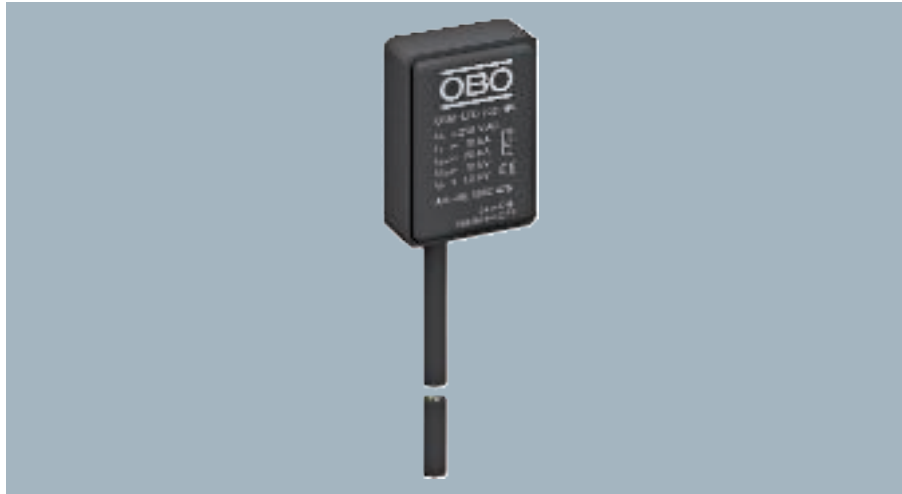
Connection options



ÜSM-LED 230		
Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	255 V
SPD to EN 61643-11		Type 2+3
SPD to IEC 61643-11		Class II+III
Lightning protection zone LPZ		1→3
Nominal discharge current (8/20)	I_n	10 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$	20 kA
Maximum discharge current (8/20 μ s)	I_{max}	20 kA
Protection level	U_p	1,3 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		16 A
Operating temperature range	T_u	-40 - +80 °C
Protection rating		IP20
Connecting cable length		0.09 m



Surge protection for LED systems 230 V IP65



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
ÜSM-LED 230-65	255	1+NPE	25	7.500	5092478

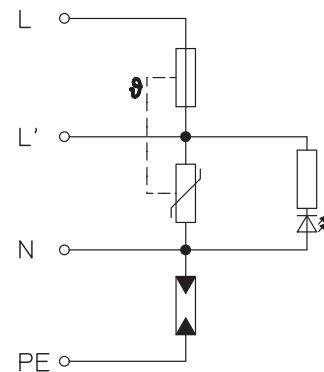
Surge protection module type 2+3 to DIN EN 61643-11 for 230/400 V power grids. Appropriate for the protection of LED lighting and the LED driver.

- With visual function display
- Small size for the installation in the mast connection box
- IP65 and with 25 cm connection cable
- 1+NPE protective circuit with a maximum discharge capacity of 20 kA
- Surge limitation under 1,300 V or 1,000 V @ 5 kA
- Available with or without cut-off function of the lamp in case of malfunction

Application: Universally deployable in all lighting systems

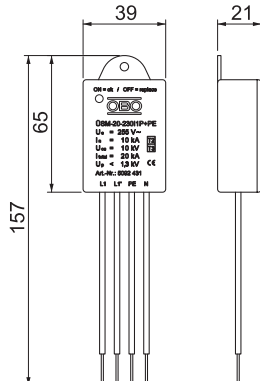
ÜSM-LED 230-65		
Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	255 V
SPD to EN 61643-11		Type 2+3
SPD to IEC 61643-11		Class II+III
Lightning protection zone LPZ		2→3
Nominal discharge current (8/20)	I_n	10 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	20 kA
Maximum discharge current (8/20 μ s)	I_{max}	20 kA
Protection level	U_p	1,3 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		16 A
Operating temperature range	T_u	-40 - +80 °C
Protection rating		IP65
Connecting cable length		0.25 m

Connection options





Surge protection for LED systems ÜSM-20-2301P+PE



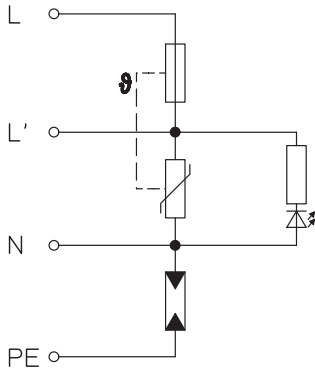
Surge protection module type 2+3 to DIN EN 61643-11 for 230/400 V power grids. Appropriate for the protection of LED lighting.

- With function display and switch-off of the load circuit when an SPD fails
- Small size for the installation in the pole connection box or upstream of the LED driver
- 1+NPE protective circuit with a maximum discharge capacity of 20 kA
- Reduction of overvoltage to under 1,300 V or 1,000 V @ 5 kA
- With or without luminaire switch-off in case of defect

Application: In the cable transition box, junction boxes, cable duct to underfloor systems

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
ÜSM-20-2301P+PE	255	1-pole + NPE for PCI	1	4.100	5092431

Connection options

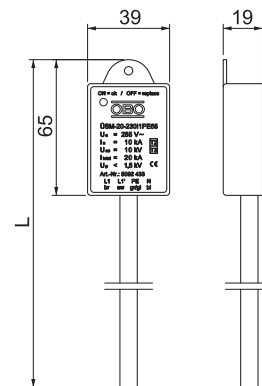


ÜSM-20-2301P+PE

Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	255 V
SPD to EN 61643-11		Type 2+3
SPD to IEC 61643-11		Class II+III
Lightning protection zone LPZ		1→2
Nominal discharge current (8/20)	I_n	10 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	20 kA
Maximum discharge current (8/20 μ s)	I_{max}	20 kA
Protection level	U_p	1,3 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		16 A
Operating temperature range	T_u	-40 - +80 °C
Protection rating		IP20
Connecting cable length		0.09 m



Surge protection for LED systems ÜSM-20-230I1PE65



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
ÜSM-20-230I1PE65	255	1-pole + NPE for PCI	1	8.300	5092433

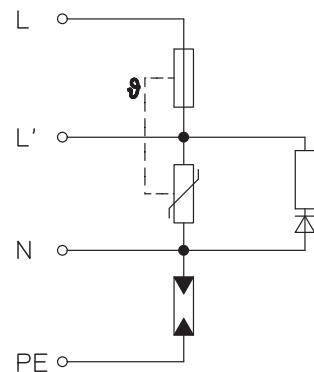
Surge protection module type 2+3 to DIN EN 61643-11 for 230/400 V power grids. Appropriate for the protection of LED lighting.

- With function display and switch-off of the load circuit when an SPD fails
- Small size for the installation in the pole connection box or upstream of the LED driver
- 1+NPE protective circuit with a maximum discharge capacity of 20 kA
- Reduction of overvoltage to under 1,500 V or 1,000 V @ 5 kA
- With or without luminaire switch-off in case of defect

Application: In the cable transition box, junction boxes, cable ducts to underfloor systems

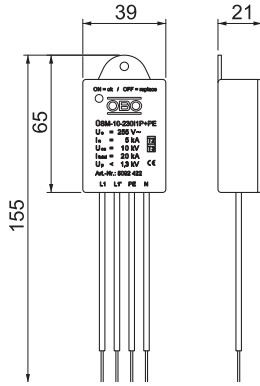
ÜSM-20-230I1PE65			
Nominal voltage	U_N		230 V
Max. continuous operating voltage	U_C		255 V
SPD to EN 61643-11			Type 2+3
SPD to IEC 61643-11			Class II+III
Lightning protection zone LPZ			1→2
Nominal discharge current (8/20)	I_n		10 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$		20 kA
Maximum discharge current (8/20 μ s)	I_{max}		20 kA
Protection level	U_p		1,5 kV
Response time	t_A		< 25 ns
Maximum back-up fuse			16 A
Operating temperature range	T_u		-40 - +80 °C
Protection rating			IP65
Connecting cable length			0.25 m

Connection options





Surge protection module ÜSM-10-230I1P+PE



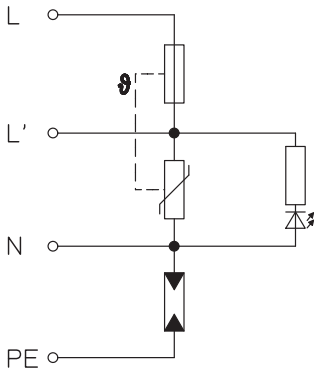
Surge protection module type 2+3 to DIN EN 61643-11 for 230/400 V power grids. Appropriate for the protection of electronic devices and LED drivers.

- With function display and switch-off of the load circuit when an SPD fails
- Small size for the installation in the pole connection box or upstream of the LED driver
- Use in the LED luminaire head upstream of the electronic LED driver
- Protective circuit with a maximum arresting capacity of 10 kA
- Reduction of overvoltage to under 1,300 V (protection level)
- For LED luminaires with PE connection

Application: In the cable transition box, junction boxes, cable duct to underfloor systems

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
ÜSM-10-230I1P+PE	255	1-pole + NPE for PCI	1	3.500	5092422

Connection options

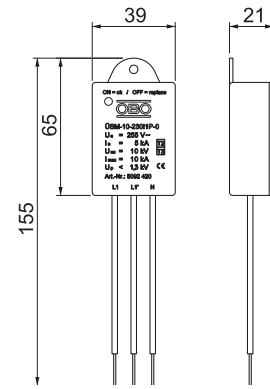


ÜSM-10-230I1P+PE

Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	255 V
SPD to EN 61643-11		Type 2+3
SPD to IEC 61643-11		Class II+III
Lightning protection zone LPZ		1→2
Nominal discharge current (8/20)	I_n	5 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$	10 kA
Maximum discharge current (8/20 μ s)	I_{max}	10 kA
Protection level	U_p	1,3 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		16 A
Operating temperature range	T_u	-40 - +80 °C
Protection rating		IP20
Connecting cable length		0.09 m



Surge protection module ÜSM-10-230I1P-0



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
ÜSM-10-230I1P-0	255	1-pole without NPE for PC II	1	3.200	5092420

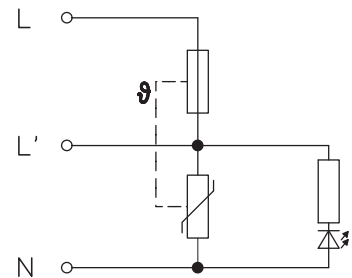
Surge protection module type 2+3 to DIN EN 61643-11 for 230/400 V power grids. Appropriate for the protection of electronic devices and LED drivers.

- With function display and switch-off of the load circuit when an SPD fails
- Small size for the installation in the pole connection box or upstream of the LED driver
- Protective circuit with a maximum arresting capacity of 10 kA
- Reduction of overvoltage to under 1,300 V (protection level)
- For protection insulated luminaires (PC II) without PE connection

Application: In the cable transition box, junction boxes, cable duct to underfloor systems

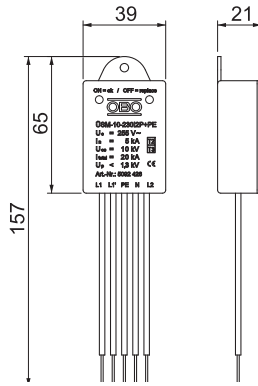
ÜSM-10-230I1P-0			
Nominal voltage	U_N		230 V
Max. continuous operating voltage	U_C		255 V
SPD to EN 61643-11			Type 2+3
SPD to IEC 61643-11			Class II+III
Lightning protection zone LPZ			1→2
Nominal discharge current (8/20)	I_n		5 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$		— kA
Maximum discharge current (8/20 μ s)	I_{max}		10 kA
Protection level	U_p		1,3 kV
Response time	t_A		< 25 ns
Maximum back-up fuse			16 A
Operating temperature range	T_u		-40 - +80 °C
Protection rating			IP20
Connecting cable length			0.09 m

Connection options





Surge protection module ÜSM-10-230I2P+PE



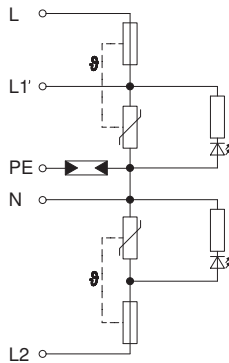
Surge protection module type 2+3 to DIN EN 61643-11 for 230/400 V power grids. Appropriate for the protection of electronic devices and LED drivers.

- For luminaires with 2 phases (power reduction)
- With function display and switch-off of the load circuit when an SPD fails
- Small size for the installation in the pole connection box or upstream of the LED driver
- Protective circuit with a maximum arresting capacity of 10 kA
- Reduction of overvoltage to under 1,300 V (protection level)
- For LED luminaires with PE connection

Application: In the cable transition box, junction boxes, cable duct to underfloor systems

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
ÜSM-10-230I2P+PE	255	2-pole + NPE for PCI	1	4.400	5092426

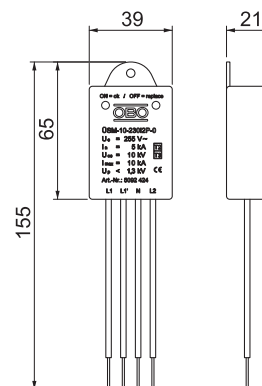
Connection options



ÜSM-10-230I2P+PE		
Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	255 V
SPD to EN 61643-11		Type 2+3
SPD to IEC 61643-11		Class II+III
Lightning protection zone LPZ		1-2
Nominal discharge current (8/20)	I_n	5 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$	10 kA
Maximum discharge current (8/20 μ s)	I_{max}	10 kA
Protection level	U_o	1,3 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		16 A
Operating temperature range	T_u	-40 - +80 °C
Protection rating		IP20
Connecting cable length		0.09 m



Surge protection module ÜSM-10-230I2P-0



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
ÜSM-10-230I2P-0	255	2-pole without NPE for SK II	1	4.100	5092424

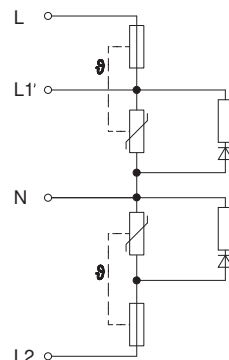
Surge protection module type 2+3 to DIN EN 61643-11 for 230/400 V power grids. Appropriate for the protection of electronic devices and LED drivers.

- For luminaires with 2 phases (power reduction)
- With function display and switch-off of the load circuit when an SPD fails
- Small size for the installation in the pole connection box or upstream of the LED driver
- Protective circuit with a maximum arresting capacity of 10 kA
- Reduction of overvoltage to under 1,300 V (protection level)
- For protection insulated luminaires (PC II) without PE connection

Application: In the cable transition box, junction boxes, cable duct to underfloor systems

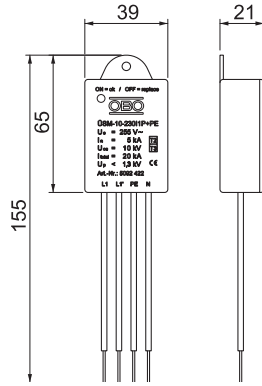
ÜSM-10-230I2P-0		
Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	255 V
SPD to EN 61643-11		Type 2+3
SPD to IEC 61643-11		Class II+III
Lightning protection zone LPZ		1→2
Nominal discharge current (8/20)	I_n	5 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$	— kA
Maximum discharge current (8/20 μ s)	I_{max}	10 kA
Protection level	U_p	1,3 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		16 A
Operating temperature range	T_u	-40 - +80 °C
Protection rating		IP20
Connecting cable length		0.09 m

Connection options





Surge protection module ÜSM 10



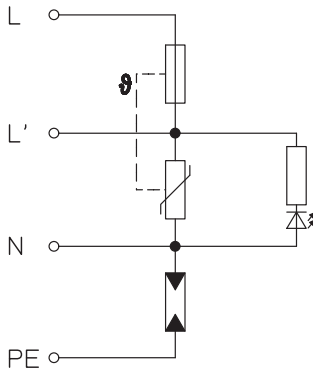
Surge protection module type 2+3 to DIN EN 61643-11 for 230/400 V power grids. Appropriate for the protection of LED lighting.

- With function display and switch-off of the load circuit when a SPD fails
- Small size for the installation in the pole connection box or upstream of the LED driver
- 1+NPE protective circuit with a maximum discharge capacity of 10 kA
- Reduction of overvoltage to under 1,00 V or 1,000 V @ 5 kA
- With or without luminaire switch-off in case of defect

Application: In the cable transition box, junction boxes, cable ducts and trunking through to underfloor systems

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
ÜSM-10-230I1PE25	255	1-pole + NPE for PCI	1	5.500	5092440

Connection options

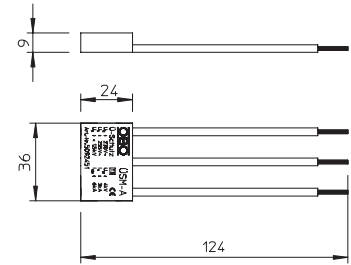


ÜSM-10-230I1PE25

Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	255 V
SPD to EN 61643-11		Type 2+3
SPD to IEC 61643-11		Class II+III
Lightning protection zone LPZ		1→2
Nominal discharge current (8/20)	I_n	5 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$	10 kA
Maximum discharge current (8/20 µs)	I_{max}	10 kA
Protection level	U_p	1,5 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		16 A
Operating temperature range	T_u	-40 - +80 °C
Protection rating		IP20
Connecting cable length		0.09 m



Surge protection module 230 V



Type	Signalling on device	Version	Pack Piece	Weight kg/100 pc.	Item no.
ÜSM-A	Acoustic	Acoustic operating display	1	1.500	5092451

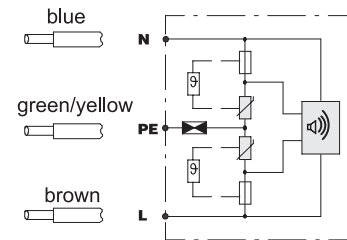
Surge protection module type 3 to DIN EN 61643-11 for 230 V power grids.

- With audible defect signal
- With low construction height
- Halogen-free plastic (UL 94 V-0)
- Y circuit

Application: Universally applicable for all installation systems.

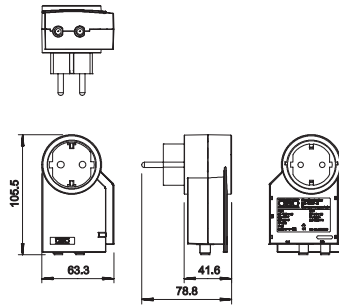
ÜSM-A	
Nominal voltage	U_N 230 V
Max. continuous operating voltage	U_C 255 V
SPD to EN 61643-11	Type 3
SPD to IEC 61643-11	Class III
Lightning protection zone LPZ	2→3
Nominal discharge current (8/20)	I_n 3 kA
Protection level (L-N)	< 1,3 kV
Protection level (N-PE)	< 1,5 kV
Maximum back-up fuse	16 A
Response time	t_A < 25 ns
Temperature range	ϑ -15 - +60 °C
Maximum discharge current (8/20 μ s)	I_{max} 6 kA
Rated current	I_L 16 A

Connection options





FineController FC-SAT for SAT systems and receivers



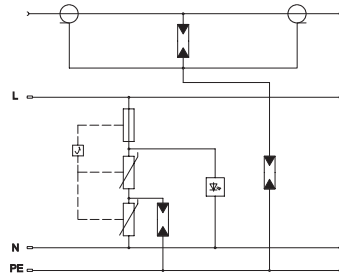
Type 3 combined surge protection to EN 61643-11, designed for use on satellite systems and receivers.

- Adapter connector
- Cut-off unit and function display
- With increased contact protection
- Incl. 0.5 m connection cable in white (double-shielded)
- Maximum continuous voltage, TV connection 72 V DC / 1.5 A (25 °C)
- Limit frequency: type 2.5 GHz (75 Ohm system)

Note: The technical data in the table below refers to the power supply.

Type	Country version	Colour	Pack Piece	Weight kg/100 pc.	Item no.
FC-SAT-D	EN	Pure white	1	16.000	5092816

Connection options

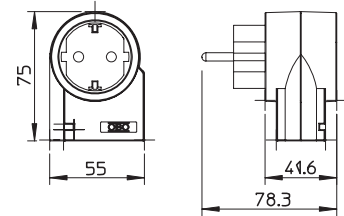


FC-SAT-D

Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_C	275 V
SPD to EN 61643-11		Type 3
SPD to IEC 61643-11		Class III
Lightning protection zone LPZ		2→3
Nominal discharge current (8/20)	I_n	3 kA
Protection level (L-N)		< 1,2 kV
Protection level (N-PE)		< 1,5 kV
Maximum back-up fuse		16 A
Response time	t_A	<25 ns



FineController FC-D for protective contact socket



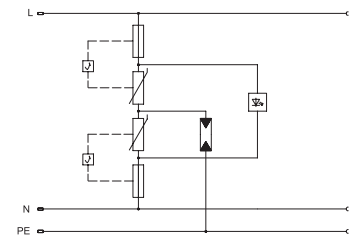
Type	Country version	Colour	Pack Piece	Weight kg/100 pc.	Item no.
FC-D	EN	Pure white	1	11.000	5092800

Type 3 surge protective device to EN 61643-11, intended for use in protective contact sockets.

- Adapter connector
- Cut-off unit and function display
- With increased touch protection

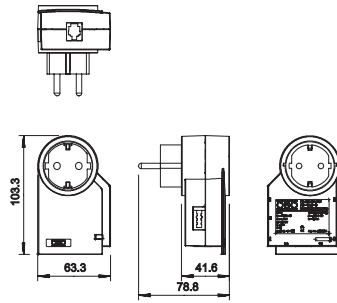
FC-D	
Nominal voltage	U_N 230 V
Max. continuous operating voltage	U_C 275 V
SPD to EN 61643-11	Type 3
SPD to IEC 61643-11	Class III
Lightning protection zone LPZ	2-3
Nominal discharge current (8/20)	I_n 3 kA
Protection level (L-N)	< 1,2 kV
Protection level (N-PE)	< 1,5 kV
Maximum back-up fuse	16 A
Response time	t_A <25 ns

Connection options





FineController FC-TAE for telephone systems and terminals



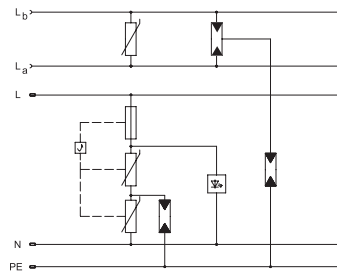
Type 3 combined surge protection to EN 61643-11, designed for use in telephone systems with TAE connection (telephones upstream of the NTBA/DSL splitter).

- Adapter connector
- Cut-off unit and function display
- With increased contact protection
- Incl. 0.5 m connection cable TAE / RJ11
- Maximum continuous voltage, TAE connection 200 V DC / 1.5 A (25 °C)
- Limit frequency: type 4 MHz / VDSL up to 46 MBit/s

Note: The technical data in the table below refers to the power supply.

Type	Country version	Colour	Pack Piece	Weight kg/100 pc.	Item no.
FC-TAE-D	EN	Pure white	1	18.000	5092824

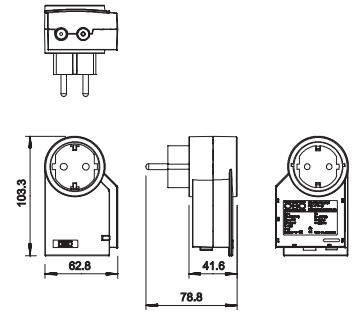
Connection options



FC-TAE-D	
Nominal voltage	U_N 230 V
Max. continuous operating voltage	U_C 275 V
SPD to EN 61643-11	Type 3
SPD to IEC 61643-11	Class III
Lightning protection zone LPZ	2→3
Nominal discharge current (8/20)	I_n 3 kA
Protection level (L-N)	< 1,2 kV
Protection level (N-PE)	< 1,5 kV
Maximum back-up fuse	16 A
Response time	t_A <25 ns



FineController FC-TV for video, TV and hi-fi systems



Type	Country version	Colour	Pack Piece	Weight kg/100 pc.	Item no.
FC-TV-D	EN	Pure white	1	17.000	5092808

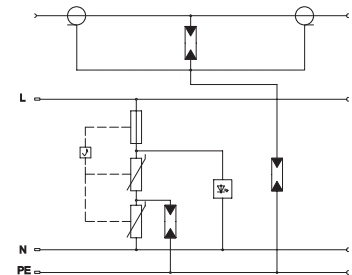
Type 3 combined surge protection to EN 61643-11, designed for use on Schuko sockets and video, TV and hi-fi systems with IEC adapter.

- Adapter connector
- Cut-off unit and function display
- With increased contact protection
- Incl. 0.5 m connection cable in white (double-shielded)
- Maximum continuous voltage, TV connection 72 V DC / 1.5 A (25 °C)
- Limit frequency: type 2.5 GHz (75 Ohm system)

Note: The technical data in the table below refers to the power supply.

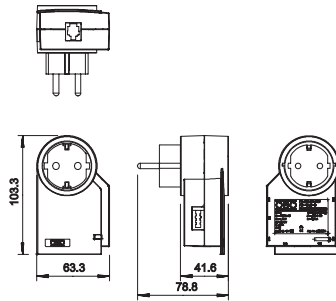
FC-TV-D	
Nominal voltage	U_N 230 V
Max. continuous operating voltage	U_C 275 V
SPD to EN 61643-11	Type 3
SPD to IEC 61643-11	Class III
Lightning protection zone LPZ	2→3
Nominal discharge current (8/20)	I_n 3 kA
Protection level (L-N)	< 1,2 kV
Protection level (N-PE)	< 1,5 kV
Maximum back-up fuse	16 A
Response time	t_A <25 ns

Connection options





FineController FC-ISDN for ISDN telephone systems and terminals



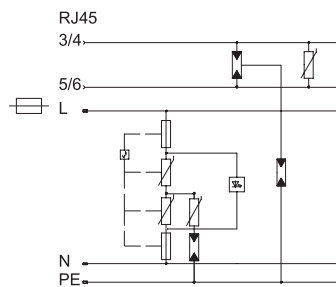
Type 3 combined surge protection to EN 61643-11 designed for use in ISDN / DSS 1 telephone systems and terminals.

- Adapter connector
- Cut-off unit and function display
- With increased contact protection
- Incl. 0.5 m connection cable RJ12
- Maximum continuous voltage, ISDN connection 6 V DC / 1.5 A (25 °C)
- Limit frequency: type 300 kHz

Note: The technical data in the table below refers to the power supply.

Type	Country version	Colour	Pack Piece	Weight kg/100 pc.	Item no.
FC-ISDN-D	EN	Pure white	1	18.000	5092812

Connection options



FC-ISDN-D	
Nominal voltage	U_N 230 V
Max. continuous operating voltage	U_C 275 V
SPD to EN 61643-11	Type 3
SPD to IEC 61643-11	Class III
Lightning protection zone LPZ	2→3
Nominal discharge current (8/20)	I_n 3 kA
Protection level (L-N)	< 1,2 kV
Protection level (N-PE)	< 1,5 kV
Maximum back-up fuse	16 A
Response time	t_A <25 ns



FRD/FLD family

Basic and combination protection for two-core systems

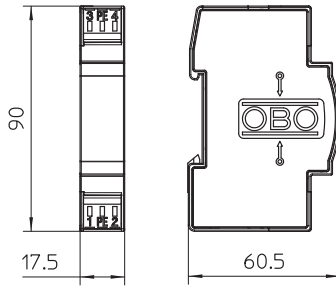


- High arresting capacity
- Low noise
- Universal application
- Simple mounting using screwless terminals
- High bandwidth
- UL-listed

The use of lightning barriers in two-core wire systems is commonplace. These surge protective devices are used from telecommunication cables through bus systems up to measurement and control technology. Surge protection technology allows flexible protection for all kinds of applications. All the devices have both a low protection level and a high arresting capacity.



Combination protection for two-core systems with HF applications 24 V



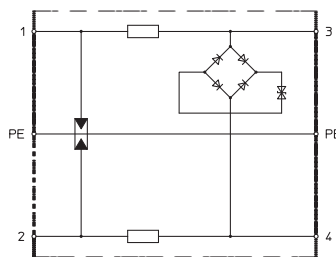
Surge protection for use in measuring, control and regulation systems.

- Basic, medium and fine protection
- Two-stage protection circuit with high lightning current carrying capacity
- High transmission frequency up to 100 MHz
- Suitable for all bus systems (e.g. Profibus)
- With installation-friendly, screwless connection terminals
- In space-saving 17.5 mm grid

Application: Multipurpose use on any 35 mm DIN profile rail in every commercially available distribution housing.

Type	Max. continuous voltage AC V	Max. continuous voltage DC V	Number of poles	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
FRD 24 HF	19	28	2	Terminal	1	4.400	5098575

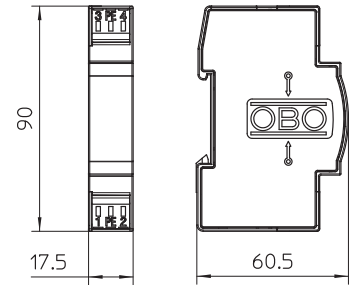
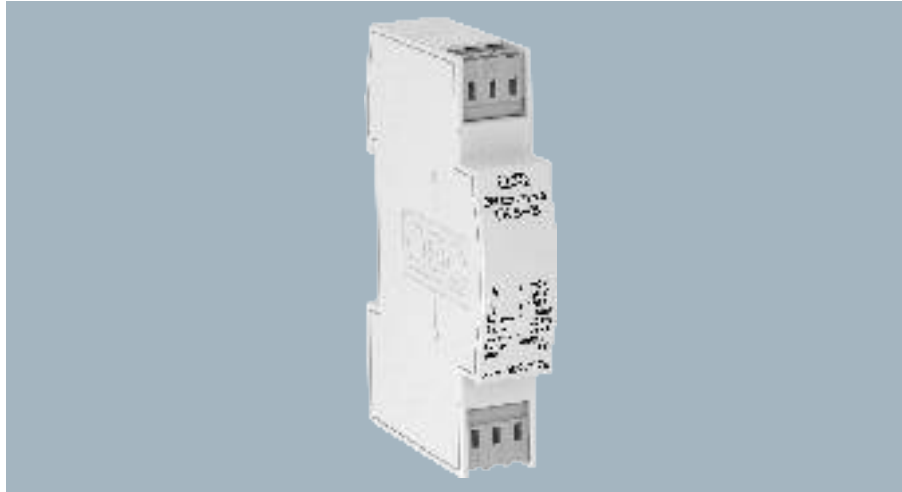
Connection options



FRD 24 HF	
Maximum continuous voltage AC	U_c 19 V
Maximum continuous voltage DC	U_c 28 V
Category	Type 1+2+3 / D1+C2+C1
Lightning protection zone LPZ	0→3
Number of poles	2
Rated current	I_L 0.45 A
Series resistance per wire	2,2 Ω \pm 10 %
Impulse durability wire-wire	C2: 18 kV / 9 kA (8/20 μ s)
Impulse durability wire-earth	C2: 18 kV / 9 kA (8/20 μ s)
Total discharge current (8/20)	18 kA
Total discharge current (10/350)	D1: 6 kA
Protection level wire-wire	<120 V
Protection level wire-earth	<650 V
Temperature range	ϑ -40 - +80 °C
Installation type	DIN rail 35 mm
Connection system	Terminal
Division unit TE (17.5 mm)	1
Protection rating	IP20
Connection cross-section, flexible	0.14 - 2.5 mm ²
Connection cross-section, multi-wire	0.14 - 2.5 mm ²
Connection cross-section, rigid	0.14 - 2.5 mm ²
Earthing via:	Terminal
Testing standard	IEC 61643-21
Approvals	UL

Basic protection for two-core systems with HF applications 120 V

Surge protection



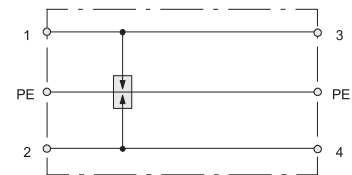
Type	Max. continuous voltage AC V	Max. continuous voltage DC V	Number of poles	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
TKS-B	120	170	2	Terminal	1	4.400	5097976

TKS-B: Surge protection for use in measuring, control and regulation systems, as well as telecommunication systems

- Basic protection for lightning protection equipotential bonding
 - High impulse arresting capacity 6 kA (10/350)
 - With installation-friendly, screwless connection terminals
 - In space-saving 17.5 mm grid
- Application: Universal use on 35 mm hat profile rail in any standard distributor housing.

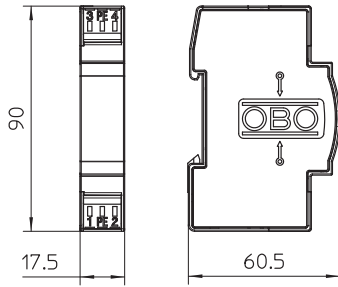
TKS-B	
Maximum continuous voltage AC	U_c 120 V
Maximum continuous voltage DC	U_c 170 V
Category	Type 1+2 / D1+C2
Lightning protection zone LPZ	0→2
Number of poles	2
Rated current	I_L 20 A
Impulse durability wire-wire	C2: 18 kV / 9 kA
Impulse durability wire-earth	C2: 18 kV / 9 kA
Total discharge current (8/20)	18 kA
Total discharge current (10/350)	D1: 6 kA
Protection level wire-wire	<950 V
Protection level wire-earth	<600 V
Temperature range	ϑ -40 - +80 °C
Installation type	DIN rail
Connection system	Terminal
Division unit TE (17.5 mm)	1
Protection rating	IP20
Connection cross-section, flexible	0.14 - 2.5 mm ²
Connection cross-section, multi-wire	0.14 - 2.5 mm ²
Connection cross-section, rigid	0.14 - 2.5 mm ²
Earthing via:	Connection cable
Testing standard	IEC 61643-21

Connection options





Medium and fine protection FRD for two-core systems 24 V



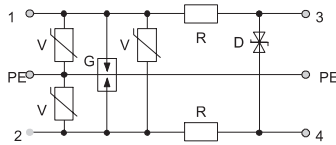
Surge protection for use in measurement and control technology

- Medium and fine protection
- Standard design for double core systems
- Two-stage protection circuit
- With installation-friendly, screwless connection terminals
- In space-saving 17.5 mm grid
- With ohmic decoupling in the longitudinal branch

Application: Universal use on any 35 mm DIN profile rail in every commercially available distributor housing.

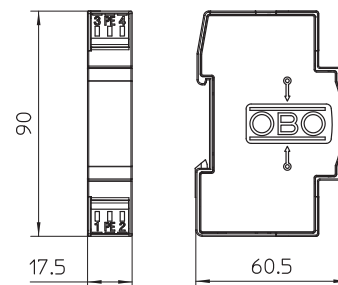
Type	Max. continuous voltage AC V	Max. continuous voltage DC V	Number of poles	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
FRD 24	19	28	2	Terminal	1	5.100	5098514

Connection options



FRD 24	
Maximum continuous voltage AC	U_c 19 V
Maximum continuous voltage DC	U_c 28 V
Category	Type 1+2+3 / D1+C2+C1
Lightning protection zone LPZ	0-3
Number of poles	2
Rated current	I_L 0.2 A
Series resistance per wire	15 Ω \pm 10 %
Impulse durability wire-wire	C2: 5 kV / 2,5 kA (8/20 μ s)
Impulse durability wire-earth	C2: 10 kV / 5 kA (8/20 μ s)
Total discharge current (8/20)	10 kA
Total discharge current (10/350)	D1: 3 kA
Protection level wire-wire	<60 V
Protection level wire-earth	<600 V
Temperature range	ϑ -40 - +80 °C
Installation type	DIN rail 35 mm
Connection system	Terminal
Division unit TE (17.5 mm)	1
Protection rating	IP20
Connection cross-section, flexible	0.14 - 2.5 mm ²
Connection cross-section, multi-wire	0.14 - 2.5 mm ²
Connection cross-section, rigid	0.14 - 2.5 mm ²
Earthing via:	Terminal
Testing standard	IEC 61643-21
Approvals	UL

Medium and fine protection FRD for two-core systems 48 V



Type	Max. continuous voltage AC V	Max. continuous voltage DC V	Number of poles	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
FRD 48	37	53	2	Terminal	1	5.100	5098522

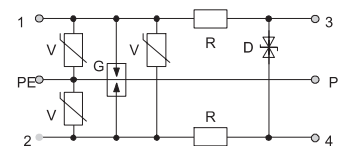
Surge protection for use in measurement and control technology

- Medium and fine protection
- Standard design for double core systems
- Two-stage protection circuit
- With installation-friendly, screwless connection terminals
- In space-saving 17.5 mm grid
- With ohmic decoupling in the longitudinal branch

Application: Universal use on any 35 mm DIN profile rail in every commercially available distributor housing.

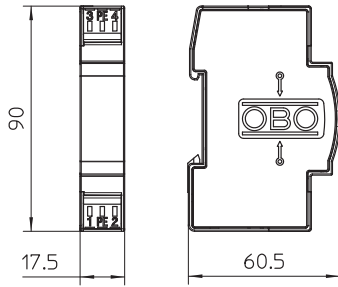
FRD 48	
Maximum continuous voltage AC	U_c 37 V
Maximum continuous voltage DC	U_c 53 V
Category	Type 1+2+3 / D1+C2+C1
Lightning protection zone LPZ	0-3
Number of poles	2
Rated current	I_L 0.2 A
Series resistance per wire	15 Ω \pm 10 %
Impulse durability wire-wire	C2: 5 kV / 2,5 kA (8/20 μ s)
Impulse durability wire-earth	C2: 10 kV / 5 kA (8/20 μ s)
Total discharge current (8/20)	10 kA
Total discharge current (10/350)	D1: 3 kA
Protection level wire-wire	<140 V
Protection level wire-earth	<600 V
Temperature range	ϑ -40 - +80 °C
Installation type	DIN rail 35 mm
Connection system	Terminal
Division unit TE (17.5 mm)	1
Protection rating	IP20
Connection cross-section, flexible	0.14 - 2.5 mm ²
Connection cross-section, multi-wire	0.14 - 2.5 mm ²
Connection cross-section, rigid	0.14 - 2.5 mm ²
Earthing via:	Terminal
Testing standard	IEC 61643-21
Approvals	UL

Connection options





Medium and fine protection FRD for two-core systems 110 V



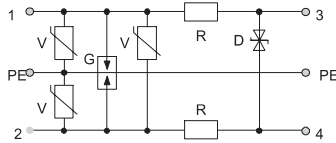
Surge protection for use in measurement and control technology

- Medium and fine protection
- Standard design for double core systems
- Two-stage protection circuit
- With installation-friendly, screwless connection terminals
- In space-saving 17.5 mm grid
- With ohmic decoupling in the longitudinal branch

Application: Universal use on any 35 mm DIN profile rail in every commercially available distributor housing.

Type	Max. continuous voltage AC V	Max. continuous voltage DC V	Number of poles	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
FRD 110	86	122	2	Terminal	1	5.100	5098557

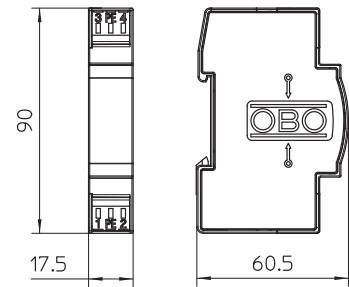
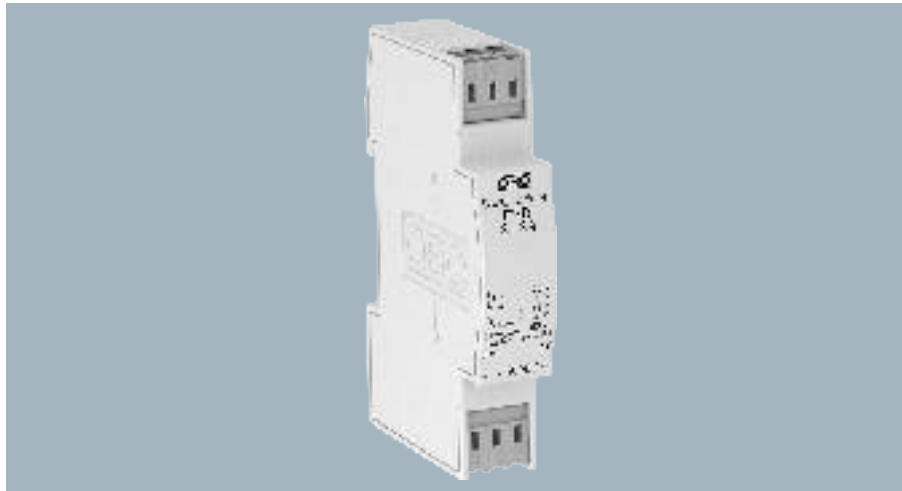
Connection options



FRD 110

Maximum continuous voltage AC	U_c	86 V
Maximum continuous voltage DC	U_c	122 V
Category		Type 1+2+3 / D1+C2+C1
Lightning protection zone LPZ		0-3
Number of poles		2
Rated current	I_L	0.2 A
Series resistance per wire		15 $\Omega \pm 10\%$
Impulse durability wire-wire		C2: 5 kV / 2,5 kA (8/20 μ s)
Impulse durability wire-earth		C2: 10 kV / 5 kA
Total discharge current (8/20)		10 kA
Total discharge current (10/350)		D1: 3 kA
Protection level wire-wire		<300 V
Protection level wire-earth		<600 V
Temperature range	ϑ	-40 - +80 °C
Installation type		DIN rail 35 mm
Connection system		Terminal
Division unit TE (17.5 mm)		1
Protection rating		IP20
Connection cross-section, flexible		0.14 - 2.5 mm ²
Connection cross-section, multi-wire		0.14 - 2.5 mm ²
Connection cross-section, rigid		0.14 - 2.5 mm ²
Earthing via:		Terminal
Testing standard		IEC 61643-21
Approvals		UL

Medium and fine protection FRD 2 for two-core systems 24 V



Type	Max. continuous voltage AC V	Max. continuous voltage DC V	Number of poles	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
FRD 2-24	19	28	2	Terminal	1	5.100	5098727

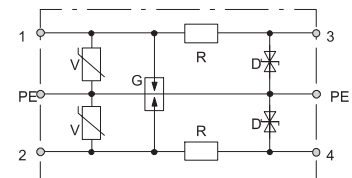
Surge protection for use in measurement and control technology

- Medium and fine protection
- Standard design for double core systems
- Two-stage protection circuit
- With installation-friendly, screwless connection terminals
- In space-saving 17.5 mm grid
- With ohmic decoupling in the longitudinal branch

Application: Universal use on any 35 mm DIN profile rail in every commercially available distributor housing.

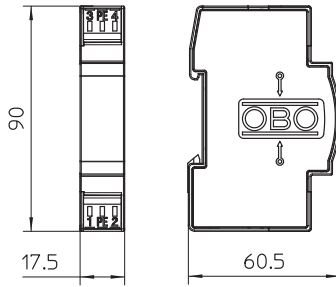
FRD 2-24	
Maximum continuous voltage AC	U_c 19 V
Maximum continuous voltage DC	U_c 28 V
Category	Type 2+3 / C2+C1
Lightning protection zone LPZ	1→3
Number of poles	2
Rated current	I_L 0.2 A
Series resistance per wire	15 $\Omega \pm 10\%$
Impulse durability wire-wire	C2: 5 kV / 2,5 kA (8/20 μ s)
Impulse durability wire-earth	C2: 5 kV / 2,5 kA (8/20 μ s)
Total discharge current (8/20)	5 kA
Total discharge current (10/350)	— kA
Protection level wire-wire	<120 V
Protection level wire-earth	<60 V
Temperature range	ϑ -40 - +80 °C
Installation type	DIN rail 35 mm
Connection system	Terminal
Division unit TE (17.5 mm)	1
Protection rating	IP20
Connection cross-section, flexible	0.14 - 2.5 mm ²
Connection cross-section, multi-wire	0.14 - 2.5 mm ²
Connection cross-section, rigid	0.14 - 2.5 mm ²
Earthing via:	Terminal
Testing standard	IEC 61643-21

Connection options





Medium and fine protection FLD for two-core systems 24 V



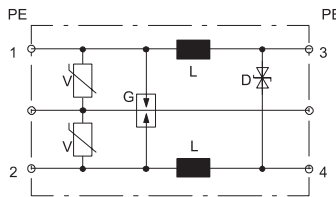
Surge protection for use in measurement and control technology

- Medium and fine protection
- Standard design for single core systems
- Two-stage protection circuit
- With installation-friendly, screwless connection terminals
- In space-saving 17.5 mm grid
- With inductive decoupling in the longitudinal branch

Application: Universal use on any 35 mm DIN profile rail in every commercially available distributor housing.

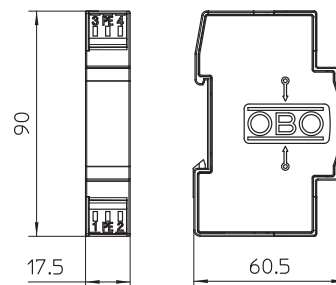
Type	Max. continuous voltage AC V	Max. continuous voltage DC V	Number of poles	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
FLD 24	19	28	2	Terminal	1	5.200	5098611

Connection options



FLD 24	
Maximum continuous voltage AC	U_c 19 V
Maximum continuous voltage DC	U_c 28 V
Category	Type 1+2+3 / D1+C2+C1
Lightning protection zone LPZ	0-3
Number of poles	2
Rated current	I_L 1 A
Series inductivity per wire	120 μ H \pm 20 %
Impulse durability wire-wire	C2: 5 kV / 2,5 kA (8/20 μ s)
Impulse durability wire-earth	C2: 10 kV / 5 kA (8/20 μ s)
Total discharge current (8/20)	10 kA
Total discharge current (10/350)	D1: 3 kA
Protection level wire-wire	<60 V
Protection level wire-earth	<600 V
Temperature range	ϑ -40 - +80 °C
Installation type	DIN rail 35 mm
Connection system	Terminal
Division unit TE (17.5 mm)	1
Protection rating	IP20
Connection cross-section, flexible	0.14 - 2.5 mm ²
Connection cross-section, multi-wire	0.14 - 2.5 mm ²
Connection cross-section, rigid	0.14 - 2.5 mm ²
Earthing via:	Terminal
Testing standard	IEC 61643-21
Approvals	UL

Medium and fine protection FLD for two-core systems 48 V



Type	Max. continuous voltage AC V	Max. continuous voltage DC V	Number of poles	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
FLD 48	37	53	2	Terminal	1	5.200	5098630

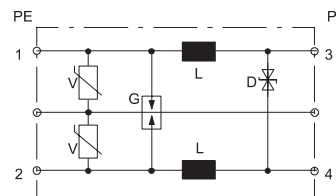
Surge protection for use in measurement and control technology

- Medium and fine protection
- Standard design for single core systems
- Two-stage protection circuit
- With installation-friendly, screwless connection terminals
- In space-saving 17.5 mm grid
- With inductive decoupling in the longitudinal branch

Application: Universal use on any 35 mm DIN profile rail in every commercially available distributor housing.

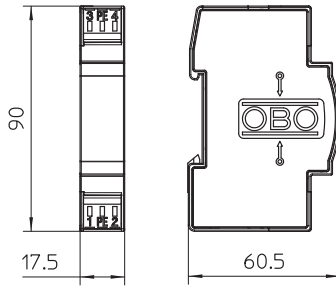
FLD 48	
Maximum continuous voltage AC	U_c 37 V
Maximum continuous voltage DC	U_c 53 V
Category	Type 1+2+3 / D1+C2+C1
Lightning protection zone LPZ	0-3
Number of poles	2
Rated current	I_L 1 A
Series inductivity per wire	120 μ H \pm 20 %
Impulse durability wire-wire	C2: 5 kV / 2,5 kA (8/20 μ s)
Impulse durability wire-earth	C2: 10 kV / 5 kA (8/20 μ s)
Total discharge current (8/20)	10 kA
Total discharge current (10/350)	D1: 3 kA
Protection level wire-wire	<140 V
Protection level wire-earth	<600 V
Temperature range	ϑ -40 - +80 °C
Installation type	DIN rail 35 mm
Connection system	Terminal
Division unit TE (17.5 mm)	1
Protection rating	IP20
Connection cross-section, flexible	0.14 - 2.5 mm ²
Connection cross-section, multi-wire	0.14 - 2.5 mm ²
Connection cross-section, rigid	0.14 - 2.5 mm ²
Earthing via:	Terminal
Testing standard	IEC 61643-21
Approvals	UL

Connection options





Medium and fine protection FLD for two-core systems 110 V



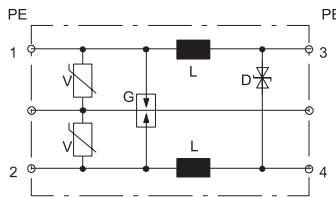
Surge protection for use in measurement and control technology

- Medium and fine protection
- Standard design for single core systems
- Two-stage protection circuit
- With installation-friendly, screwless connection terminals
- In space-saving 17.5 mm grid
- With inductive decoupling in the longitudinal branch

Application: Universal use on any 35 mm DIN profile rail in every commercially available distributor housing.

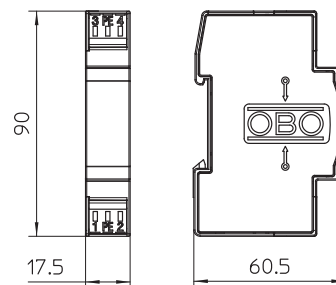
Type	Max. continuous voltage AC V	Max. continuous voltage DC V	Number of poles	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
FLD 110	86	122	2	Terminal	1	5.200	5098646

Connection options



FLD 110	
Maximum continuous voltage AC	U_c 86 V
Maximum continuous voltage DC	U_c 122 V
Category	Type 1+2+3 / D1+C2+C1
Lightning protection zone LPZ	0-3
Number of poles	2
Rated current	I_L 1 A
Series inductivity per wire	120 μ H \pm 20 %
Impulse durability wire-wire	C1: 1 kV / 0,5 kA (8/20 μ s)
Impulse durability wire-earth	C2: 10 kV / 5 kA (8/20 μ s)
Total discharge current (8/20)	10 kA
Total discharge current (10/350)	D1: 3 kA
Protection level wire-wire	<300 V
Protection level wire-earth	<600 V
Temperature range	ϑ -40 - +80 °C
Installation type	DIN rail 35 mm
Connection system	Terminal
Division unit TE (17.5 mm)	1
Protection rating	IP20
Connection cross-section, flexible	0.14 - 2.5 mm ²
Connection cross-section, multi-wire	0.14 - 2.5 mm ²
Connection cross-section, rigid	0.14 - 2.5 mm ²
Earthing via:	Terminal
Testing standard	IEC 61643-21
Approvals	UL

Medium and fine protection FLD 2 for two-core systems 12 V



Type	Max. continuous voltage AC V	Max. continuous voltage DC V	Number of poles	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
FLD 2-12	9	13	2	Terminal	1	5.100	5098808

Surge protection for use in measurement and control technology

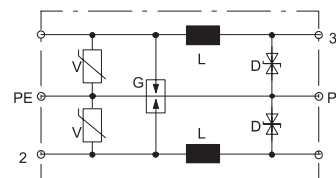
- Medium and fine protection
- Standard design for single core systems
- Two-stage protection circuit
- With installation-friendly, screwless connection terminals
- In space-saving 17.5 mm grid
- With inductive decoupling in the longitudinal branch

Application: Universal use on any 35 mm DIN profile rail in every commercially available distributor housing.

FLD 2-12

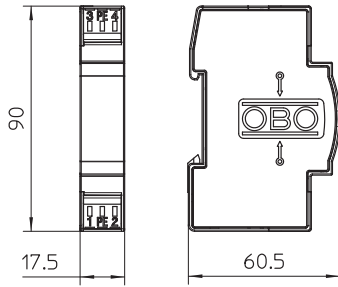
Maximum continuous voltage AC	U_c	9 V
Maximum continuous voltage DC	U_c	13 V
Category		Type 2+3 / C2+C1
Lightning protection zone LPZ		1→3
Number of poles		2
Rated current	I_L	1 A
Series inductivity per wire		120 μ H \pm 10 %
Impulse durability wire-wire		C1: 1 kV / 0,5 kA (8/20 μ s)
Impulse durability wire-earth		C1: 1 kV / 0,5 kA (8/20 μ s)
Total discharge current (8/20)		1 kA
Total discharge current (10/350)		— kA
Protection level wire-wire		<60 V
Protection level wire-earth		<30 V
Temperature range	ϑ	-40 - +80 °C
Installation type		DIN rail 35 mm
Connection system		Terminal
Division unit TE (17.5 mm)		1
Protection rating		IP20
Connection cross-section, flexible		0.14 - 2.5 mm ²
Connection cross-section, multi-wire		0.14 - 2.5 mm ²
Connection cross-section, rigid		0.14 - 2.5 mm ²
Earthing via:		Terminal
Testing standard		IEC 61643-21
Approvals		UL

Connection options





Medium and fine protection for two-core systems 24 V



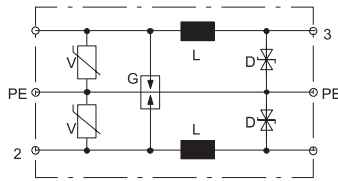
Surge protection for use in measurement and control technology

- Medium and fine protection
- Standard design for single core systems
- Two-stage protection circuit
- With installation-friendly, screwless connection terminals
- In space-saving 17.5 mm grid
- With inductive decoupling in the longitudinal branch

Application: Universal use on any 35 mm DIN profile rail in every commercially available distributor housing.

Type	Max. continuous voltage AC V	Max. continuous voltage DC V	Number of poles	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
FLD 2-24	19	28	2	Terminal	1	5.100	5098816

Connection options



FLD 2-24	
Maximum continuous voltage AC	U_c 19 V
Maximum continuous voltage DC	U_c 28 V
Category	Type 2+3 / C2+C1
Lightning protection zone LPZ	1→3
Number of poles	2
Rated current	I_L 1 A
Series inductivity per wire	120 μ H \pm 10 %
Impulse durability wire-wire	C1: 1 kV / 0,5 kA (8/20 μ s)
Impulse durability wire-earth	C1: 1 kV / 0,5 kA (8/20 μ s)
Total discharge current (8/20)	1 kA
Total discharge current (10/350)	— kA
Protection level wire-wire	<120 V
Protection level wire-earth	<60 V
Temperature range	ϑ -40 - +80 °C
Installation type	DIN rail 35 mm
Connection system	Terminal
Division unit TE (17.5 mm)	1
Protection rating	IP20
Connection cross-section, flexible	0.14 - 2.5 mm ²
Connection cross-section, multi-wire	0.14 - 2.5 mm ²
Connection cross-section, rigid	0.14 - 2.5 mm ²
Earthing via:	Terminal
Testing standard	IEC 61643-21
Approvals	UL

VF family

Protection for 2-pin power supplies

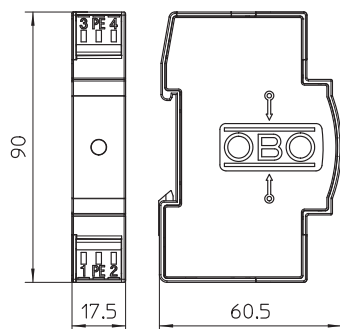


- High arresting capacity
- Low noise level
- Usable in AC/DC applications
- Simple mounting using screwless terminals

The lightning barriers of type VF are fine protection devices, used for single-phase energy technology systems. Besides the low protection level, these devices also have a visual display, which will indicate defective surge protection. If required, remote signalling is also available using a changeover contact and an NC contact.



MCR protection for 2-pole power supply, 12 V



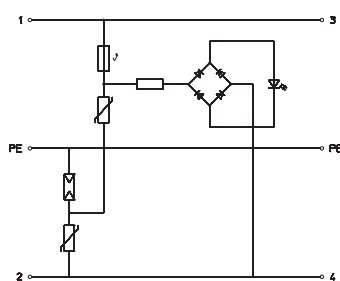
Surge protection device/fine protection type 3 to EN 61643-11

- Suitable for DC and AC voltage systems
- With visual function display
- With installation-friendly, screwless connection terminals
- In a space-saving 17.5 mm grid
- Y circuit

Application: Universal use on 35 mm DIN profile rail in every normal commercially available distributor housing.

Type	Highest continuous voltage V	Pack Piece	Weight kg/100 pc.	Item no.
VF12-AC DC	13.5	1	9.000	5097453

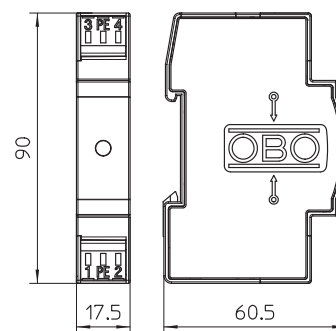
Connection options



VF12-AC DC

U max AC	U _c AC	13.5 V
U max DC	U _c DC	18 V
SPD to EN 61643-11		Type 3
SPD to IEC 61643-11		Class III
Lightning protection zone LPZ		2→3
Nominal discharge current (8/20)	I _n	0,7 kA
Maximum discharge current (8/20 μs)	I _{max}	2 kA
Rated current	I _L	20 A
Protection level wire-wire		<110 V
Protection level wire-earth		<1200 V
Response time	t _A	<25 ns
Temperature range	ϑ	-40 - +80 °C
Protection rating		IP 20
Division unit TE (17.5 mm)		1
Connection cross-section, rigid		0.14 - 2.5 mm ²
Connection cross-section, multi-wire		0.14 - 2.5 mm ²
Connection cross-section, flexible		0.14 - 2.5 mm ²

MCR protection for 2-pole for power supply, 24 V



Type	Highest continuous voltage V	Pack Piece	Weight kg/100 pc.	Item no.
VF24-AC/DC	34	1	8.000	5097607

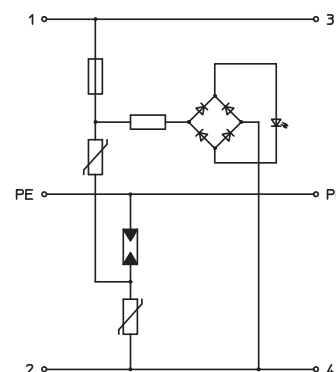
Surge protection device/fine protection type 3 to EN 61643-11

- Suitable for DC and AC voltage systems
- With visual function display
- With installation-friendly, screwless connection terminals
- In a space-saving 17.5 mm grid
- Y circuit

Application: Universal use on 35 mm DIN profile rail in every normal commercially available distributor housing.

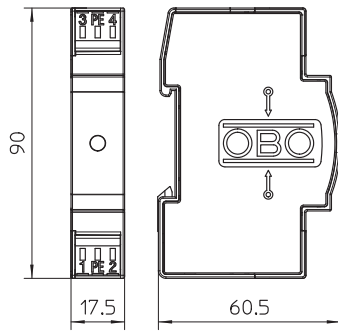
VF24-AC/DC	
U max AC	U _c AC 34 V
U max DC	U _c DC 46 V
SPD to EN 61643-11	Type 3
SPD to IEC 61643-11	Class III
Lightning protection zone LPZ	2-3
Nominal discharge current (8/20)	I _n 0,7 kA
Maximum discharge current (8/20 μs)	I _{max} 2 kA
Rated current	I _L 20 A
Protection level wire-wire	<130 V
Protection level wire-earth	<1200 V
Response time	t _A <25 ns
Temperature range	ϑ -40 - +80 °C
Protection rating	IP 20
Division unit TE (17.5 mm)	1
Connection cross-section, rigid	0.14 - 2.5 mm ²
Connection cross-section, multi-wire	0.14 - 2.5 mm ²
Connection cross-section, flexible	0.14 - 2.5 mm ²

Connection options





MCR protection for 2-pole for power supply, 48 V



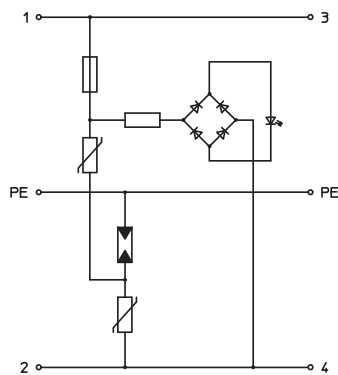
Surge protection device/fine protection type 3 to EN 61643-11

- Suitable for DC and AC voltage systems
- With visual function display
- With installation-friendly, screwless connection terminals
- In a space-saving 17.5 mm grid
- Y circuit

Application: Universal use on 35 mm DIN profile rail in every normal commercially available distributor housing.

Type	Highest continuous voltage V	Pack Piece	Weight kg/100 pc.	Item no.
VF48-AC/DC	60	1	8.000	5097615

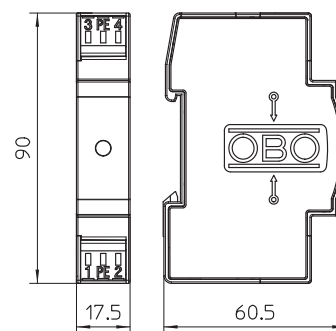
Connection options



VF48-AC/DC	
U max AC	U_c AC 60 V
U max DC	U_c DC 80 V
SPD to EN 61643-11	Type 3
SPD to IEC 61643-11	Class III
Lightning protection zone LPZ	2→3
Nominal discharge current (8/20)	I_n 0,7 kA
Maximum discharge current (8/20 μ s)	I_{max} 2 kA
Rated current	I_L 20 A
Protection level wire-wire	<220 V
Protection level wire-earth	<1200 V
Response time	t_A <25 ns
Temperature range	ϑ -40 - +80 °C
Protection rating	IP 20
Division unit TE (17.5 mm)	1
Connection cross-section, rigid	0.14 - 2.5 mm ²
Connection cross-section, multi-wire	0.14 - 2.5 mm ²
Connection cross-section, flexible	0.14 - 2.5 mm ²



MCR protection for 2-pole for power supply, 60 V



Type	Highest continuous voltage V	Pack Piece	Weight kg/100 pc.	Item no.
VF60-AC/DC	80	1	8.000	5097623

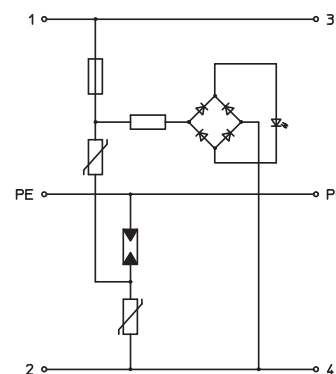
Surge protection device/fine protection type 3 to EN 61643-11

- Suitable for DC and AC voltage systems
- With visual function display
- With installation-friendly, screwless connection terminals
- In a space-saving 17.5 mm grid
- Y circuit

Application: Universal use on 35 mm DIN profile rail in every normal commercially available distributor housing.

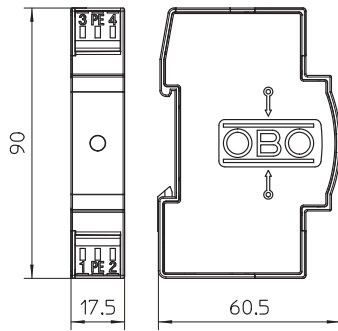
VF60-AC/DC	
U max AC	U _c AC 80 V
U max DC	U _c DC 110 V
SPD to EN 61643-11	Type 3
SPD to IEC 61643-11	Class III
Lightning protection zone LPZ	2-3
Nominal discharge current (8/20)	I _n 0,7 kA
Maximum discharge current (8/20 μs)	I _{max} 2 kA
Rated current	I _L 20 A
Protection level wire-wire	<280 V
Protection level wire-earth	<1200 V
Response time	t _A <25 ns
Temperature range	ϑ -40 - +80 °C
Protection rating	IP 20
Division unit TE (17.5 mm)	1
Connection cross-section, rigid	0.14 - 2.5 mm ²
Connection cross-section, multi-wire	0.14 - 2.5 mm ²
Connection cross-section, flexible	0.14 - 2.5 mm ²

Connection options





MCR protection for 2-pole for power supply, 110 V



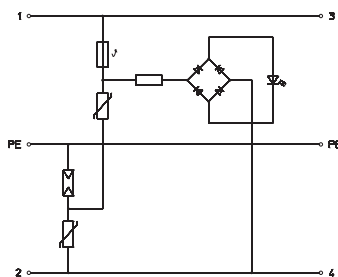
Surge protection device/fine protection type 3 to EN 61643-11

- Suitable for DC and AC voltage systems
- With visual function display
- With installation-friendly, screwless connection terminals
- In a space-saving 17.5 mm grid
- Y circuit

Application: Universal use on 35 mm DIN profile rail in every normal commercially available distributor housing.

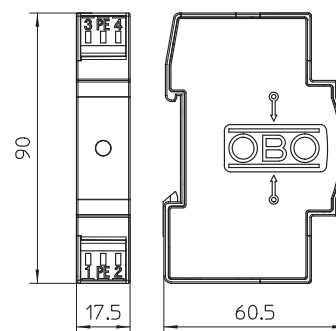
Type	Highest continuous voltage V	Pack Piece	Weight kg/100 pc.	Item no.
VF110-AC DC	150	1	8.000	5097631

Connection options



VF110-AC DC	
U max AC	U _c AC 150 V
U max DC	U _c DC 200 V
SPD to EN 61643-11	Type 3
SPD to IEC 61643-11	Class III
Lightning protection zone LPZ	2→3
Nominal discharge current (8/20)	I _n 2 kA
Maximum discharge current (8/20 μs)	I _{max} 6.5 kA
Rated current	I _L 20 A
Protection level wire-wire	<500 V
Protection level wire-earth	<1400 V
Response time	t _A <25 ns
Temperature range	θ -40 - +80 °C
Protection rating	IP 20
Division unit TE (17.5 mm)	1
Connection cross-section, rigid	0.14 - 2.5 mm ²
Connection cross-section, multi-wire	0.14 - 2.5 mm ²
Connection cross-section, flexible	0.14 - 2.5 mm ²

MCR protection for 2-pole for power supply, 230 V



Type	Highest continuous voltage V	Pack Piece	Weight kg/100 pc.	Item no.
VF230-AC/DC	255	1	8.000	5097650

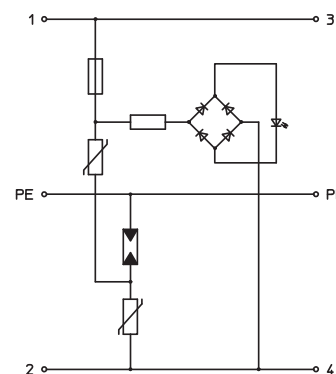
Surge protection device/fine protection type 3 to EN 61643-11

- Suitable for DC and AC voltage systems
- With visual function display
- With installation-friendly, screwless connection terminals
- In a space-saving 17.5 mm grid
- Y circuit

Application: Universal use on 35 mm DIN profile rail in every normal commercially available distributor housing.

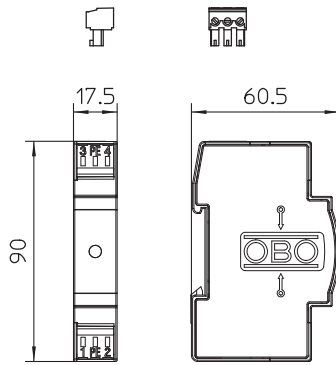
VF230-AC/DC	
U max AC	U _c AC 255 V
U max DC	U _c DC 350 V
SPD to EN 61643-11	Type 3
SPD to IEC 61643-11	Class III
Lightning protection zone LPZ	2→3
Nominal discharge current (8/20)	I _n 2.5 kA
Maximum discharge current (8/20 μs)	I _{max} 7 kA
Rated current	I _L 20 A
Protection level wire-wire	<1000 V
Protection level wire-earth	<1400 V
Response time	t _A <25 ns
Temperature range	ϑ -40 - +80 °C
Protection rating	IP 20
Division unit TE (17.5 mm)	1
Connection cross-section, rigid	0.14 - 2.5 mm ²
Connection cross-section, multi-wire	0.14 - 2.5 mm ²
Connection cross-section, flexible	0.14 - 2.5 mm ²

Connection options





MCR protection for 2-pole for power supply with remote signalling, 12 V AC/DC



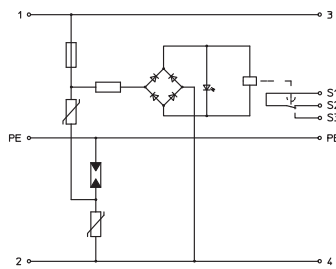
Surge protection / fine power protection, type 3, to EN 61643-11 with remote signalling

- With remote signalling, potential-free changeover contact, for function monitoring
- Suitable for DC and AC systems
- With visual function display
- With easy mounting, screwless connection terminals
- In space-saving 17.5 mm grid
- Y circuit

Application: Universal use on 35 mm DIN profile rails in any standard distributor housing.

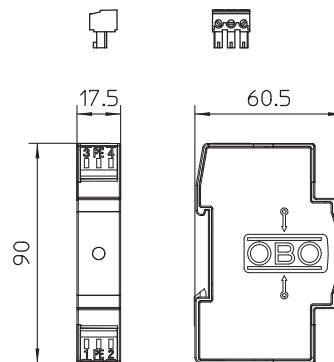
Type	Highest continuous voltage V	Pack Piece	Weight kg/100 pc.	Item no.
VF12-AC/DC-FS	13.5	1	6.400	5097454

Connection options



VF12-AC/DC-FS		
U max AC	U _c AC	13.5 V
U max DC	U _c DC	18 V
SPD to EN 61643-11		Type 3
SPD to IEC 61643-11		Class III
Lightning protection zone LPZ		2→3
Nominal discharge current (8/20)	I _n	0,7 kA
Maximum discharge current (8/20 μs)	I _{max}	2 kA
Rated current	I _L	20 A
Protection level wire-wire		<110 V
Protection level wire-earth		<1200 V
Response time	t _A	<25 ns
Temperature range	θ	-40 - +80 °C
Protection rating		IP 20
Division unit TE (17.5 mm)		1
Connection cross-section, rigid		0.14 - 2.5 mm ²
Connection cross-section, multi-wire		0.14 - 2.5 mm ²
Connection cross-section, flexible		0.14 - 2.5 mm ²

MCR protection for 2-pole power supply with remote signalling, 24 V AC/DC



Type	Highest continuous voltage V	Pack Piece	Weight kg/100 pc.	Item no.
VF24-AC/DC-FS	34	1	6.620	5097820

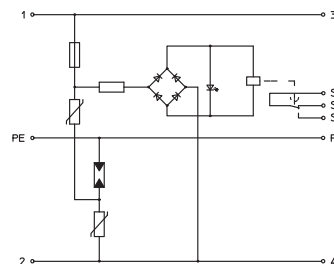
Surge protection / fine power protection, type 3, to EN 61643-11 with remote signalling

- With remote signalling, potential-free changeover contact, for function monitoring
- Suitable for DC and AC systems
- With visual function display
- With easy mounting, screwless connection terminals
- In space-saving 17.5 mm grid
- Y circuit

Application: Universal use on 35 mm DIN profile rails in any standard distributor housing.

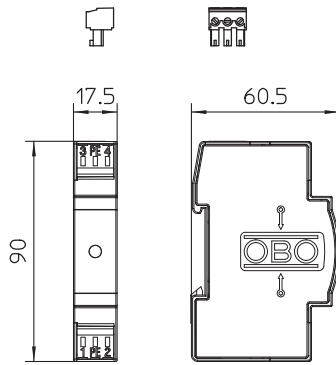
VF24-AC/DC-FS	
U max AC	U _{c AC} 34 V
U max DC	U _{c DC} 46 V
SPD to EN 61643-11	Type 3
SPD to IEC 61643-11	Class III
Lightning protection zone LPZ	2→3
Nominal discharge current (8/20)	I _n 0,7 kA
Maximum discharge current (8/20 μs)	I _{max} 2 kA
Rated current	I _L 20 A
Protection level wire-wire	<160 V
Protection level wire-earth	<1200 V
Response time	t _A <25 ns
Temperature range	ϑ -40 - +80 °C
Protection rating	IP 20
Division unit TE (17.5 mm)	1
Connection cross-section, rigid	0.14 - 2.5 mm ²
Connection cross-section, multi-wire	0.14 - 2.5 mm ²
Connection cross-section, flexible	0.14 - 2.5 mm ²

Connection options





MCR protection for 2-pole power supply with remote signalling, 48 V AC/DC



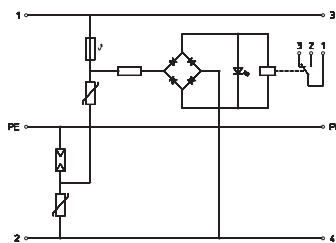
Surge protection / fine power protection, type 3, to EN 61643-11 with remote signalling

- With remote signalling, potential-free changeover contact, for function monitoring
- Suitable for DC and AC systems
- With visual function display
- With easy mounting, screwless connection terminals
- In space-saving 17.5 mm grid
- Y circuit

Application: Universal use on 35 mm DIN profile rails in any standard distributor housing.

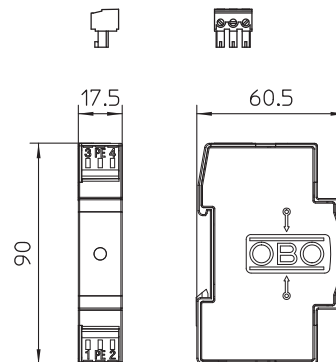
Type	Highest continuous voltage V	Pack Piece	Weight kg/100 pc.	Item no.
VF48-AC/DC-FS	60	1	6.630	5097822

Connection options



VF48-AC/DC-FS	
U max AC	U _{c AC} 60 V
U max DC	U _{c DC} 80 V
SPD to EN 61643-11	Type 3
SPD to IEC 61643-11	Class III
Lightning protection zone LPZ	2→3
Nominal discharge current (8/20)	I _n 0,7 kA
Maximum discharge current (8/20 μs)	I _{max} 2 kA
Rated current	I _L 20 A
Protection level wire-wire	<220 V
Protection level wire-earth	<1200 V
Response time	t _A <25 ns
Temperature range	θ -40 - +80 °C
Protection rating	IP 20
Division unit TE (17.5 mm)	1
Connection cross-section, rigid	0.14 - 2.5 mm ²
Connection cross-section, multi-wire	0.14 - 2.5 mm ²
Connection cross-section, flexible	0.14 - 2.5 mm ²

MCR protection for 2-pole power supply with remote signalling, 230 V AC



Type	Highest continuous voltage V	Pack Piece	Weight kg/100 pc.	Item no.
VF230-AC-FS	255	1	6.910	5097858

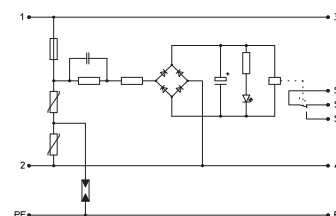
Surge protection / fine power protection, type 3, to EN 61643-11 with remote signalling

- With remote signalling, potential-free changeover contact, for function monitoring
- Suitable for AC systems
- With visual function display
- With easy mounting, screwless connection terminals
- In space-saving 17.5 mm grid
- Y circuit

Application: Universal use on 35 mm DIN profile rails in any standard distributor housing.

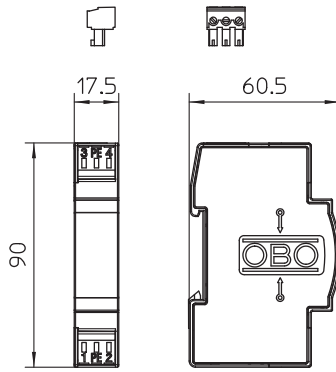
VF230-AC-FS	
U max AC	U _c AC 255 V
SPD to EN 61643-11	Type 3
SPD to IEC 61643-11	Class III
Lightning protection zone LPZ	2→3
Nominal discharge current (8/20)	I _n 2,5 kA
Maximum discharge current (8/20 μs)	I _{max} 7 kA
Rated current	I _L 20 A
Protection level wire-wire	<1060 V
Protection level wire-earth	<1400 V
Response time	t _A <25 ns
Temperature range	ϑ -40 - +80 °C
Protection rating	IP 20
Division unit TE (17.5 mm)	1
Connection cross-section, rigid	0.14 - 2.5 mm ²
Connection cross-section, multi-wire	0.14 - 2.5 mm ²
Connection cross-section, flexible	0.14 - 2.5 mm ²

Connection options





MCR protection for 2-pin for power supply with leak current-free remote signalling, 230 V AC/DC

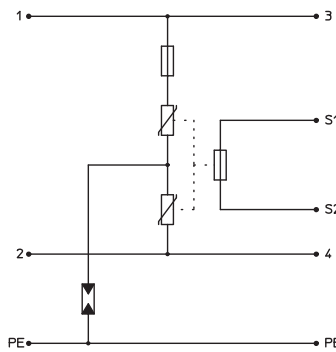


- Type 3 surge protection/fine network protection to EN 61643-11 with leak current-free remote signalling
- With remote signalling: potential-free NC contact for function monitoring
 - With installation-friendly, screwless connection terminals
 - In space-saving 17.5 mm grid
 - Y circuit

Application: Universal use on 35 mm DIN profile rails in any standard distributor housing.

Type	U max	U max	Pack	Weight	Item no.
	AC	DC			
VF2-230-AC/DC-FS	255 V	350 V	1 Piece	6.000 kg/100 pc.	5097939

Connection options



VF2-230-AC/DC-FS		
U max AC	U _c AC	255 V
U max DC	U _c DC	350 V
SPD to EN 61643-11		Type 3
SPD to IEC 61643-11		Class III
Lightning protection zone LPZ		2→3
Nominal discharge current (8/20)	I _n	2,5 kA
Maximum discharge current (8/20 μs)	I _{max}	7 kA
Rated current	I _L	20 A
Protection level wire-wire		< 1000 V
Protection level wire-earth		< 1400 V
Response time	t _A	<25 ns
Temperature range	θ	-40 - +80 °C
Protection rating		IP 20
Division unit TE (17.5 mm)		1
Connection cross-section, rigid		0.14 - 2.5 mm ²
Connection cross-section, multi-wire		0.14 - 2.5 mm ²
Connection cross-section, flexible		0.14 - 2.5 mm ²

MDP family

MCR protection for multi-wire systems (testable)



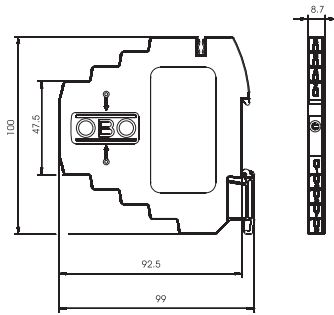
- Protection device for multi-wire systems (4-pole)
- Direct shield earthing
- Easy-mounting, screwless connection terminals
- Space-saving width of just 8.7 mm
- Versions with nominal currents up to 10 A
- High frequency bandwidth up to 100 MHz
- UL-listed

Besides the high current capacity, the lightning barriers of type MDP offer a narrow installation width of just 8.7 mm. A separate screen connection permits screen attachment on both sides of the equipotential bonding, thus optimising the screen effect against capacitive and inductive couplings. Depending on the version, a nominal current of up

to 10 A can be applied to the devices, meaning that they are thus ideally suited to use in special applications, such as slip ring transmitters or heating systems in wind power systems. When installed, all the MDPs can be checked using LifeControl.



Series protection device, 2-pole, 5 V version



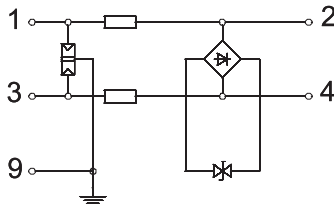
Lightning barrier with test function; 5 V version

- Nominal load current 0.58 A
- Protection device for multi-wire systems
- Direct shield earthing and screwless connection terminals
- Space-saving width of just 8.7 mm
- Protection circuit testable with Life Control
- High frequency range of 0–100 MHz
- UL-listed (4DG1)

Application: Universal use on 35 mm DIN profile rail in any standard distribution housing.

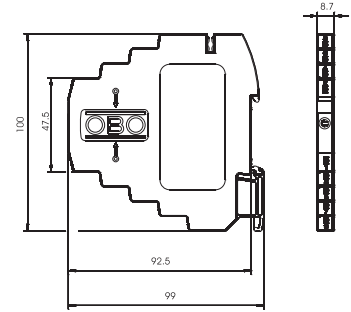
Type	Max. continuous voltage AC V	Max. continuous voltage DC V	Number of poles	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
MDP-2 D-5-T	7	10	2	Terminal	1	6.000	5098404

Connection options



MDP-2 D-5-T	
Maximum continuous voltage AC	U_c 7 V
Maximum continuous voltage DC	U_c 10 V
Category	Type 1+2+3 / D1+C2+C1
Lightning protection zone LPZ	0→3
Number of poles	2
Rated current	I_L 0.58 A
Series resistance per wire	2,35 $\Omega \pm 5\%$
Impulse durability wire-wire	C1: 0,5 kV / 0,25 kA (8/20 μ s)
Impulse durability wire-earth	C2: 5 kV / 2,5 kA (8/20 μ s)
Total discharge current (8/20)	5 kA
Total discharge current (10/350)	D1: 1 kA
Protection level wire-wire	<35 V
Protection level wire-earth	<800 V
Frequency range	0 - 100 MHz
Temperature range	ϑ -40 - +80 °C
Installation type	DIN rail 35 mm
Connection system	Terminal
Protection rating	IP20
Shielding connection available	Yes
Shield connection	Direct
Connection cross-section, flexible	0.14 - 2.5 mm ²
Connection cross-section, multi-wire	0.14 - 1.5 mm ²
Connection cross-section, rigid	0.14 - 2.5 mm ²
Earthing via:	DIN rail
Testing standard	IEC 61643-21
Approvals	UL

Series protection device, 3-pole, 5 V version



Type	Max. continuous voltage AC V	Max. continuous voltage DC V	Number of poles	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
MDP-3 D-5-T	7	10	3	Terminal	1	6.000	5098407

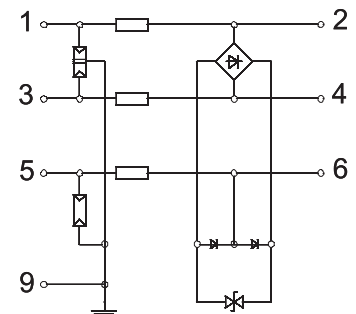
Lightning barrier with test function; 5 V version

- Nominal load current 0.58 A
- Protection device for multi-wire systems
- Direct shield earthing and screwless connection terminals
- Space-saving width of just 8.7 mm
- Protection circuit testable with Life Control
- High frequency range of 0–100 MHz
- UL-listed (4DG1)

Application: Universal use on 35 mm DIN profile rail in any standard distribution housing.

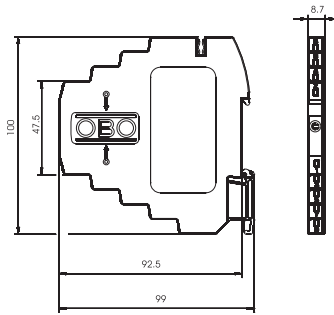
MDP-3 D-5-T	
Maximum continuous voltage AC	U_c 7 V
Maximum continuous voltage DC	U_c 10 V
Category	Type 1+2+3 / D1+C2+C1
Lightning protection zone LPZ	0→3
Number of poles	3
Rated current	I_L 0.58 A
Series resistance per wire	2,35 $\Omega \pm 5\%$
Impulse durability wire-wire	C1: 0,5 kV / 0,25 kA (8/20 μ s)
Impulse durability wire-earth	C2: 5 kV / 2,5 kA (8/20 μ s)
Total discharge current (8/20)	7,5 kA
Total discharge current (10/350)	D1: 1,5 kA
Protection level wire-wire	<35 V
Protection level wire-earth	<800 V
Frequency range	0 - 100 MHz
Temperature range	ϑ -40 - +80 °C
Installation type	DIN rail 35 mm
Connection system	Terminal
Protection rating	IP20
Shielding connection available	Yes
Shield connection	Direct
Connection cross-section, flexible	0.14 - 2.5 mm ²
Connection cross-section, multi-wire	0.14 - 1.5 mm ²
Connection cross-section, rigid	0.14 - 2.5 mm ²
Earthing via:	DIN rail
Testing standard	IEC 61643-21
Approvals	UL

Connection options





Series protection device, 4-pole, 5 V version



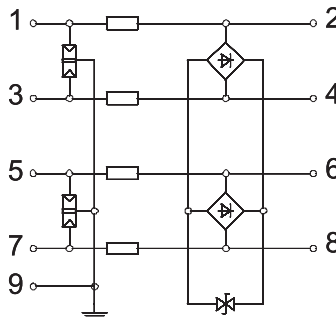
Lightning barrier with test function; 5 V version

- Nominal load current 0.58 A
- Protection device for multi-wire systems
- Direct shield earthing and screwless connection terminals
- Space-saving width of just 8.7 mm
- Protection circuit testable with Life Control
- High frequency range of 0–100 MHz
- UL-listed (4DG1)

Application: Universal use on 35 mm DIN profile rail in any standard distribution housing.

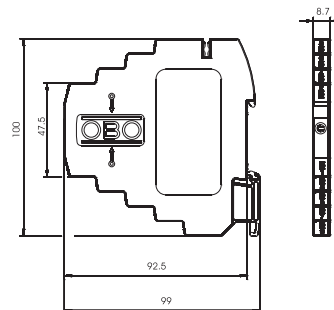
Type	Max. continuous AC voltage V	Max. continuous DC voltage V	Number of poles	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
MDP-4 D-5-T	7	10	4	Terminal	1	6.000	5098411

Connection options



MDP-4 D-5-T	
Maximum continuous voltage AC	U_c 7 V
Maximum continuous voltage DC	U_c 10 V
Category	Type 1+2+3 / D1+C2+C1
Lightning protection zone LPZ	0→3
Number of poles	4
Rated current	I_L 0.58 A
Series resistance per wire	2,35 Ω \pm 5 %
Impulse durability wire-wire	C1: 0,5 kV / 0,25 kA (8/20 μ s)
Impulse durability wire-earth	C2: 5 kV / 2,5 kA (8/20 μ s)
Total discharge current (8/20)	10 kA
Total discharge current (10/350)	D1: 2 kA
Protection level wire-wire	<35 V
Protection level wire-earth	<800 V
Frequency range	0 - 100 MHz
Temperature range	ϑ -40 - +80 °C
Installation type	DIN rail 35 mm
Connection system	Terminal
Protection rating	IP20
Shielding connection available	Yes
Shield connection	Direct
Connection cross-section, flexible	0.14 - 2.5 mm ²
Connection cross-section, multi-wire	0.14 - 1.5 mm ²
Connection cross-section, rigid	0.14 - 2.5 mm ²
Earthing via:	DIN rail
Testing standard	IEC 61643-21
Approvals	UL

Series protection device, 2-pole, 24 V version



Type	Max. continuous AC voltage V	Max. continuous DC voltage V	Number of poles	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
MDP-2 D-24-T	20	28	2	Terminal	1	6.000	5098422

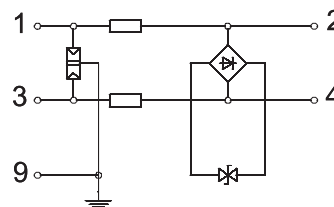
Lightning barrier with test function; 24 V version

- Rated load current 0.58 A
- Protection device for multi-wire systems
- Direct shield earthing and screwless connection terminals
- Space-saving width of just 8.7 mm
- Protection circuit testable with Life Control
- High bandwidth to 100 MHz
- UL-listed (4DG1)

Application: Universal use on 35 mm DIN profile rail in any standard distribution housing.

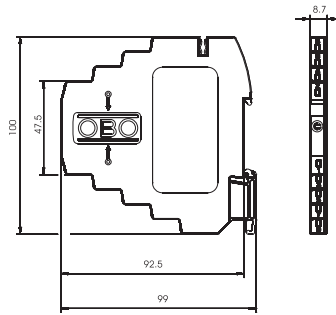
MDP-2 D-24-T	
Maximum continuous voltage AC	U_c 20 V
Maximum continuous voltage DC	U_c 28 V
Category	Type 1+2+3 / D1+C2+C1
Lightning protection zone LPZ	0→3
Number of poles	2
Rated current	I_L 0.58 A
Series resistance per wire	2,35 $\Omega \pm 5\%$
Impulse durability wire-wire	C1: 0,5 kV / 0,25 kA (8/20 μ s)
Impulse durability wire-earth	C2: 5 kV / 2,5 kA (8/20 μ s)
Total discharge current (8/20)	5 kA
Total discharge current (10/350)	D1: 1 kA
Protection level wire-wire	<55 V
Protection level wire-earth	<800 V
Frequency range	0 - 100 MHz
Temperature range	ϑ -40 - +80 °C
Installation type	DIN rail 35 mm
Connection system	Terminal
Protection rating	IP20
Shielding connection available	Yes
Shield connection	Direct
Connection cross-section, flexible	0.14 - 2.5 mm ²
Connection cross-section, multi-wire	0.14 - 1.5 mm ²
Connection cross-section, rigid	0.14 - 2.5 mm ²
Earthing via:	DIN rail
Testing standard	IEC 61643-21
Approvals	UL

Connection options





Series protection device, 3-pole, 24 V version



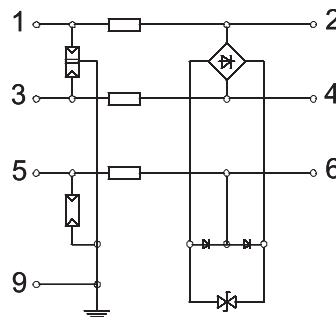
Lightning barrier with test function; 24 V version

- Rated load current 0.58 A
- Protection device for multi-wire systems
- Direct shield earthing and screwless connection terminals
- Space-saving width of just 8.7 mm
- Protection circuit testable with Life Control
- High bandwidth to 100 MHz
- UL-listed (4DG1)

Application: Universal use on 35 mm DIN profile rail in any standard distribution housing.

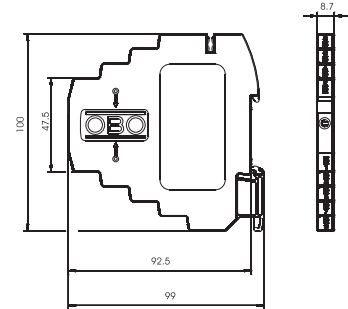
Type	Max. continuous voltage AC V	Max. continuous voltage DC V	Number of poles	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
MDP-3 D-24-T	20	28	3	Terminal	1	6.000	5098427

Connection options



MDP-3 D-24-T	
Maximum continuous voltage AC	U_c 20 V
Maximum continuous voltage DC	U_c 28 V
Category	Type 1+2+3 / D1+C2+C1
Lightning protection zone LPZ	0-3
Number of poles	3
Rated current	I_L 0.58 A
Series resistance per wire	2,35 Ω \pm 5 %
Impulse durability wire-wire	C1: 0,5 kV / 0,25 kA (8/20 μ s)
Impulse durability wire-earth	C2: 5 kV / 2,5 kA (8/20 μ s)
Total discharge current (8/20)	7,5 kA
Total discharge current (10/350)	D1: 1,5 kA
Protection level wire-wire	<55 V
Protection level wire-earth	<800 V
Frequency range	0 - 100 MHz
Temperature range	ϑ -40 - +80 °C
Installation type	DIN rail 35 mm
Connection system	Terminal
Protection rating	IP20
Shielding connection available	Yes
Shield connection	Direct
Connection cross-section, flexible	0.14 - 2.5 mm ²
Connection cross-section, multi-wire	0.14 - 1.5 mm ²
Connection cross-section, rigid	0.14 - 2.5 mm ²
Earthing via:	DIN rail
Testing standard	IEC 61643-21
Approvals	UL

Series protection device, 4-pole, 24 V version



Type	Max. continuous AC voltage V	Max. continuous DC voltage V	Number of poles	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
MDP-4 D-24-T	20	28	4	Terminal	1	5.800	5098431

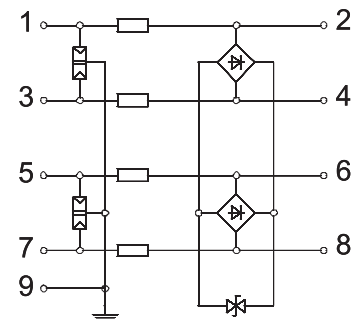
Lightning barrier with test function; 24 V version

- Rated load current 0.58 A
- Protection device for multi-wire systems
- Direct shield earthing and screwless connection terminals
- Space-saving width of just 8.7 mm
- Protection circuit testable with Life Control
- High bandwidth to 100 MHz
- UL-listed (4DG1)

Application: Universal use on 35 mm DIN profile rail in any standard distribution housing.

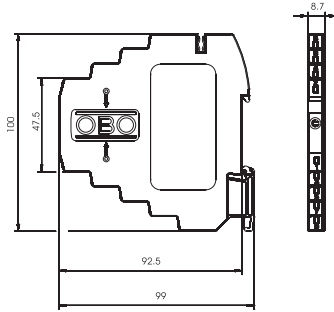
MDP-4 D-24-T	
Maximum continuous voltage AC	U_c 20 V
Maximum continuous voltage DC	U_c 28 V
Category	Type 1+2+3 / D1+C2+C1
Lightning protection zone LPZ	0→3
Number of poles	4
Rated current	I_L 0.58 A
Series resistance per wire	2,35 $\Omega \pm 5\%$
Impulse durability wire-wire	C1: 0,5 kV / 0,25 kA (8/20 μ s)
Impulse durability wire-earth	C2: 5 kV / 2,5 kA (8/20 μ s)
Total discharge current (8/20)	10 kA
Total discharge current (10/350)	D1: 2 kA
Protection level wire-wire	<55 V
Protection level wire-earth	<800 V
Frequency range	0 - 100 MHz
Temperature range	ϑ -40 - +80 °C
Installation type	DIN rail 35 mm
Connection system	Terminal
Protection rating	IP20
Shielding connection available	Yes
Shield connection	Direct
Connection cross-section, flexible	0.14 - 2.5 mm ²
Connection cross-section, multi-wire	0.14 - 1.5 mm ²
Connection cross-section, rigid	0.14 - 2.5 mm ²
Earthing via:	DIN rail
Testing standard	IEC 61643-21
Approvals	UL

Connection options





Series protection device, 2-pole, 48 V version



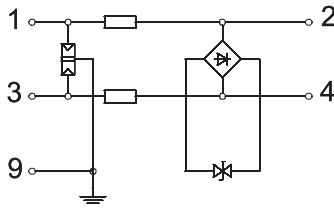
Lightning barrier with test function; 48 V version

- Rated load current 0.58 A
- Protection device for multi-wire systems
- Direct shield earthing and screwless connection terminals
- Space-saving width of just 8.7 mm
- Protection circuit testable with Life Control
- High bandwidth to 100 MHz
- UL-listed (4DG1)

Application: Universal use on 35 mm DIN profile rail in any standard distribution housing.

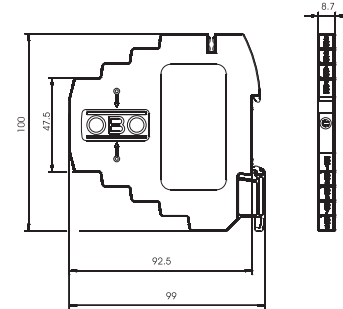
Type	Max. continuous voltage AC V	Max. continuous voltage DC V	Number of poles	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
MDP-2 D-48-T	41	58	2	Terminal	1	6.000	5098442

Connection options



MDP-2 D-48-T	
Maximum continuous voltage AC	U_c 41 V
Maximum continuous voltage DC	U_c 58 V
Category	Type 1+2+3 / D1+C2+C1
Lightning protection zone LPZ	0→3
Number of poles	2
Rated current	I_L 0.58 A
Series resistance per wire	2,35 Ω \pm 5 %
Impulse durability wire-wire	C1: 0,5 kV / 0,25 kA (8/20 μ s)
Impulse durability wire-earth	C2: 5 kV / 2,5 kA (8/20 μ s)
Total discharge current (8/20)	5 kA
Total discharge current (10/350)	D1: 1 kA
Protection level wire-wire	<95 V
Protection level wire-earth	<800 V
Frequency range	0 - 100 MHz
Temperature range	ϑ -40 - +80 °C
Installation type	DIN rail 35 mm
Connection system	Terminal
Protection rating	IP20
Shielding connection available	Yes
Shield connection	Direct
Connection cross-section, flexible	0.14 - 2.5 mm ²
Connection cross-section, multi-wire	0.14 - 1.5 mm ²
Connection cross-section, rigid	0.14 - 2.5 mm ²
Earthing via:	DIN rail
Testing standard	IEC 61643-21
Approvals	UL

Series protection device, 3-pole, 48 V version



Type	Max. continuous AC voltage V	Max. continuous DC voltage V	Number of poles	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
MDP-3 D-48-T	41	58	3	Terminal	1	6.000	5098446

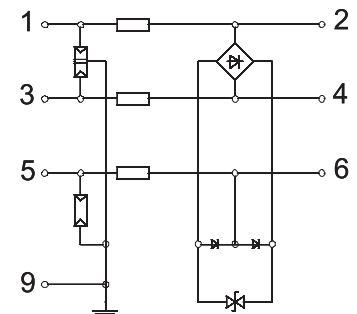
Lightning barrier with test function; 48 V version

- Rated load current 0.58 A
- Protection device for multi-wire systems
- Direct shield earthing and screwless connection terminals
- Space-saving width of just 8.7 mm
- Protection circuit testable with Life Control
- High bandwidth to 100 MHz
- UL-listed (4DG1)

Application: Universal use on 35 mm DIN profile rail in any standard distribution housing.

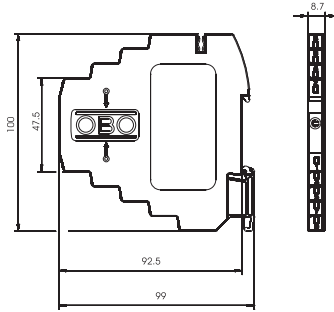
MDP-3 D-48-T	
Maximum continuous voltage AC	U_c 41 V
Maximum continuous voltage DC	U_c 58 V
Category	Type 1+2+3 / D1+C2+C1
Lightning protection zone LPZ	0→3
Number of poles	3
Rated current	I_L 0.58 A
Series resistance per wire	2,35 $\Omega \pm 5\%$
Impulse durability wire-wire	C1: 0,5 kV / 0,25 kA (8/20 μ s)
Impulse durability wire-earth	C2: 5 kV / 2,5 kA (8/20 μ s)
Total discharge current (8/20)	7,5 kA
Total discharge current (10/350)	D1: 1,5 kA
Protection level wire-wire	<95 V
Protection level wire-earth	<800 V
Frequency range	0 - 100 MHz
Temperature range	ϑ -40 - +80 °C
Installation type	DIN rail 35 mm
Connection system	Terminal
Protection rating	IP20
Shielding connection available	Yes
Shield connection	Direct
Connection cross-section, flexible	0.14 - 2.5 mm ²
Connection cross-section, multi-wire	0.14 - 1.5 mm ²
Connection cross-section, rigid	0.14 - 2.5 mm ²
Earthing via:	DIN rail
Testing standard	IEC 61643-21
Approvals	UL

Connection options





Series protection device, 4-pole, 48 V version



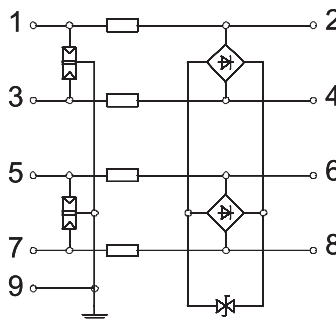
Lightning barrier with test function; 48 V version

- Rated load current 0.58 A
- Protection device for multi-wire systems
- Direct shield earthing and screwless connection terminals
- Space-saving width of just 8.7 mm
- Protection circuit testable with Life Control
- High bandwidth to 100 MHz
- UL-listed (4DG1)

Application: Universal use on 35 mm DIN profile rail in any standard distribution housing.

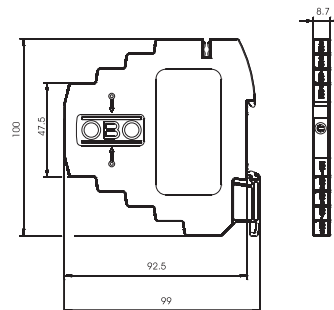
Type	Max. continuous voltage AC V	Max. continuous voltage DC V	Number of poles	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
MDP-4 D-48-T	41	58	4	Terminal	1	5.800	5098450

Connection options



MDP-4 D-48-T	
Maximum continuous voltage AC	U_c 41 V
Maximum continuous voltage DC	U_c 58 V
Category	Type 1+2+3 / D1+C2+C1
Lightning protection zone LPZ	0-3
Number of poles	4
Rated current	I_L 0.58 A
Series resistance per wire	2,35 Ω \pm 5 %
Impulse durability wire-wire	C1: 0,5 kV / 0,25 kA (8/20 μ s)
Impulse durability wire-earth	C2: 5 kV / 2,5 kA (8/20 μ s)
Total discharge current (8/20)	10 kA
Total discharge current (10/350)	D1: 2 kA
Protection level wire-wire	<95 V
Protection level wire-earth	<800 V
Frequency range	0 - 100 MHz
Temperature range	ϑ -40 - +80 °C
Installation type	DIN rail 35 mm
Connection system	Terminal
Protection rating	IP20
Shielding connection available	Yes
Shield connection	Direct
Connection cross-section, flexible	0.14 - 2.5 mm ²
Connection cross-section, multi-wire	0.14 - 1.5 mm ²
Connection cross-section, rigid	0.14 - 2.5 mm ²
Earthing via:	DIN rail
Testing standard	IEC 61643-21
Approvals	UL

Series protection device, 4-pole, 5 V version



Type	Max. continuous voltage AC V	Max. continuous voltage DC V	Number of poles	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
MDP-4 D-5-T-10	7	10	4	Terminal	1	7.200	5098413

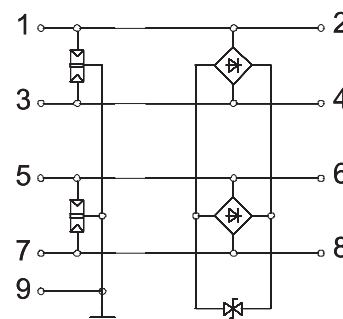
Lightning barrier with test function; 5 V version

- Rated load current 10 A
- Protection device for multi-wire systems
- Direct shield earthing and screwless connection terminals
- Space-saving width of just 8.7 mm
- Protection circuit testable with Life Control
- High bandwidth to 100 MHz
- UL-listed (4DG1)

Application: Universal use on 35 mm DIN rail in any standard distribution housing.

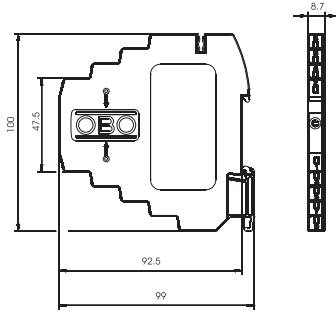
MDP-4 D-5-T-10	
Maximum continuous voltage AC	U_c 7 V
Maximum continuous voltage DC	U_c 10 V
Category	Type 1+2+3 / D1+C2+C1
Lightning protection zone LPZ	0→3
Number of poles	4
Rated current	I_L 10 A
Series resistance per wire	—
Impulse durability wire-wire	C1: 0,5 kV / 0,25 kA (8/20 μ s)
Total discharge current (8/20)	10 kA
Total discharge current (10/350)	D1: 2 kA
Protection level wire-wire	<45 V
Protection level wire-earth	<800 V
Frequency range	0 - 100 MHz
Temperature range	ϑ -40 - +80 °C
Installation type	DIN rail
Connection system	Terminal
Protection rating	IP20
Shielding connection available	Yes
Shield connection	Direct
Connection cross-section, flexible	0.14 - 2.5 mm ²
Connection cross-section, multi-wire	0.14 - 1.5 mm ²
Connection cross-section, rigid	0.14 - 2.5 mm ²
Earthing via:	DIN rail
Testing standard	IEC 61643-21
Approvals	UL

Connection options





Series protection device, 2-pole, 12 V version



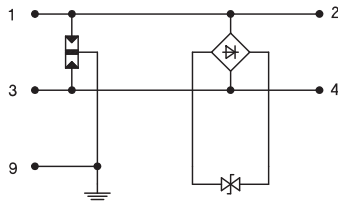
Lightning barrier with test function; 12 V version

- Rated load current 10 A
- Protection device for multi-wire systems
- Direct shield earthing and screwless connection terminals
- Space-saving width of just 8.7 mm
- Protection circuit testable with Life Control
- High bandwidth to 100 MHz
- UL-listed (4DG1)

Application: Universal use on 35 mm DIN profile rail in any standard distribution housing.

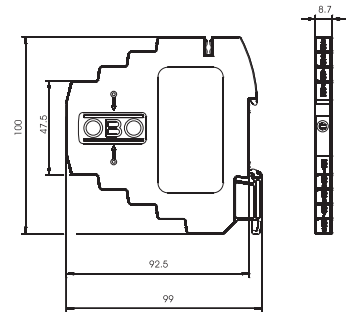
Type	Max. continuous AC voltage V	Max. continuous DC voltage V	Number of poles	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
MDP-2 D-12-T-10	10.5	15	2	Terminal	1	6.000	5098415

Connection options



MDP-2 D-12-T-10	
Maximum continuous voltage AC	U_c 10.5 V
Maximum continuous voltage DC	U_c 15 V
Category	Type 1+2+3 / D1+C2+C1
Lightning protection zone LPZ	0→3
Number of poles	2
Rated current	I_L 10 A
Series resistance per wire	—
Impulse durability wire-wire	C1: 0,5 kV / 0,25 kA (8/20 μ s)
Total discharge current (8/20)	5 kA
Total discharge current (10/350)	D1: 1 kA
Protection level wire-wire	<55 V
Protection level wire-earth	<800 V
Frequency range	0 - 100 MHz
Temperature range	ϑ -40 - +80 °C
Installation type	DIN rail
Connection system	Terminal
Protection rating	IP20
Shielding connection available	Yes
Shield connection	Direct
Connection cross-section, flexible	0.14 - 2.5 mm ²
Connection cross-section, multi-wire	0.14 - 1.5 mm ²
Connection cross-section, rigid	0.14 - 2.5 mm ²
Earthing via:	DIN rail
Testing standard	IEC 61643-21
Approvals	UL

Series protection device, 4-pole, 12 V version



Surge protection

Type	Max. continuous voltage AC V	Max. continuous voltage DC V	Number of poles	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
MDP-4 D-12-T-10	10.5	15	4	Terminal	1	6.000	5098419

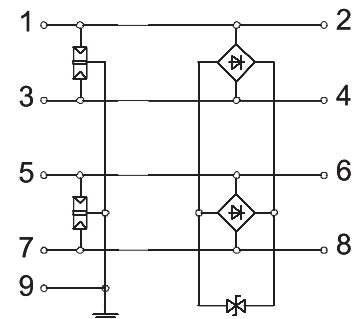
Lightning barrier with test function; 12 V version

- Rated load current 10 A
- Protection device for multi-wire systems
- Direct shield earthing and screwless connection terminals
- Space-saving width of just 8.7 mm
- Protection circuit testable with Life Control
- High bandwidth to 100 MHz
- UL-listed (4DG1)

Application: Universal use on 35 mm DIN profile rail in any standard distribution housing.

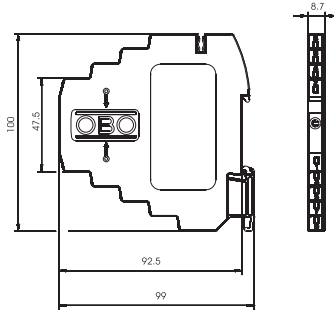
MDP-4 D-12-T-10	
Maximum continuous voltage AC	U_c 10.5 V
Maximum continuous voltage DC	U_c 15 V
Category	Type 1+2+3 / D1+C2+C1
Lightning protection zone LPZ	0→3
Number of poles	4
Rated current	I_L 10 A
Series resistance per wire	—
Impulse durability wire-wire	C1: 0,5 kV / 0,25 kA (8/20 μ s)
Total discharge current (8/20)	10 kA
Total discharge current (10/350)	D1: 2 kA
Protection level wire-wire	<55 V
Protection level wire-earth	<800 V
Frequency range	0 - 100 MHz
Temperature range	ϑ -40 - +80 °C
Installation type	DIN rail
Connection system	Terminal
Protection rating	IP20
Shielding connection available	Yes
Shield connection	Direct
Connection cross-section, flexible	0.14 - 2.5 mm ²
Connection cross-section, multi-wire	0.14 - 1.5 mm ²
Connection cross-section, rigid	0.14 - 2.5 mm ²
Earthing via:	DIN rail
Testing standard	IEC 61643-21
Approvals	UL

Connection options





Series protection device, 2-pole, 24 V version



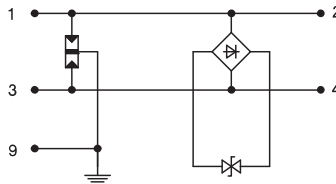
Lightning barrier with test function; 24 V version

- Rated load current 10 A
- Protection device for multi-wire systems
- Direct shield earthing and screwless connection terminals
- Space-saving width of just 8.7 mm
- Protection circuit testable with Life Control
- High bandwidth to 100 MHz
- UL-listed (4DG1)

Application: Universal use on 35 mm DIN profile rail in any standard distribution housing.

Type	Max. continuous voltage AC V	Max. continuous voltage DC V	Number of poles	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
MDP-2 D-24-T-10	20	28	2	Terminal	1	6.000	5098425

Connection options



MDP-2 D-24-T-10	
Maximum continuous voltage AC	U_c 20 V
Maximum continuous voltage DC	U_c 28 V
Category	Type 1+2+3 / D1+C2+C1
Lightning protection zone LPZ	0-3
Number of poles	2
Rated current	I_L 10 A
Series resistance per wire	—
Impulse durability wire-wire	C1: 0,5 kV / 0,25 kA (8/20 μ s)
Total discharge current (8/20)	5 kA
Total discharge current (10/350)	D1: 1 kA
Protection level wire-wire	<70 V
Protection level wire-earth	<800 V
Frequency range	0 - 100 MHz
Temperature range	ϑ -40 - +80 °C
Installation type	DIN rail
Connection system	Terminal
Protection rating	IP20
Shielding connection available	Yes
Shield connection	Direct
Connection cross-section, flexible	0.14 - 2.5 mm ²
Connection cross-section, multi-wire	0.14 - 1.5 mm ²
Connection cross-section, rigid	0.14 - 2.5 mm ²
Earthing via:	DIN rail
Testing standard	IEC 61643-21
Approvals	UL

Tele Defender

Combined protection device for VDSL, ISDN and DSL systems



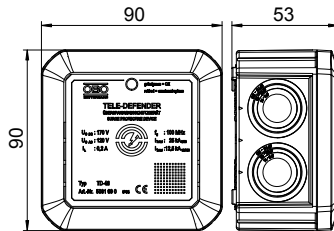
- Low protection level at a high current load
- "Push-in" clamps for quick installation
- Bandwidth-optimised for secure transmission up to 225 MHz
- Surface mounting

The data cable protection devices for telecommunications applications are available as combination protection and fine protection. Depending on the application, from DSL through to analogue communication, the devices are used for direct intermediate switching into the data cable, meaning that they

can easily be retrofitted in existing installations. The devices differ in their connection technology and transmission cable and are thus optimised for their appropriate applications, in order to cause the lowest attenuation level possible.



Combination protection device TD-4/I for ISDN and DSL systems

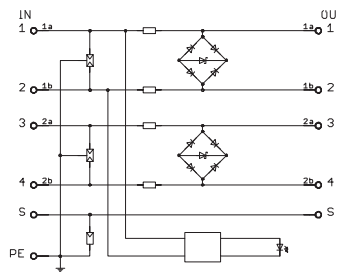


Data cable protection device for telecommunications equipment

- Low protection level at a high current load
 - "Push-in" terminals for quick installation
 - Bandwidth-optimised for secure transmission
 - Surface mounting
 - Visual function display
- Application: DSL systems, IP connections, ISDN or analogue telecommunications

Type	Max. continuous voltage AC V	Max. continuous voltage DC V	Number of poles	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
TD-4/I	120	170	4	Terminal	1	11.000	5081690

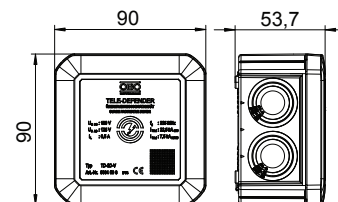
Connection options



TD-4/I	
Maximum continuous voltage AC	U_c 120 V
Maximum continuous voltage DC	U_c 170 V
Category	Type 1+2+3 / D1+C2+C1
Lightning protection zone LPZ	0→3
Number of poles	4
Rated current	I_L 0.2 A
Capacity (wire-wire)	<50 pF
Capacity (wire-earth)	<10 pF
Series resistance per wire	9 Ω \pm 10 %
Impulse durability wire-wire	C2: 18 kV / 9 kA (8/20 μ s)
Impulse durability wire-earth	C2: 18 kV / 9 kA (8/20 μ s)
Impulse discharge current (10/350)	I_{imp} 2.5 kA
Total discharge current (8/20)	25 kA
Total discharge current (10/350)	D1: 12,5 kA
Protection level wire-wire	<300 V
Protection level wire-earth	<650 V
Protection level, shield-earth (S-PE)	850 V
Frequency range	0 - 100 MHz
Insertion loss	S_{21} \leq 3 dB
Temperature range	ϑ -40 - +80 °C
Installation type	Surface-mounted
Connection system	Terminal
Protection rating	IP54
Shielding connection available	Yes
Connection cross-section, flexible	0.14 - 0.75 mm ²
Connection cross-section, multi-wire	0.14 - 0.75 mm ²
Connection cross-section, rigid	0.14 - 0.75 mm ²
Testing standard	IEC 61643-21

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Combination protection device TD-2d-V for VDSL systems



Surge protection

Type	Max. continuous voltage AC V	Max. continuous voltage DC V	Number of poles	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
TD-2D-V	125	180	2	Terminal	1	9.500	5081698

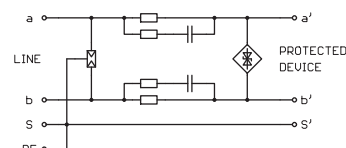
Data cable protection device for telecommunications equipment

- Low protection level at a high current load
- "Push-in" clamps for quick installation
- Bandwidth-optimised for secure transmission up to 225 MHz
- Surface mounting

Application: Ideal for all DSL systems, IP connections, ISDN or analogue telecommunications

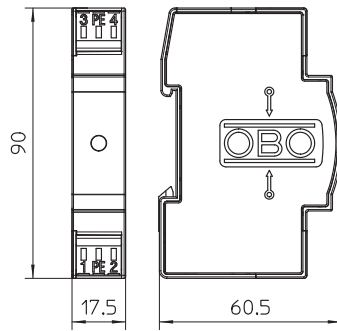
TD-2D-V	
Maximum continuous voltage AC	U_c 125 V
Maximum continuous voltage DC	U_c 180 V
Category	Type 1+2+3 / D1+C2+C1
Lightning protection zone LPZ	0-3
Number of poles	2
Rated current	I_L 0.5 A
Capacity (wire-wire)	<10 pF
Capacity (wire-earth)	<20 pF
Series resistance per wire	2,2 $\Omega \pm 5\%$
Impulse durability wire-wire	C2: 15 kV / 7,5 kA (8/20 μ s)
Impulse durability wire-earth	C2: 15 kV / 7,5 kA (8/20 μ s)
Impulse discharge current (10/350)	I_{imp} 2.5 kA
Total discharge current (8/20)	22,5 kA
Total discharge current (10/350)	D1: 7,5 kA
Protection level wire-wire	<350 V
Protection level wire-earth	<600 V
Frequency range	0 - 225 MHz
Insertion loss	S_{21} ≤ 3 dB
Temperature range	ϑ -40 - +80 °C
Installation type	Surface-mounted
Connection system	Terminal
Protection rating	IP54
Shielding connection available	Yes
Connection cross-section, flexible	0.14 - 1 mm ²
Connection cross-section, multi-wire	0.14 - 1 mm ²
Connection cross-section, rigid	0.08 - 1.5 mm ²
Testing standard	IEC 61643-21

Connection options





Combination protection device TD-2/D-HS for ISDN and DSL systems



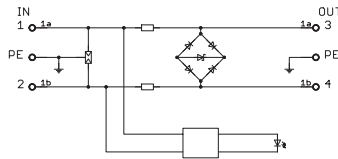
Data cable protection devices for telecommunication systems

- Low protection level at high current load
- Screwless terminals or connectable
- Bandwidth-optimised for secure transmission
- Quick mounting onto DIN rail for a telephone line
- Visual function display

Application: DSL systems, ISDN or analogue telecommunication

Type	Max. continuous voltage AC V	Max. continuous voltage DC V	Number of poles	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
TD-2/D-HS	120	170	2	Terminal	1	4.800	5081694

Connection options



TD-2/D-HS

Maximum continuous voltage AC	U_c	120 V
Maximum continuous voltage DC	U_c	170 V
Category		Type 1+2+3 / D1+C2+C1
Lightning protection zone LPZ		0-3
Number of poles		2
Rated current	I_L	0.2 A
Capacity (wire-wire)		<50 pF
Capacity (wire-earth)		<50 pF
Series resistance per wire		$9 \Omega \pm 10 \%$
Impulse durability wire-wire		C2: 18 kV / 9 kA (8/20 μ s)
Impulse durability wire-earth		C2: 18 kV / 9 kA (8/20 μ s)
Impulse discharge current (10/350)	I_{imp}	2.5 kA
Total discharge current (8/20)		10 kA
Total discharge current (10/350)		D1: 5 kA kA
Protection level wire-wire		<300 V
Protection level wire-earth		<650 V
Frequency range		0 - 75 MHz
Insertion loss	S_{21}	≤ 3 dB
Temperature range	ϑ	-40 - +80 °C
Installation type		DIN rail 35 mm
Connection system		Terminal
Protection rating		IP20
Shielding connection available		No
Connection cross-section, flexible		0.14 - 2.5 mm ²
Connection cross-section, multi-wire		0.14 - 2.5 mm ²
Connection cross-section, rigid		0.14 - 2.5 mm ²
Testing standard		IEC 61643-21

Tele Defender

Combination and fine protection devices RJ11-Tele and RJ45 Tele for analogue cables



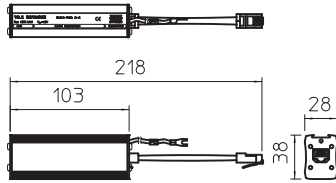
- In aluminium housing
- With two-stage protection circuit
- Simple mounting
- Inc. 150 mm connecting cable with RJ 11 and/or RJ 45 connectors
- Optimised bandwidth for TC systems
- DIN rail mounting

The data cable protection devices for telecommunications applications are available as combination protection and fine protection. Depending on the application, from DSL through to analogue communication, the devices are used for direct intermediate switching into the data cable, meaning that they

can easily be retrofitted in existing installations. The devices differ in their connection technology and transmission cable and are thus optimised for their appropriate applications, in order to cause the lowest attenuation level possible.



Fine protection device TELE 4-F for ISDN RJ11



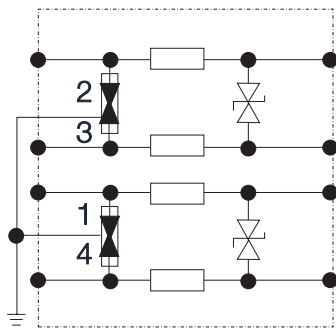
Data line protection device for analogue telecommunications systems

- In aluminium housing
- With 2-stage protection circuit
- Simple mounting
- Incl. 150 mm connection cable with RJ11 and/or RJ45 connectors
- Optimised bandwidth for TC systems
- DIN rail mounting with DLS-BS accessories (5082 38 2)

Application: For analogue telecommunication systems

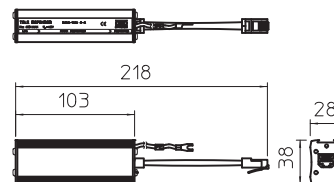
Type	Version	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
RJ11-TELE 4-F	Fine protection, 4 wires	RJ11	1	14.000	5081977

Connection options



RJ11-TELE 4-F	
Maximum continuous voltage AC	U_c 120 V
Maximum continuous voltage DC	U_c 170 V
Category	Type 2+3 / C2+C1
Lightning protection zone LPZ	1-3
Number of poles	4
Series resistance per wire	$2,2 \Omega \pm 10 \%$
Total discharge current (8/20)	4 kA
Protection level wire-wire	<300 V
Protection level wire-earth	<600 V
Protection level, wire-earth at 1 kV/ μ s (C3)	U_p <245 V
Frequency range	0 - 18 MHz
Insertion loss	S_{21} ≤ 3 dB
Temperature range	ϑ -40 - +80 °C
Installation type	Connector/cable adapter
Connection system	RJ11
Protection rating	IP40
Earthing via:	Connection cable
Testing standard	IEC 61643-21

Fine protection device TELE 4-F for ISDN RJ45



Type	Version	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
RJ45-TELE 4-F	Fine protection, 4 wires	RJ45	1	14.000	5081984

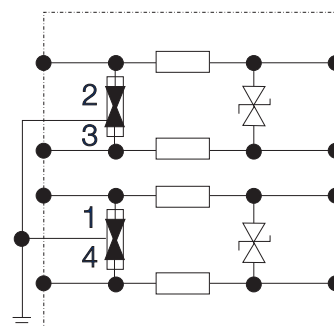
Data line protection device for analogue telecommunications systems

- In aluminium housing
- With 2-stage protection circuit
- Simple mounting
- Incl. 150 mm connection cable with RJ11 and/or RJ45 connectors
- Optimised bandwidth for TC systems
- DIN rail mounting with DLS-BS accessories (5082 38 2)

Application: For analogue telecommunication systems

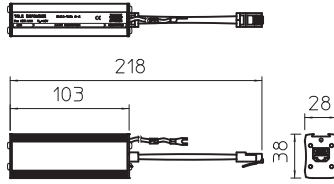
RJ45-TELE 4-F		
Maximum continuous voltage AC	U_c	120 V
Maximum continuous voltage DC	U_c	170 V
Category		Type 2+3 / C2+C1
Lightning protection zone LPZ		1-3
Number of poles		4
Series resistance per wire		$2,2 \Omega \pm 10 \%$
Total discharge current (8/20)		4 kA
Protection level wire-wire		<300 V
Protection level wire-earth		<600 V
Protection level, wire-earth at 1 kV/ μ s (C3)	U_p	<245 V
Frequency range		0 - 18 MHz
Insertion loss	S_{21}	≤ 3 dB
Temperature range	ϑ	-40 - +80 °C
Installation type		Connector/cable adapter
Connection system		RJ45
Protection rating		IP40
Earthing via:		Connection cable
Testing standard		IEC 61643-21

Connection options





Combination protection device TELE 4-C for ISDN RJ11



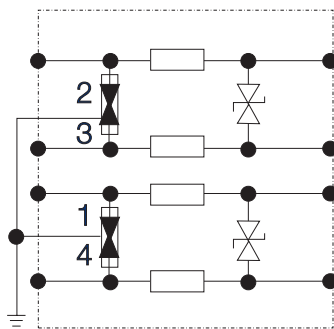
Data line protection device for analogue telecommunications systems

- In aluminium housing
- With 2-stage protection circuit
- Simple mounting
- Incl. 150 mm connection cable with RJ11 and/or RJ45 connectors
- Optimised bandwidth for TC systems
- DIN rail mounting with DLS-BS accessories (5082 38 2)

Application: For analogue telecommunication systems

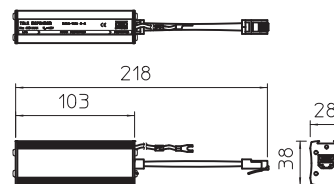
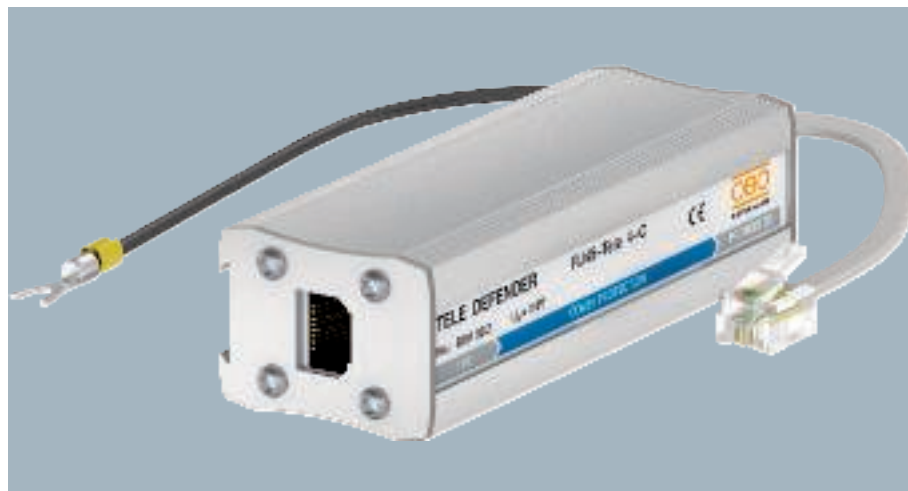
Type	Version	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
RJ11-TELE 4-C	Combi protection, 4 wires	RJ11	1	14.000	5081975

Connection options



RJ11-TELE 4-C	
Maximum continuous voltage AC	U_c 120 V
Maximum continuous voltage DC	U_c 170 V
Category	Type 1+2+3 / D1+C2+C1
Lightning protection zone LPZ	0-3
Number of poles	4
Series resistance per wire	$8,2 \Omega \pm 10 \%$
Total discharge current (8/20)	4 kA
Total discharge current (10/350)	1,5 kA
Protection level wire-wire	<300 V
Protection level wire-earth	<600 V
Protection level, wire-earth at 1 kV/ μ s (C3)	U_p <245 V
Frequency range	0 - 12 MHz
Insertion loss	S_{21} ≤ 3 dB
Temperature range	ϑ -40 - +80 °C
Installation type	Connector/cable adapter
Connection system	RJ11
Protection rating	IP40
Earthing via:	Connection cable
Testing standard	IEC 61643-21

Combination protection device TELE 4-C for ISDN RJ45



Surge protection

Type	Version	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
RJ45-TELE 4-C	Combi protection, 4 wires	RJ45	1	14.000	5081982

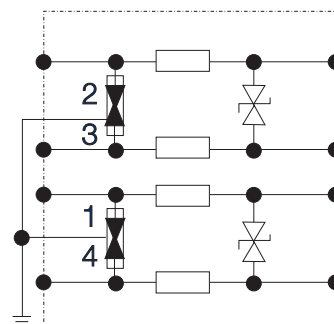
Data line protection device for analogue telecommunications systems

- In aluminium housing
- With 2-stage protection circuit
- Simple mounting
- Incl. 150 mm connection cable with RJ11 and/or RJ45 connectors
- Optimised bandwidth for TC systems
- DIN rail mounting with DLS-BS accessories (5082 38 2)

Application: For analogue telecommunication systems

RJ45-TELE 4-C	
Maximum continuous voltage AC	U_c 120 V
Maximum continuous voltage DC	U_c 170 V
Category	Type 1+2+3 / D1+C2+C1
Lightning protection zone LPZ	0-3
Number of poles	4
Series resistance per wire	$8,2 \Omega \pm 10 \%$
Total discharge current (8/20)	4 kA
Total discharge current (10/350)	1,5 kA
Protection level wire-wire	<300 V
Protection level wire-earth	<600 V
Protection level, wire-earth at 1 kV/ μ s (C3)	U_p <245 V
Frequency range	0 - 12 MHz
Insertion loss	S_{21} ≤ 3 dB
Temperature range	ϑ -40 - +80 °C
Installation type	Connector/cable adapter
Connection system	RJ45
Protection rating	IP40
Earthing via:	Connection cable
Testing standard	IEC 61643-21

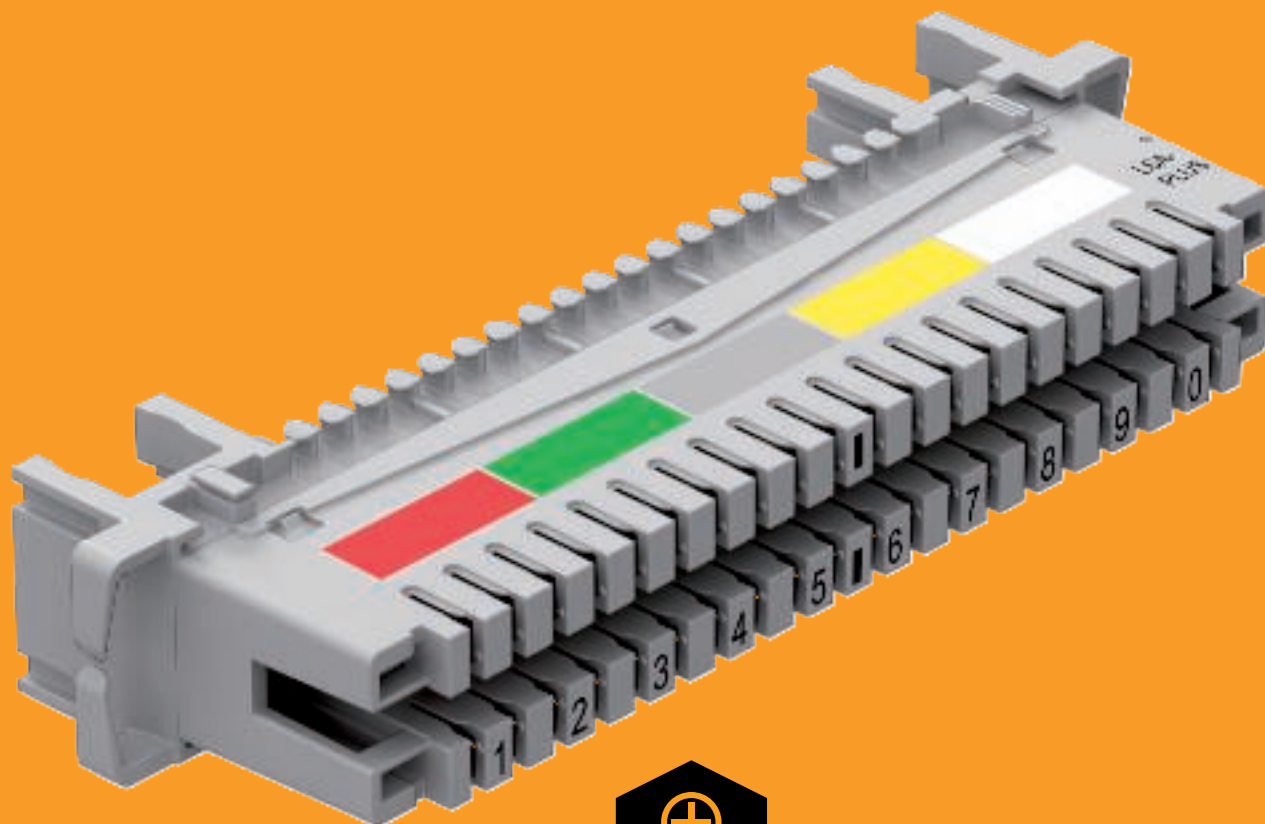
Connection options



LSA-Plus technology

Basic and fine protection

Surge protective devices for industrial telecommunications applications



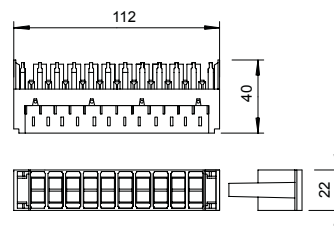
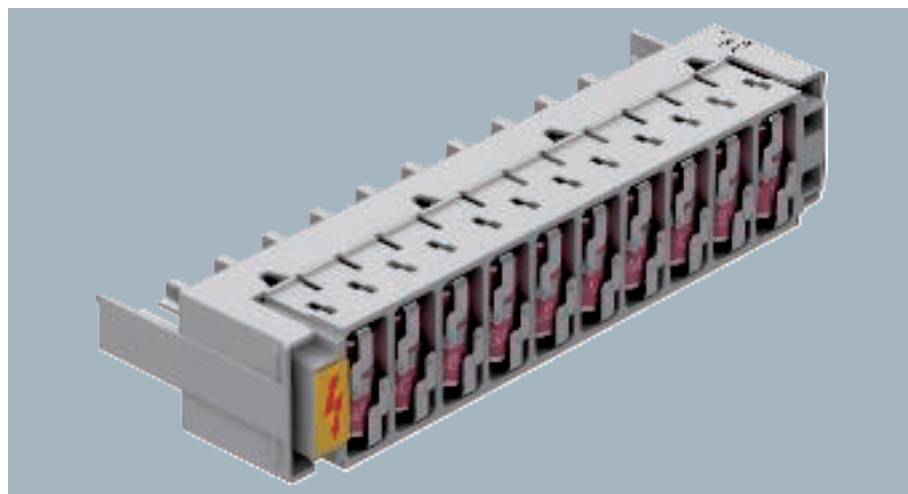
- Simple installation
- Protection up to ten two-core wires
- Low protection level
- High arresting capacity
- High broadband in basic protection
- Wide range of uses

In particular with multi-wire cable systems, such as telecommunications distribution systems, the LSA surge voltage components offer rapid, adequate protection. The LSA system offers both basic protection modules and fine protection modules to

protect up to ten two-core wires per connection strip. These are split up into separating and connection strips and must be selected according to the application.



LSA basic protection magazine



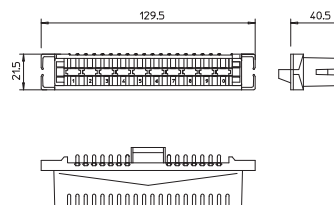
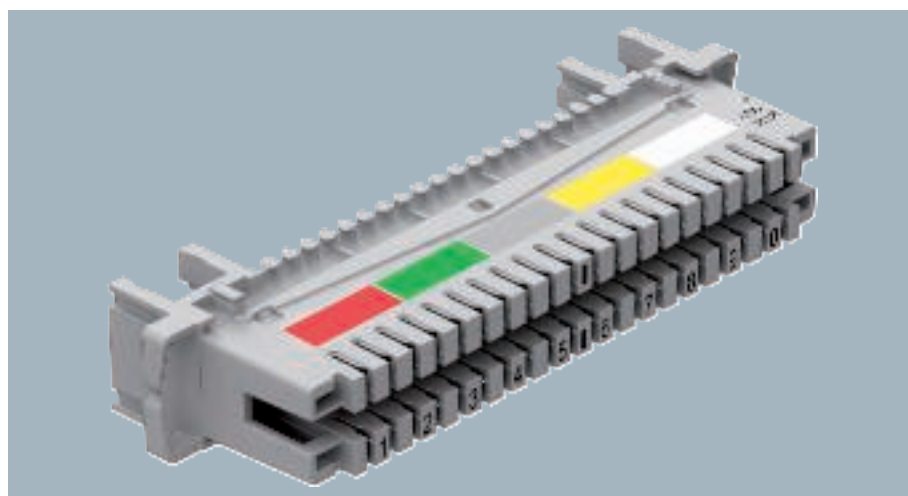
Type	Installation type	Number of poles	Pack Piece	Weight kg/100 pc.	Item no.
LSA-B-MAG	LSA-Plus, connectable	20	1	8.600	5084020

LSA basic protection magazine for use in multi-core data cable systems, MCR systems and telephone switchboards.

- Basic protection
- Equipped with 20 gas arresters
- Max. voltage: 180 V

Application: Directly on LSA-Plus separating strips or connection rails (e.g. OBO LSA-A-LEI (5084 00 8) or OBO LSA-T-LEI (5084 01 2)).

LSA connection strip



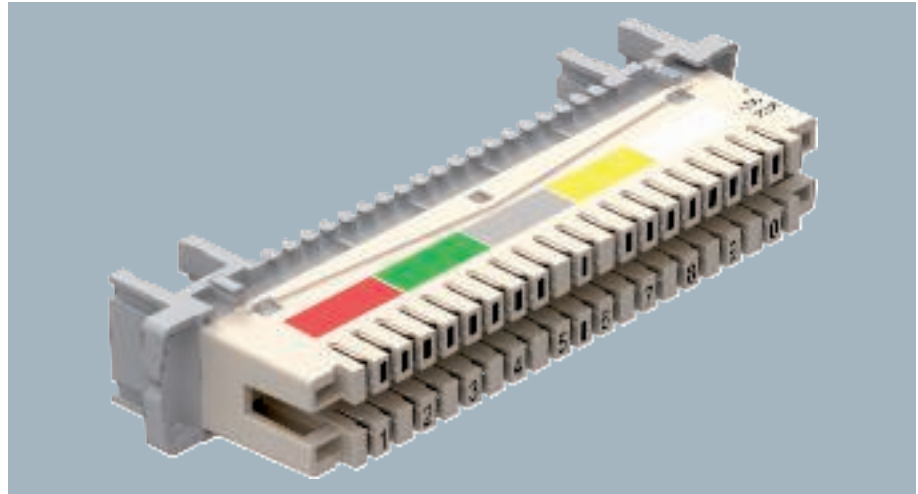
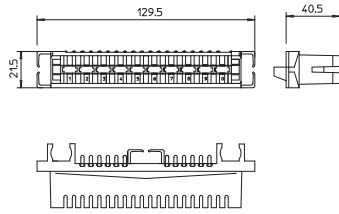
Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
LSA-A-LEI	Grey	1	5.100	5084008

LSA connection strip 2/10 for attaching 10 double-cores.

- For use with protection element LSA-B-MAG
- Fastening to mounting trough LSA-M
- Colour: Grey
- Clampable cross-sections 0.14–0.5 (AWG 26–20)



LSA separating strip



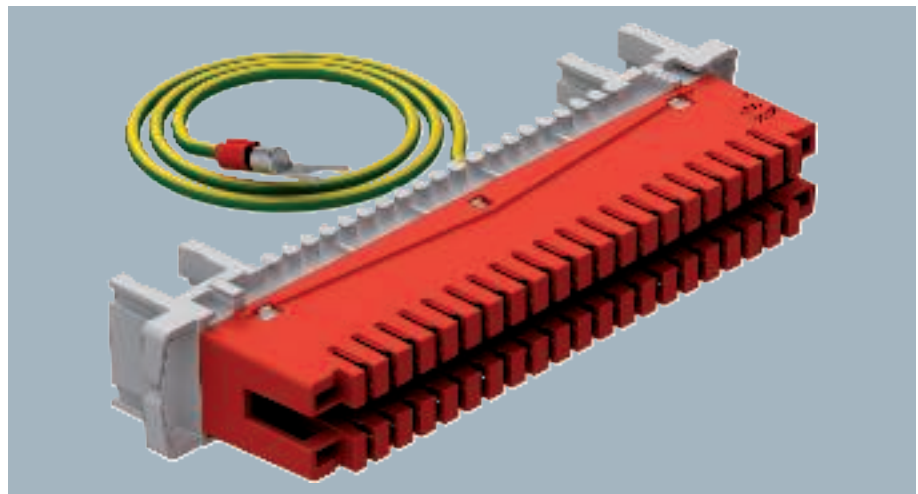
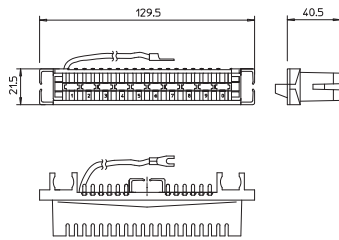
LSA separating strip 2/10 for attaching up to 10 double-cores.

- For use with protection element LSA-BF-180; LSA-BF-24; LSA-B-MAG
- Fastening to mounting trough LSA-M
- Colour: White
- Clampable cross-sections 0.14–0.5 mm² (AWG 26–20)

Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
LSA-T-LEI	White	1	5.400	5084012



LSA earthing strip



LSA earthing strip, 40-pole for connecting earthing cables or screens to the earth connection.

- Complete with connection line, green-yellow, 1.5 mm²
- Colour: Red

Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
LSA-E-LEI	Red	1	6.500	5084016

Net Defender

Surge protection for data and network technology
PoE++ or 4PPoE Standard (IEEE 802.3bt)

Surge protection



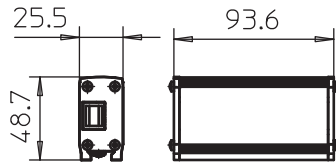
- Connectable protection device
- High-performance surge protection
- Usable in the "Channel Link" up to 10 GBit
- Supports Power over Ethernet to 1 A
- Testing protocol available

The "Net Defender" permits the use of Power over Ethernet with nominal currents of up to 1 A and optimised surge protection in the channel up to 10 GBit/s. This corresponds to a Channel Performance according to ISO/IEC 11801 Amd. 2 of Class EA or CAT 6A to TIA/ANSI. Of course,

reverse compatibility is also guaranteed. To ensure easy installation, the "Net Defender" can be snapped directly onto the DIN rail and uses it to create the necessary equipotential bonding. Alternatively, terminal protection using a separately connectable earthing line is possible.



Surge protection for high-speed networks up to 10 GBit (Class EA/CAT6A)

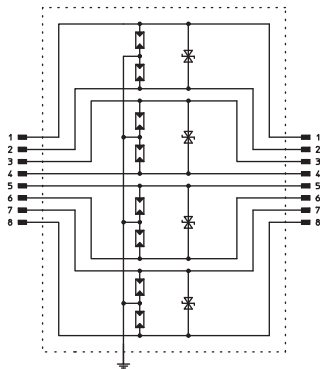


- Data cable protection device for high-speed networks
- Protection class: Fine protection
 - High-quality RJ45 sockets
 - Low protection level at high current load
 - Earthing via DIN rail or connection cable
 - Support of Power over Ethernet ++ (PoE++/4PPoE) to 1 A in accordance with IEEE 802.3
 - Tested transmission quality in networks up to 10 GBit/s (Class EA) or CAT6
 - Rapid installation through plug-in version
 - Incl. DIN rail fastening set and earthing cable

Application example: 10 GBit Ethernet, 10/100 MBit Ethernet, PoE applications, IP camera systems, ISDN S0 interfaces

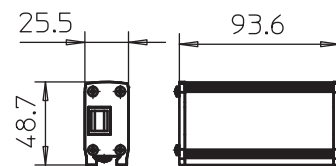
Type	Version	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
ND-CAT6A/EA	Fine protection, 8 wires + shield	RJ45 8(8)	1	16.600	5081800

Connection options



ND-CAT6A/EA	
Maximum continuous voltage AC	U_c 41 V
Maximum continuous voltage DC	U_c 58 V
Category	Type 2+3 / C2+C1
Lightning protection zone LPZ	1-3
Channel performance ISO/IEC	Class EA
Channel performance Ansi/EA	CAT 6A
Number of poles	8
Rated current	I_L 1 A
Impulse durability wire-wire	C1: 0,3 kV / 0,15 kA (8/20 μ s)
Impulse durability wire-earth	C2: 2 kV / 1 kA (8/20 μ s)
Total discharge current (8/20)	7 kA
Protection level wire-wire	<120 V
Protection level wire-earth	<700 V
Frequency range	>500 MHz
Temperature range	ϑ -40 - +80 °C
Installation type	Connector/cable adapter
Connection system	RJ45 8(8)
Protection rating	IP10
Shielding connection available	Yes
Shield connection	Direct
Earthing via:	Connection cable / DIN rail
Testing standard	IEC 61643-21

Surge protection for high-speed networks up to 1 GBit (Class ND-CAT6/E-F)



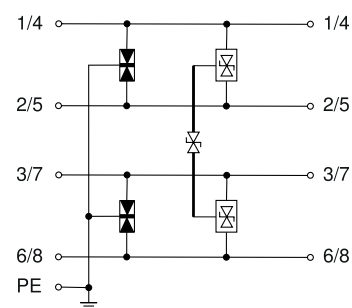
Type	Version	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
ND-CAT6/E-F	Fine protection, 8 wires + shield	RJ45 8(8)	1	16.380	5081802

- Data cable protection device for high-speed networks
- High-quality RJ45 sockets
 - Low protection level at high current load
 - Earthing via DIN rail or connection cable
 - Support of Power over Ethernet ++ (PoE++/4PPoE) to 1 A in accordance with IEEE 802.3
 - Tested transmission quality in networks up to 1 Gbit/s (Class E) or CAT6
 - Fast installation through plug-in version
 - Incl. DIN rail fastening set and earthing cable

Application example: 1 GBit Ethernet, 10/100 MBit Ethernet, PoE applications, IP camera systems, ISDN S0 interfaces

ND-CAT6/E-F	
Maximum continuous voltage AC	U_c 41 V
Maximum continuous voltage DC	U_c 58 V
Category	Type 2+3 / C2+C1
Lightning protection zone LPZ	1→3
Channel performance ISO/IEC	Class E
Channel performance Ansi/EA	CAT 6
Number of poles	8
Rated current	I_L 1 A
Impulse durability wire-wire	C1: 0,3 kV / 0,15 kA (8/20μs)
Impulse durability wire-earth	C2: 3 kV / 1,5 kA (8/20μs)
Total discharge current (8/20)	5 kA
Protection level wire-wire	<40 V
Protection level wire-earth	<900 V
Frequency range	>250 MHz
Temperature range	ϑ -40 - +80 °C
Installation type	Connector/cable adapter
Connection system	RJ45 8(8)
Protection rating	IP10
Shielding connection available	Yes
Shield connection	Direct
Earthing via:	Connection cable / DIN rail
Testing standard	IEC 61643-21

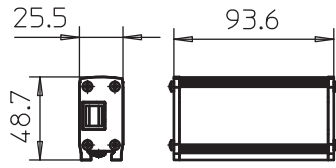
Connection options



Alu



Surge protection for high-speed networks up to 1 GBit (Class ND-CAT6/E-B)

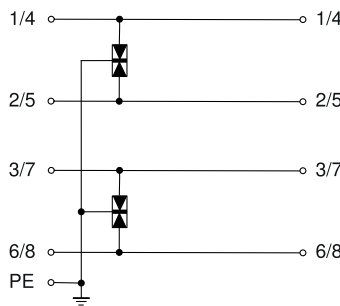


- Data cable protection device for high-speed networks
- Protection class: Basic protection
 - High-quality RJ45 sockets
 - Low protection level at high current load
 - Earthing via DIN rail or connection cable
 - Support of Power over Ethernet ++ (PoE++/4PPoE) to 1 A in accordance with IEEE 802.3
 - Tested transmission quality in networks up to 1 GBit/s (Class E) or CAT6
 - Rapid installation through plug-in version
 - Incl. DIN rail fastening set and earthing cable

Application example: 1 GBit Ethernet, 10/100 Mbit Ethernet, PoE applications, IP camera systems, ISDN S0 interfaces

Type	Version	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
ND-CAT6/E-B	Basic protection, 8 wires + shield	RJ45 8(8)	1	16.220	5081804

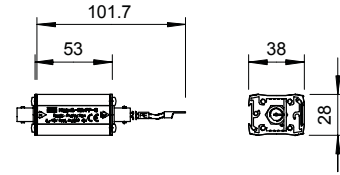
Connection options



ND-CAT6/E-B	
Maximum continuous voltage AC	U_c 46 V
Maximum continuous voltage DC	U_c 65 V
Category	Type 1 / D1
Lightning protection zone LPZ	0→1
Channel performance ISO/IEC	Class E
Channel performance Ansi/EA	CAT 6
Number of poles	8
Rated current	I_L 1 A
Impulse durability wire-wire	C2: 3 kV / 1,5 kA (8/20 μ s)
Impulse durability wire-earth	C2: 3 kV / 1,5 kA (8/20 μ s)
Total discharge current (8/20)	10 kA
Protection level wire-wire	<1100 V
Protection level wire-earth	<900 V
Frequency range	>250 MHz
Temperature range	ϑ -40 - +80 °C
Installation type	Connector/cable adapter
Connection system	RJ45 8(8)
Protection rating	IP10
Shielding connection available	Yes
Shield connection	Direct
Earthing via:	Connection cable / DIN rail
Testing standard	IEC 61643-21

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Combination arrester for 10Base2-/10Base5 networks



Type	Version	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
KOAX B-E2 MF-C	Combi protection	BNC	1	10.300	5082430

Data line protection device for coaxial Ethernet network systems

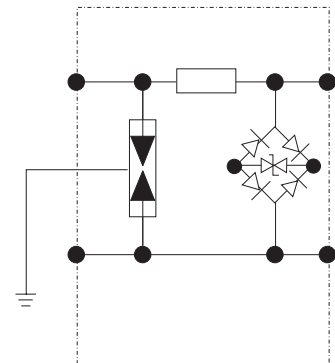
- In aluminium housing
- BNC connector m/f
- Simple mounting with adapter plug
- Two-stage protection circuit
- DIN rail mounting with DLS-BS accessories (5082 38 2)

Application: Protecting video signals; cameras and/or CCTV units, Cheapernet, 10BASE2, 10BASE5

KOAX B-E2 MF-C

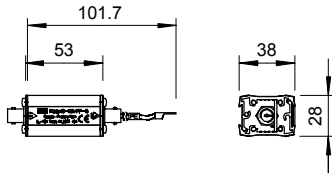
Maximum continuous voltage AC	U_c	4.2 V
Maximum continuous voltage DC	U_c	6.2 V
Category		Type 1+2+3 / D1+C2+C1
Lightning protection zone LPZ		0-3
Number of poles		1
Rated current	I_L	0.3 A
Series resistance per wire		4,7 $\Omega \pm 10\%$
Wave resistance	Z_L	75 Ω
Impulse durability wire-wire		C2: 10 kV / 5 kA (8/20 μ s)
Impulse durability wire-earth		C2: 10 kV / 5 kA (8/20 μ s)
Impulse discharge current (10/350)	I_{imp}	1 kA
Total discharge current (8/20)		10 kA
Total discharge current (10/350)		2 kA
Protection level wire-wire		<75 V
Protection level wire-earth		<600 V
Frequency range		0 - 68 MHz
Insertion loss	S_{21}	$\leq 1,7$ dB
Return loss	S_{11}	≥ 14 dB
Temperature range	ϑ	-20 - +80 °C
Installation type		Connector/cable adapter
Connection system		BNC
Protection rating		IP40
Shielding connection available		Yes
Shield connection		Direct
Earthing via:		Connection cable
Testing standard		IEC 61643-21

Connection options





Fine protection for 10Base2-/10Base5 networks



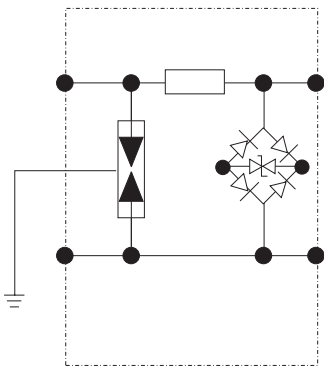
Data line protection device for coaxial Ethernet network systems

- In aluminium housing
- BNC connector m/f
- Simple mounting with adapter plug
- Two-stage protection circuit
- DIN rail mounting with DLS-BS accessories (5082 38 2)

Application: Protecting video signals; cameras and/or CCTV units, Cheapernet, 10BASE2, 10BASE5

Type	Version	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
KOAX B-E2 MF-F	Fine protection	BNC	1	9.800	5082432

Connection options

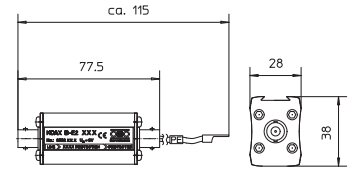


KOAX B-E2 MF-F

Maximum continuous voltage AC	U_c	4.2 V
Maximum continuous voltage DC	U_c	6.2 V
Category		Type 2+3 / C2+C1
Lightning protection zone LPZ		1→3
Number of poles		1
Rated current	I_L	1 A
Wave resistance	Z_L	75 Ω
Impulse durability wire-wire		C1: 1 kV / 0,5 kA (8/20μs)
Impulse durability wire-earth		C2: 10 kV / 5 kA (8/20μs)
Total discharge current (8/20)		10 kA
Protection level wire-wire		<40 V
Protection level wire-earth		<600 V
Frequency range		0 - 70 MHz
Insertion loss	S_{21}	≤1 dB
Return loss	S_{11}	≥14 dB
Temperature range	θ	-20 - +80 °C
Installation type		Connector/cable adapter
Connection system		BNC
Protection rating		IP40
Shielding connection available		Yes
Shield connection		Direct
Earthing via:		Connection cable
Testing standard		IEC 61643-21



Data cable protection device for coaxial TV / camera systems



Type	Version	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
KOAX B-E2 FF-F	Fine protection	BNC	1	14.400	5082434

Data cable protection device for coaxial TV / camera systems

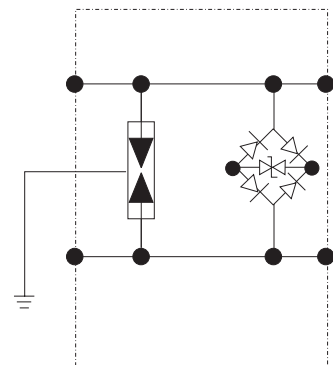
- In aluminium housing
- BNC connector socket/socket
- Simple mounting with adapter plug
- Two-stage protection circuit
- DIN rail mounting with DLS-BS accessories (5082 38 2)

Application: Protection of CCTV, video signals; cameras and/or TV systems

KOAX B-E2 FF-F

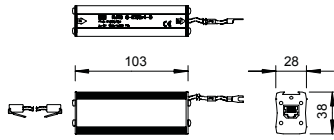
Maximum continuous voltage AC	U_c	4.2 V
Maximum continuous voltage DC	U_c	6.2 V
Category		Type 2+3 / C2+C1
Lightning protection zone LPZ		1-3
Number of poles		1
Rated current	I_L	1 A
Wave resistance	Z_L	75 Ω
Impulse durability wire-wire		C1: 1 kV / 0,5 kA (8/20 μ s)
Impulse durability wire-earth		C2: 10 kV / 5 kA (8/20 μ s)
Total discharge current (8/20)		10 kA
Protection level wire-wire		<40 V
Protection level wire-earth		<600 V
Frequency range		0 - 160 MHz
Insertion loss	S_{21}	$\leq 1,7$ dB
Return loss	S_{11}	≥ 14 dB
Temperature range	ϑ	-20 - +80 °C
Installation type		Connector/cable adapter
Connection system		BNC
Protection rating		IP40
Shielding connection available		Yes
Shield connection		Direct
Earthing via:		Connection cable
Testing standard		IEC 61643-21

Connection options





Fine protection 8-F for Ethernet networks (Class D/CAT 5)



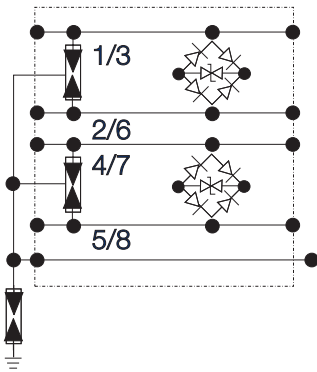
Universal data cable protection device for network technology and telecommunication systems

- In aluminium housing
- Protection for 8 cores
- With two-stage protective circuit
- Simple mounting
- With RJ45 Western connector
- Incl. 150 mm connection cable with RJ45 connectors
- Cat 5e network technology, 10BaseT, 100BaseT, 1000BaseT
- DIN rail mounting with accessories DLS-BS (5082 38 2)

Application: For analogue, ISDN, DSL systems, Ethernet Twisted Pair.

Type	Version	Conne- tion system	Pack Piece	Weight kg/100 pc.	Item no.
RJ45 S-ATM 8-F	Fine protection, 8 wires + shield	RJ45 8(8)	1	14.000	5081990

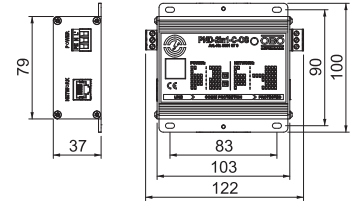
Connection options



RJ45 S-ATM 8-F

Maximum continuous voltage AC	U_c	4.2 V
Maximum continuous voltage DC	U_c	6.2 V
Category		Type 2+3 / C2+C1
Lightning protection zone LPZ		1-3
Channel performance ISO/IEC		Class D
Channel performance Ansi/EA		CAT 5e
Number of poles		8
Rated current	I_L	1 A
Impulse durability wire-wire		C2: 3 kV / 1,5 kA (8/20 μ s)
Impulse durability wire-earth		C2: 3 kV / 1,5 kA (8/20 μ s)
Total discharge current (8/20)		7,5 kA
Protection level wire-wire		<40 V
Protection level wire-earth		<900 V
Frequency range		>155 MHz
Temperature range	ϑ	-40 - +80 °C
Installation type		Connector/cable adapter
Connection system		RJ45 8(8)
Protection rating		IP40
Shielding connection available		Yes
Shield connection		Direct
Earthing via:		Connection cable
Testing standard		IEC 61643-21

Combined protection device 2in1 for CCTV camera systems



Type	Maximum continuous voltage (L-N) V	Maximum discharge current (8/20 μs) kA	Pack Piece	Weight kg/100 pc.	Item no.
PND-2in1-C-OS	255	10	1	27.000	5081070

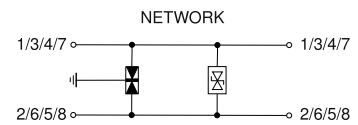
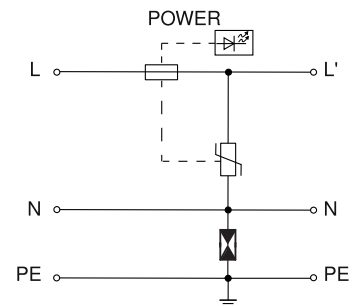
Combination protection device for IP-based TV/camera systems

- Protection of power and data interface in a single device
- In aluminium housing
- Simple mounting with adapter plug
- Two-stage protection circuit
- Three-pole power connection for the power interface
- RJ45 connection for the data interface
- With LED operation display (OS)
- Incl. DIN rail fastening set

Application: Protection of CCTV, video signals, (IP) cameras and/or TV systems

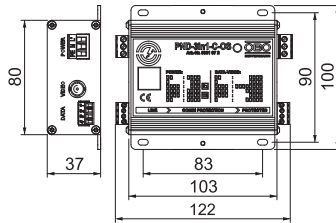
PND-2in1-C-OS		
Temperature range	θ	-20 - +80 °C
Installation type		Installation
Protection rating		IP20
Earthing via:		Connection cable / DIN rail
Lightning protection zone LPZ		1-3
Power		
SPD to IEC 61643-11		Class II+III
SPD to EN 61643-11		Type 2+3
Maximum continuous voltage (L-N)	U_c	255 V
Rated current	I_L	16 A
Protection level	U_p	<1,3 kV
Idle voltage	U_{oc}	10 kV
Nominal discharge current (8/20 μs)	$I_n / L-N$	5 kA
Maximum discharge current (8/20 μs)	I_{max}	10 kA
Network		
Maximum continuous voltage AC	U_c	5.65 V
Maximum continuous voltage DC	U_c	8 V
Category		Type 1+2+3 / D1+C2+C1
Impulse durability wire-wire		C1: 0,3 kV / 0,15 kA (8/20μs)
Impulse durability wire-earth		C2: 3 kV / 1,5 kA (8/20μs)
Protection level wire-wire		<40 V
Protection level wire-earth		<450 V
Frequency range		0 - 100 MHz
Shielding connection available		Yes
Shield connection		Direct
Testing standard		IEC 61643-21

Connection options





Combined protection device 3in1 for CCTV camera systems



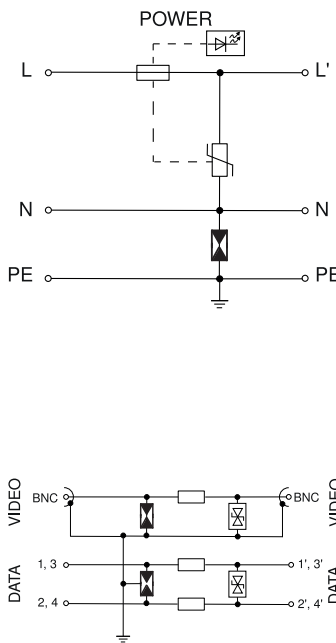
Combination protection device for coaxial TV/camera systems

- Protection of power and data interfaces in a single device
- In aluminium housing
- Simple mounting with adapter
- Two-stage protection circuit
- Three-pole power connection for the power interface
- With LED operation display (OS)
- Incl. DIN rail fastening set

Application: Protection of CCTV, video signals, cameras and/or TV systems

Type	Maximum continuous voltage (L-N) V	Maximum discharge current (8/20 μs) kA	Pack Piece	Weight kg/100 pc.	Item no.
PND-3in1-C-OS	255	10	1	29.900	5081072

Connection options



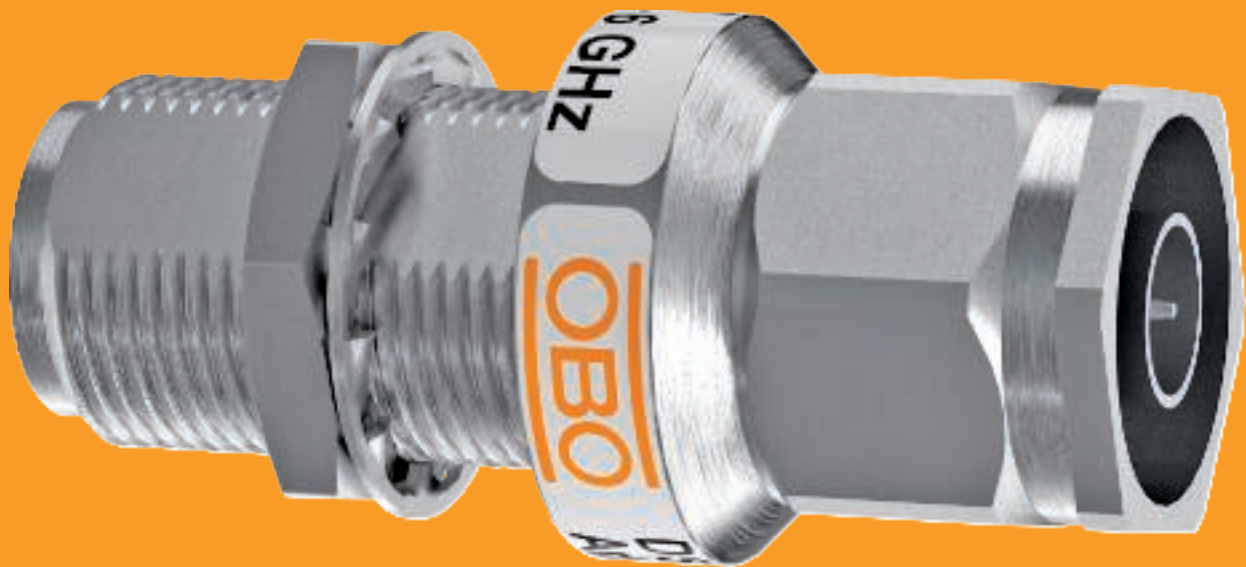
PND-3in1-C-OS	
Lightning protection zone LPZ	1→3
Earthing via:	Connection cable / DIN rail
Protection rating	IP20
Power	
SPD to IEC 61643-11	Class II+III
SPD to EN 61643-11	Type 2+3
Maximum continuous voltage (L-N)	U_c 255 V
Rated current	I_L 16 A
Protection level	U_p <1,3 kV
Nominal discharge current (8/20 μs)	$I_n/L-N$ 5 kA
Maximum discharge current (8/20 μs)	I_{max} 10 kA
Data	
Maximum continuous voltage AC	U_c 5.65 V
Maximum continuous voltage DC	U_c 8 V
SPD to IEC 61643-21	Class I+II / D1+C2
Category	Type 1+2 / D1+C2
Impulse durability wire-wire	C2: 10 kV / 5 kA (8/20μs)
Impulse durability wire-earth	C2: 10 kV / 5 kA (8/20μs)
Impulse current (10/350)	I_{imp} 1 kA
Protection level wire-earth	<450 V
Protection level wire-wire	<65 V
Frequency range	0-100 MHz
Video	
Maximum continuous voltage AC	U_c 5.65 V
Maximum continuous voltage DC	U_c 8 V
SPD to IEC 61643-21	Class I+II / D1+C2
Category	Type 1+2 / D1+C2
Impulse durability wire-earth	C2: 10 kV / 5 kA (8/20μs)
Impulse durability wire-wire	C2: 10 kV / 5 kA (8/20μs)
Impulse current (10/350)	I_{imp} 1 kA
Protection level wire-wire	<90 V
Protection level wire-earth	<150 V
Frequency range	0-100 MHz
Screen connection	Yes
Screening	Direct
Temperature range	θ -20 - +80 °C

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DS family

Coaxial protection devices for S-UHF, BNC, N, TNC, F and SMA connection

Surge protection



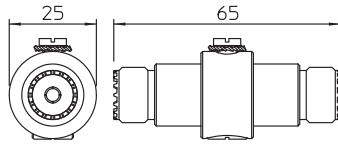
- Coaxial protection devices
- Optimum protection for sensitive systems
- Low insertion attenuation and low return loss at different wave resistances
- High bandwidth

The coaxial protection devices of type DS offer optimum protection of sensitive systems, based on coaxial plug connections. The low insertion attenuation and low return attenuation at different wave resistances offer ideal protection for any application. In accordance with their structure, the protec-

tion devices are switched into the application in series, and are connected to the local equipotential bonding. The direct shield earthing avoids reducing of the shield performance.



Coaxial protection devices for S-UHF connection: male/female

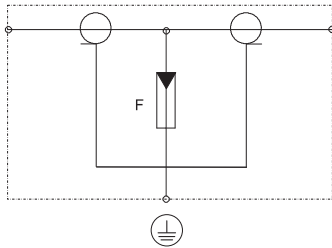


Coaxial data cable protection devices

- Basic protection
- High pulsed current carrying capacity $2 \times 2.5 \text{ kA}$ (10/350 μs)
- Simple installation (adapter plug), m = male/f = female connector
- Various plug combinations
- With UHF connector
- Optimised transmission behaviour
- Including OBO M25 Quick clip for simple installation

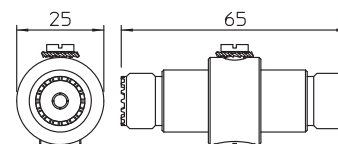
Type	Connection system	Frequency range	Pack Piece	Weight kg/100 pc.	Item no.
S-UHF M/W	UHF	0 - 1,3 GHz	1	7.000	5093023

Connection options



S-UHF M/W	
Maximum continuous voltage AC	U_c 130 V
Maximum continuous voltage DC	U_c 185 V
Category	Type 1+2 / D1+C2
Lightning protection zone LPZ	0-2
Number of poles	1
Rated current	I_L 10 A
Wave resistance	Z_L 50 Ω
Impulse durability wire-wire	C2: 10 kV / 5 kA (8/20 μs)
Impulse durability wire-earth	C2: 10 kV / 5 kA (8/20 μs)
Impulse discharge current (10/350)	I_{imp} 2.5 kA
Total discharge current (8/20)	10 kA
Total discharge current (10/350)	5 kA
Protection level	<800 V
Frequency range	0 - 1,3 GHz
Insertion loss	S_{21} $\leq 0,2 \text{ dB}$
Return loss	S_{11} $\geq 14 \text{ dB}$
Temperature range	ϑ -40 - +80 $^{\circ}\text{C}$
Installation type	Connector/cable adapter
Connection system	UHF
Protection rating	IP40
Shielding connection available	Yes
Shield connection	Direct
Testing standard	IEC 61643-21

Coaxial protection devices for S-UHF connection: female/female



Type	Connection system	Frequency range	Pack Piece	Weight kg/100 pc.	Item no.
S-UHF W/W	UHF	0-1,3 GHz	1	7.000	5093015

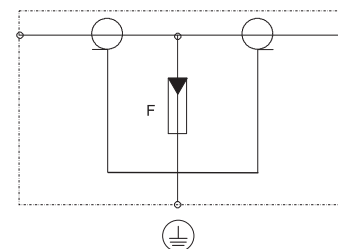
Coaxial data cable protection devices

- Basic protection
- High pulsed current carrying capacity 2 x 2.5 kA (10/350 μs)
- Simple installation (adapter plug), m = male/f = female connector
- Various plug combinations
- With UHF connector
- Optimised transmission behaviour
- Including OBO M25 Quick clip for simple installation

S-UHF W/W

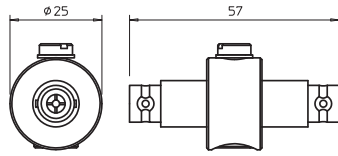
Maximum continuous voltage AC	U_c	130 V
Maximum continuous voltage DC	U_c	185 V
Category		Type 1+2 / D1+C2
Lightning protection zone LPZ		0-2
Number of poles		1
Rated current	I_L	10 A
Wave resistance	Z_L	50 Ω
Impulse durability wire-wire		C2: 10 kV / 5 kA (8/20μs)
Impulse durability wire-earth		C2: 10 kV / 5 kA (8/20μs)
Impulse discharge current (10/350)	I_{imp}	2.5 kA
Total discharge current (8/20)		10 kA
Total discharge current (10/350)		5 kA
Protection level		<800 V
Frequency range		0 - 1,3 GHz
Insertion loss	S_{21}	≤0,2 dB
Return loss	S_{11}	≥14 dB
Temperature range	ϑ	-40 - +80 °C
Installation type		Connector/cable adapter
Connection system		UHF
Protection rating		IP40
Shielding connection available		Yes
Shield connection		Direct
Testing standard		IEC 61643-21

Connection options





Coaxial protection device for BNC connection: male/female

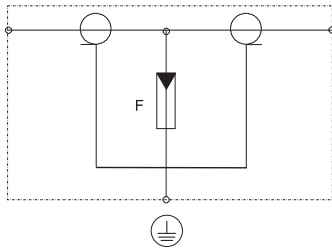


Coaxial data cable protection devices

- Basic protection
- High pulsed current carrying capacity 2 x 2.5 kA (10/350 μ s)
- Simple installation (adapter plug), m = plug/f = female connector
- Various plug combinations
- With BNC connector
- Optimised transmission behaviour
- Including OBO M25 Quick clip for simple installation

Type	Connection system	Frequency range	Pack Piece	Weight kg/100 pc.	Item no.
DS-BNC M/W	BNC	0 - 2,2 GHz	1	6.500	5093252

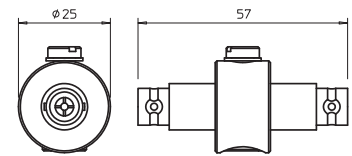
Connection options



DS-BNC M/W

Maximum continuous voltage AC	U_c	130 V
Maximum continuous voltage DC	U_c	185 V
Category		Type 1+2 / D1+C2
Lightning protection zone LPZ		0-2
Number of poles		1
Rated current	I_L	10 A
Wave resistance	Z_L	50 Ω
Impulse durability wire-wire		C2: 10 kV / 5 kA (8/20 μ s)
Impulse durability wire-earth		C2: 10 kV / 5 kA (8/20 μ s)
Impulse discharge current (10/350)	I_{imp}	2.5 kA
Total discharge current (8/20)		10 kA
Total discharge current (10/350)		5 kA
Protection level		<800 V
Frequency range		0 - 2,2 GHz
Insertion loss	S_{21}	$\leq 0,95$ dB
Return loss	S_{11}	≥ 14 dB
Temperature range	ϑ	-40 - +80 °C
Installation type		Connector/cable adapter
Connection system		BNC
Protection rating		IP40
Shielding connection available		Yes
Shield connection		Direct
Testing standard		IEC 61643-21

Coaxial protection device for BNC connection: female/female

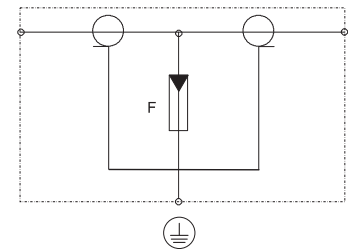


Type	Connection system	Frequency range	Pack Piece	Weight kg/100 pc.	Item no.
DS-BNC W/W	BNC	0-2,2 GHz	1	6.000	5093236

- Coaxial data cable protection devices
- Basic protection
 - High pulsed current carrying capacity 2 x 2.5 kA (10/350 μs)
 - Simple installation (adapter plug), m = plug/f = female connector
 - Various plug combinations
 - With BNC connector
 - Optimised transmission behaviour
 - Including OBO M25 Quick clip for simple installation

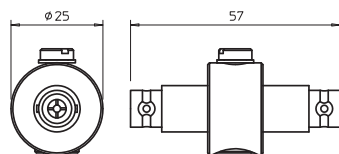
DS-BNC W/W	
Maximum continuous voltage AC	U_c 130 V
Maximum continuous voltage DC	U_c 185 V
Category	Type 1+2 / D1+C2
Lightning protection zone LPZ	0-2
Number of poles	1
Rated current	I_L 10 A
Wave resistance	Z_L 50 Ω
Impulse durability wire-wire	C2: 10 kV / 5 kA (8/20μs)
Impulse durability wire-earth	C2: 10 kV / 5 kA (8/20μs)
Impulse discharge current (10/350)	I_{imp} 2.5 kA
Total discharge current (8/20)	10 kA
Total discharge current (10/350)	5 kA
Protection level	<800 V
Frequency range	0 - 2,2 GHz
Insertion loss	S_{21} ≤0,95 dB
Return loss	S_{11} ≥14 dB
Temperature range	θ -40 - +80 °C
Installation type	Connector/cable adapter
Connection system	BNC
Protection rating	IP40
Shielding connection available	Yes
Shield connection	Direct
Testing standard	IEC 61643-21

Connection options





Coaxial protection device for BNC connection: male/male

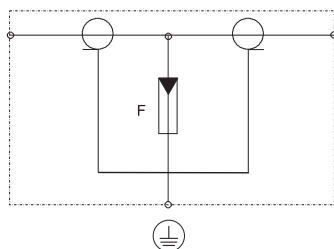


Coaxial data cable protection devices

- Basic protection
- High pulsed current carrying capacity 2 x 2.5 kA (10/350 μs)
- Simple installation (adapter plug), m = plug/f = female connector
- Various plug combinations
- With BNC connector
- Optimised transmission behaviour
- Including OBO M25 Quick clip for simple installation

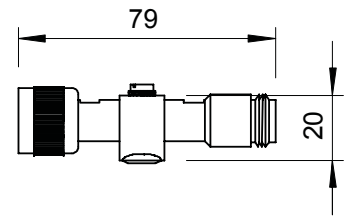
Type	Conne- tion system	Frequency range	Pack Piece	Weight kg/100 pc.	Item no.
DS-BNC M/M	BNC	0-2,2 GHz	1	7.000	5093260

Connection options



DS-BNC M/M	
Maximum continuous voltage AC	U_c 130 V
Maximum continuous voltage DC	U_c 185 V
Category	Type 1+2 / D1+C2
Lightning protection zone LPZ	0→2
Number of poles	1
Rated current	I_L 10 A
Wave resistance	Z_L 50 Ω
Impulse durability wire-wire	C2: 10 kV / 5 kA (8/20μs)
Impulse durability wire-earth	C2: 10 kV / 5 kA (8/20μs)
Impulse discharge current (10/350)	I_{imp} 2.5 kA
Total discharge current (8/20)	10 kA
Total discharge current (10/350)	5 kA
Protection level	<800 V
Frequency range	0 - 2,2 GHz
Insertion loss	S_{21} ≤0,95 dB
Return loss	S_{11} ≥14 dB
Temperature range	θ -40 - +80 °C
Installation type	Connector/cable adapter
Connection system	BNC
Protection rating	IP40
Shielding connection available	Yes
Shield connection	Direct
Testing standard	IEC 61643-21

Coaxial protection device for N connection: male/female

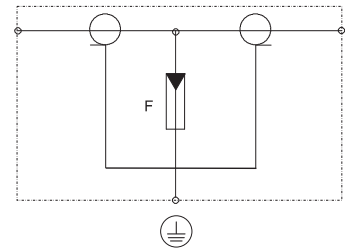


Type	Connection system	Frequency range	Pack Piece	Weight kg/100 pc.	Item no.
DS-N M/W	N	0-3 GHz	1	12.200	5093996

- Coaxial data cable protection devices
- High pulsed current carrying capacity 2 x 2.5 kA (10/350)
 - Simple mounting (adapter plug), m = plug/f = female connector
 - Optimised transmission behaviour
 - 5-year guarantee
 - With N connector
 - Including OBO M25 Quick clip for simple installation

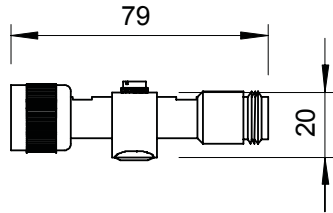
DS-N M/W	
Maximum continuous voltage AC	U_c 130 V
Maximum continuous voltage DC	U_c 185 V
Category	Type 1+2 / D1+C2
Lightning protection zone LPZ	0-2
Number of poles	1
Rated current	I_L 10 A
Wave resistance	Z_L 50 Ω
Impulse durability wire-wire	C2: 10 kV / 5 kA (8/20 μ s)
Impulse durability wire-earth	C2: 10 kV / 5 kA (8/20 μ s)
Impulse discharge current (10/350)	I_{imo} 2.5 kA
Total discharge current (8/20)	10 kA
Total discharge current (10/350)	5 kA
Protection level	<800 V
Frequency range	0 - 3 GHz
Insertion loss	S_{21} \leq 0,62 dB
Return loss	S_{11} \geq 14 dB
Temperature range	ϑ -40 - +80 °C
Installation type	Connector/cable adapter
Connection system	N
Protection rating	IP40
Shielding connection available	Yes
Shield connection	Direct
Testing standard	IEC 61643-21

Connection options





Coaxial protection device for N connection: female/female

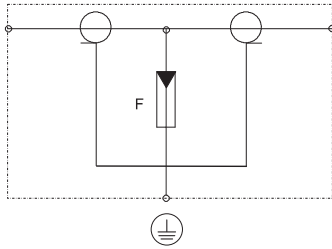


Coaxial data cable protection devices

- High pulsed current carrying capacity 2 x 2.5 kA (10/350)
- Simple mounting (adapter plug), m = plug/f = female connector
- Optimised transmission behaviour
- 5-year guarantee
- With N connector
- Including OBO M25 Quick clip for simple installation

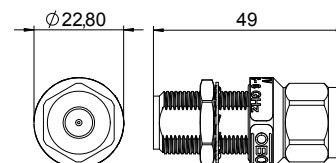
Type	Con- nection system	Frequency range	Pack Piece	Weight kg/100 pc.	Item no.
DS-N W/W	N	0-3 GHz	1	11.500	5093988

Connection options



DS-N W/W	
Maximum continuous voltage AC	U_c 130 V
Maximum continuous voltage DC	U_c 185 V
Category	Type 1+2 / D1+C2
Lightning protection zone LPZ	0-2
Number of poles	1
Rated current	I_L 10 A
Wave resistance	Z_L 50 Ω
Impulse durability wire-wire	C2: 10 kV / 5 kA (8/20 μ s)
Impulse durability wire-earth	C2: 10 kV / 5 kA (8/20 μ s)
Impulse discharge current (10/350)	I_{imp} 2.5 kA
Total discharge current (8/20)	10 kA
Total discharge current (10/350)	5 kA
Protection level	<800 V
Frequency range	0 - 3 GHz
Insertion loss	S_{21} \leq 0,62 dB
Return loss	S_{11} \geq 14 dB
Temperature range	ϑ -40 - +80 °C
Installation type	Connector/cable adapter
Connection system	N
Protection rating	IP40
Shielding connection available	Yes
Shield connection	Direct
Testing standard	IEC 61643-21

Coaxial protection device for N connection up to 6 GHz: male/female



Type	Connection system	Frequency range	Pack Piece	Weight kg/100 pc.	Item no.
DS-N-6 M/W	N	0-6 GHz	1	7.830	5093998

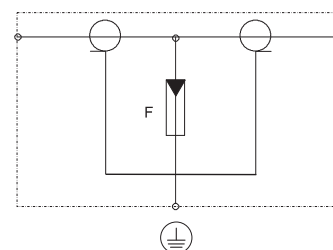
Coaxial data cable protection devices for transmission and reception technology

- With N-Connector, male/female
- High impulse current load capacity: 2.5 kA (10/350)
- Simple mounting (adapter), m = connector, w = socket
- Low protection level at high current loads
- Optimum transmission behaviour:
 - Low reflection behaviour
 - Bandwidth-optimised for secure transmission up to 6 GHz
- Available in 50 Ω technology

Application: For example: SAT-TV C band, WIMAX, WLAN applications, DVB-T2

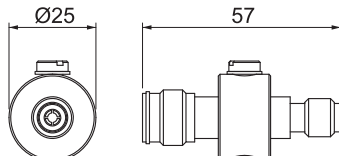
DS-N-6 M/W	
Maximum continuous voltage AC	U_c 50 V
Maximum continuous voltage DC	U_c 70 V
Category	Type 1+2 / D1+C2
Lightning protection zone LPZ	0-2
Number of poles	1
Rated current	I_L 10 A
Wave resistance	Z_L 50 Ω
Impulse durability wire-wire	C2: 10 kV / 5 kA (8/20μs)
Impulse durability wire-earth	C2: 10 kV / 5 kA (8/20μs)
Impulse discharge current (10/350)	I_{imp} 2.5 kA
Protection level	<750 V
Frequency range	0 - 6 GHz
Insertion loss	S_{21} ≤0,1 dB
Return loss	S_{11} ≥22 dB
Temperature range	θ -40 - +80 °C
Installation type	Connector/cable adapter
Connection system	N
Protection rating	IP65/67
Shielding connection available	Yes
Shield connection	Direct
Testing standard	IEC 61643-21

Connection options





Coaxial protection device for TNC connection: male/female

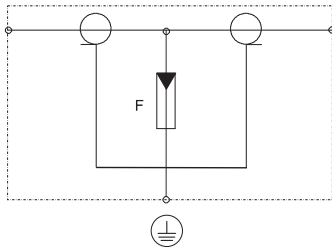


Coaxial data cable protection devices

- Basic protection
- High pulsed current carrying capacity 2 x 2.5 kA (10/350 μ s)
- Simple installation (adapter plug), m = plug/f = female connector
- Various plug combinations
- With TNC connector
- Optimised transmission behaviour
- Including OBO M25 Quick clip for simple installation

Type	Con- nection system	Frequency range	Pack Piece	Weight kg/100 pc.	Item no.
DS-TNC M/W	TNC	0-4 GHz	1	7.953	5093270

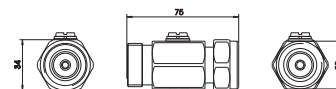
Connection options



DS-TNC M/W

Maximum continuous voltage AC	U_c	130 V
Maximum continuous voltage DC	U_c	185 V
Category		Type 1+2 / D1+C2
Lightning protection zone LPZ		0-2
Number of poles		1
Rated current	I_L	10 A
Wave resistance	Z_L	50 Ω
Impulse durability wire-wire		C2: 10 kV / 5 kA (8/20 μ s)
Impulse durability wire-earth		C2: 10 kV / 5 kA (8/20 μ s)
Impulse discharge current (10/350)	I_{imp}	2.5 kA
Total discharge current (8/20)		10 kA
Total discharge current (10/350)		5 kA
Protection level		<800 V
Frequency range		0 - 4 GHz
Insertion loss	S_{21}	$\leq 0,5$ dB
Return loss	S_{11}	≥ 14 dB
Temperature range	ϑ	-40 - +80 °C
Installation type		Connector/cable adapter
Connection system		TNC
Protection rating		IP40
Shielding connection available		Yes
Shield connection		Direct
Testing standard		IEC 61643-21

Coaxial protection device for 7/16 connection: male/female



Type	Connection system	Frequency range	Pack Piece	Weight kg/100 pc.	Item no.
DS-7 16 M/W	7/16	0-3GHz	1	35.500	5093171

Coaxial data protection device

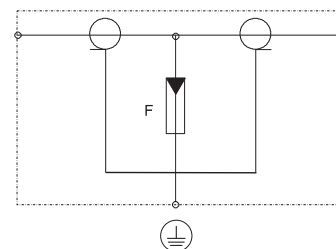
- Basic protection
- Simple mounting (adapter)
- Optimum transmission
- High pulse load capacity
- With 7/16 connector

Application: to protect mobile telephony applications.

DS-7 16 M/W

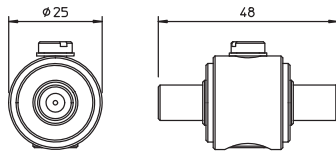
Maximum continuous voltage AC	U_c	130 V
Maximum continuous voltage DC	U_c	185 V
Category		Type 1+2 / D1+C2
Lightning protection zone LPZ		0-2
Number of poles		1
Rated current	I_L	10 A
Wave resistance	Z_L	50 Ω
Impulse durability wire-wire		C2: 10 kV / 5 kA (8/20 μ s)
Impulse durability wire-earth		C2: 10 kV / 5 kA (8/20 μ s)
Impulse discharge current (10/350)	I_{imp}	2.5 kA
Total discharge current (8/20)		10 kA
Total discharge current (10/350)		5 kA
Protection level		<800 V
Frequency range		0 - 3 GHz
Insertion loss	S_{21}	$\leq 0,95$ dB
Return loss	S_{11}	≥ 14 dB
Temperature range	ϑ	-40 - +80 °C
Installation type		Connector/cable adapter
Connection system		7/16
Protection rating		IP40
Shielding connection available		Yes
Shield connection		Direct
Testing standard		IEC 61643-21

Connection options





Coaxial protection device for F connection: male/female



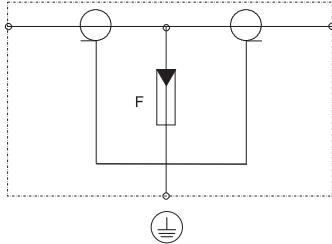
Coaxial data cable protection devices

- Basic protection
- High pulsed current carrying capacity 2 x 2.5 kA (10/350 μ s)
- Simple installation (adapter plug), m = plug/f = female connector
- Various plug combinations
- With F connector
- Optimised transmission behaviour
- Including OBO M25 Quick clip for simple installation

Application: Protection of TV and SAT systems, multi-switches, receivers and DVB-T(2)

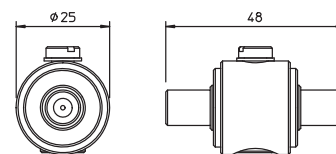
Type	Connection system	Frequency range	Pack Piece	Weight kg/100 pc.	Item no.
DS-F M/W	F	0-3,4 GHz	1	9.000	5093275

Connection options



DS-F M/W	
Maximum continuous voltage AC	U_C 130 V
Maximum continuous voltage DC	U_C 185 V
Category	Type 1+2 / D1+C2
Lightning protection zone LPZ	0-2
Number of poles	1
Rated current	I_L 5 A
Wave resistance	Z_L 75 Ω
Impulse durability wire-wire	C2: 10 kV / 5 kA (8/20 μ s)
Impulse durability wire-earth	C2: 10 kV / 5 kA (8/20 μ s)
Impulse discharge current (10/350)	I_{imp} 1 kA
Total discharge current (8/20)	10 kA
Total discharge current (10/350)	2 kA
Protection level	<800 V
Frequency range	0 - 3,4 GHz
Insertion loss	S_{21} \leq 0,9 dB
Return loss	S_{11} \geq 14 dB
Temperature range	ϑ -40 - +80 $^{\circ}$ C
Installation type	Connector/cable adapter
Connection system	F
Protection rating	IP40
Shielding connection available	Yes
Shield connection	Direct
Testing standard	IEC 61643-21

Coaxial protection device for F connection: fe-male/female



Type	Connection system	Frequency range	Pack Piece	Weight kg/100 pc.	Item no.
DS-F W/W	F	0-3,4 GHz	1	9.000	5093272

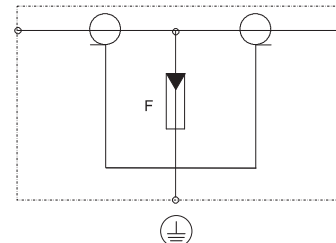
Coaxial data cable protection devices

- Basic protection
- High pulsed current carrying capacity 2 x 2.5 kA (10/350 μs)
- Simple installation (adapter plug), m = plug/f = female connector
- Various plug combinations
- With F connector
- Optimised transmission behaviour
- Including OBO M25 Quick clip for simple installation

Application: Protection of TV and SAT systems, multi-switches, receivers and DVB-T(2)

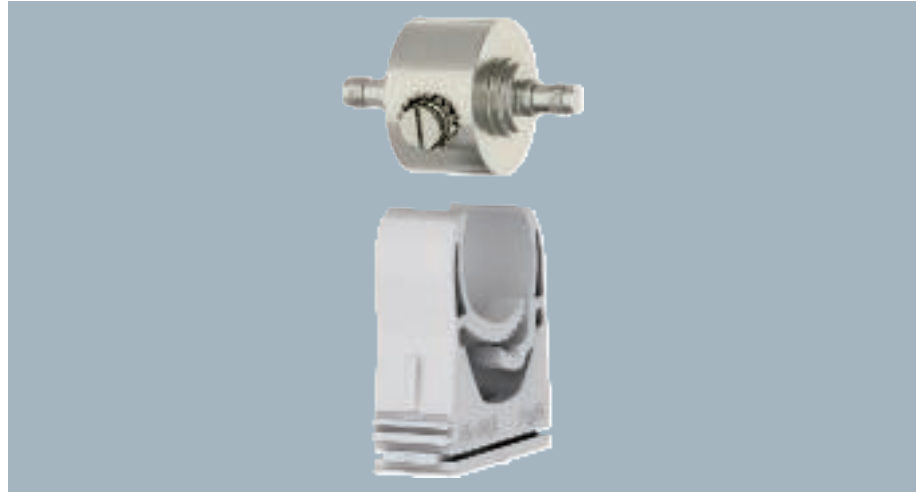
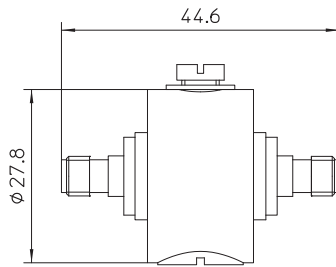
DS-F W/W	
Maximum continuous voltage AC	U_c 130 V
Maximum continuous voltage DC	U_c 185 V
Category	Type 1+2 / D1+C2
Lightning protection zone LPZ	0→2
Number of poles	1
Rated current	I_L 5 A
Wave resistance	Z_L 75 Ω
Impulse durability wire-wire	C2: 10 kV / 5 kA (8/20μs)
Impulse durability wire-earth	C2: 10 kV / 5 kA (8/20μs)
Impulse discharge current (10/350)	I_{imp} 1 kA
Total discharge current (8/20)	10 kA
Total discharge current (10/350)	2 kA
Protection level	<800 V
Frequency range	0 - 3,4 GHz
Insertion loss	S_{21} ≤0,9 dB
Return loss	S_{11} ≥14 dB
Temperature range	θ -40 - +80 °C
Installation type	Connector/cable adapter
Connection system	F
Protection rating	IP40
Shielding connection available	Yes
Shield connection	Direct
Testing standard	IEC 61643-21

Connection options





Coaxial protection device for SMA connection: female/female



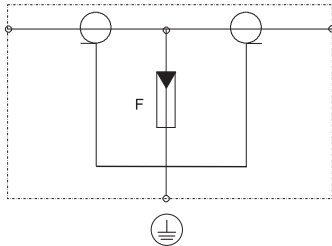
Coaxial data cable protection devices

- High pulse current carrying capacity $2 \times 2.5 \text{ kA}$ (10/350)
- Simple mounting (adapter connector), m = connector, f = socket
- Optimised transmission behaviour
- 5-year guarantee
- With SMA connector
- Including OBO Multi-Quick clip 25-28 for simple installation
- 50Ω technology

Application: Radio and data technology with SMA connector

Type	Connection system	Frequency range	Pack Piece	Weight kg/100 pc.	Item no.
DS-SMA W/W	SMA	0-3,7 GHz	1	7.500	5093277

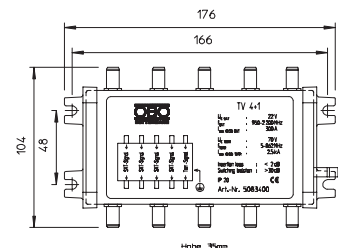
Connection options



DS-SMA W/W

Maximum continuous voltage AC	U_c	130 V
Maximum continuous voltage DC	U_c	185 V
Category		Type 1+2 / D1+C2
Lightning protection zone LPZ		0→2
Number of poles		1
Rated current	I_L	10 A
Wave resistance	Z_L	50Ω
Impulse durability wire-wire		C2: 10 kV / 5 kA (8/20 μ s)
Impulse durability wire-earth		C2: 10 kV / 5 kA (8/20 μ s)
Impulse discharge current (10/350)	I_{imp}	2.5 kA
Total discharge current (8/20)		10 kA
Total discharge current (10/350)		5 kA
Protection level		<800 V
Frequency range		0 - 3,7 GHz
Insertion loss	S_{21}	$\leq 0,2 \text{ dB}$
Return loss	S_{11}	$\geq 14 \text{ dB}$
Temperature range	ϑ	-40 - +80 °C
Installation type		Connector/cable adapter
Connection system		SMA
Protection rating		IP40
Shielding connection available		Yes
Shield connection		Direct
Testing standard		IEC 61643-21

Coaxial protection device for SAT and cable multi-switch



Type	Connection system	Frequency range	Connection system	Pack Piece	Weight kg/100 pc.	Item no.
TV 4+1	F	0,5-2,8 GHz	F	1	37.000	5083400

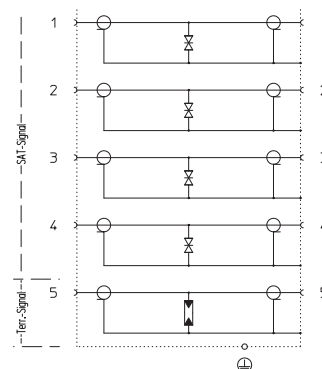
Coaxial data line protection for TV reception systems

- Protects up to four SAT lines
- Protects one terrestrial line, e.g. DVB-T.
- Simple mounting using screws and holder
- With F-connector
- Optimum transmission behaviour with 75 Ohm technology.

Application: Protection of TV and SAT systems, multi-switches, receivers and DVB-T receivers

TV 4+1		
Maximum continuous voltage Vc SAT inputs	U_C	22 V
Maximum continuous voltage Vc terrestrial input	U_C	70 V
Category		Type 2+3 / C2+C1
Lightning protection zone LPZ		1-3
Number of poles		5
Rated current	I_L	2 A
Wave resistance	Z_L	75 Ω
Nominal discharge current SAT inputs	I_n	300 A
Lightning impulse current terrestrial input	I_{imp}	1 kA
Protection level SAT inputs at In	U_d	<45 V
Protection level Terrestrial input at In		<500 V
Frequency range		0,5 - 2,8 GHz
Insertion loss	S_{21}	≤ 3 dB
Return loss	S_{11}	> 30 dB
Temperature range	ϑ	-40 - +80 °C
Installation type		Surface-mounted
Connection system		F
Protection rating		IP10
Shielding connection available		Yes
Shield connection		Direct
Earthing via:		Connection cable
Testing standard		IEC 61643-21

Connection options





Surge protective devices for photovoltaic applications

Type 1+2 and type 2 for 1,000 V and 1,500 V DC



Surge protection



- Surge protection according to EN/IEC 60364-7-712 (VDE 0100-712)
- Error-resistant Y circuit with status display
- The FS variant has a potential-free changeover contact for remote signalling



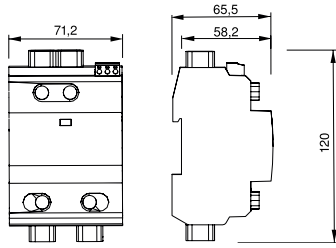
Type 1+2 1000 V



Type 2 1500 V



PV complete block 1500 V DC



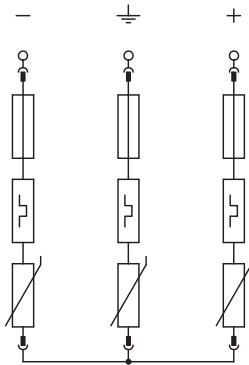
Type 1+2 combination arrester for lightning and surge protection of PV systems.

- Lightning protection equipotential bonding according to IEC 62305 (VDE 0185-305)
- Surge protection according to IEC 60364-7-712 (VDE 0100-712)
- Arresting capacity to 12.5 kA (10/350) and 40 kA (8/20)
- Error-resistant Y circuit with status display
- The FS variant possesses a potential-free changeover contact for remote signalling

Application: Lightning current and surge protective devices for PV systems.

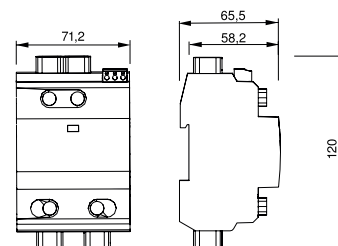
Type	U max DC V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V-PV-T1+2-1500	1500	Y configuration	1	49.200	5094240

Connection options



V-PV-T1+2-1500		
U max DC	U _c DC	1500 V
SPD to EN 61643-11		Type 1+2
Lightning protection zone LPZ		0→2
Impulse discharge current (10/350)	I _{imp}	6.25 kA
Nominal discharge current (8/20)	I _n	20 kA
Maximum discharge current (8/20 μs)	I _{max}	40 kA
Protection level	U _p	< 4,5 kV
Response time	t _A	< 25 ns
Temperature range	θ	-40 - 80 °C
Protection rating		IP20
Division unit TE (17.5 mm)		4
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 35 mm ²

PV complete block 1500 V DC with remote signalling



Type	U max DC V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V-PV-T1+2-1500FS	1500	Y configuration + RS	1	49.600	5094242

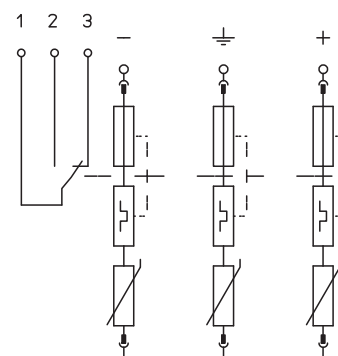
Type 1+2 combination arrester for lightning and surge protection of PV systems.

- Lightning protection equipotential bonding according to IEC 62305 (VDE 0185-305)
- Surge protection according to IEC 60364-7-712 (VDE 0100-712)
- Arresting capacity to 12.5 kA (10/350) and 40 kA (8/20)
- Error-resistant Y circuit with status display
- The FS variant possesses a potential-free changeover contact for remote signalling

Application: Lightning current and surge protective devices for PV systems.

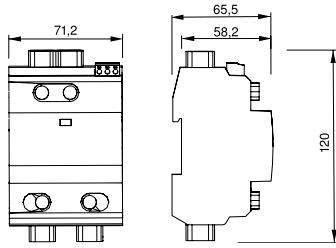
V-PV-T1+2-1500FS	
U max DC	U _c DC 1500 V
SPD to EN 61643-11	Type 1+2
Lightning protection zone LPZ	0→2
Impulse discharge current (10/350)	I _{imp} 6.25 kA
Nominal discharge current (8/20)	I _n 20 kA
Maximum discharge current (8/20 μs)	I _{max} 40 kA
Protection level	U _p < 4,5 kV
Response time	t _A < 25 ns
Temperature range	θ -40 - 80 °C
Protection rating	IP20
Division unit TE (17.5 mm)	4
Connection cross-section, rigid	2.5 - 35 mm ²
Connection cross-section, multi-wire	2.5 - 35 mm ²
Connection cross-section, flexible	2.5 - 35 mm ²

Connection options





PV complete block 1,000 V DC



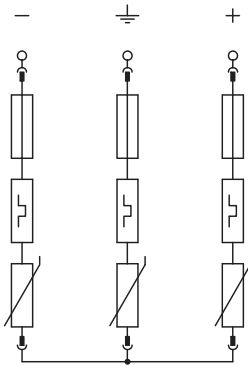
Type 1+2 combination arrester according to EN 50539-11 for lightning and surge protection of PV systems.

- Lightning protection equipotential bonding according to IEC 62305 (VDE 0185-305)
- Surge protection according to IEC 60364-7-712 (VDE 0100-712)
- Arresting capacity to 12.5 kA (10/350) and 40 kA (8/20)
- Error-resistant Y circuit with status display
- The FS variant possesses a potential-free changeover contact for remote signalling

Application: Lightning current and surge protective devices for PV systems.

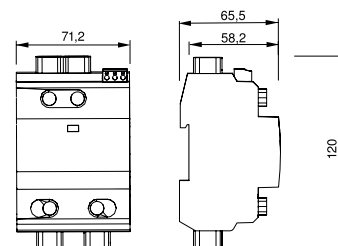
Type	U max DC V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V-PV-T1+2-1000	1000	Y configuration	1	40.700	5094230

Connection options



V-PV-T1+2-1000	
U max DC	U _c DC 1000 V
SPD to EN 61643-11	Type 1+2
Lightning protection zone LPZ	0→2
Impulse discharge current (10/350)	I _{imp} 6.25 kA
Nominal discharge current (8/20)	I _n 20 kA
Maximum discharge current (8/20 μs)	I _{max} 40 kA
Protection level	U _p < 3,3 kV
Response time	t _A < 25 ns
Temperature range	θ -40 - 80 °C
Protection rating	IP20
Division unit TE (17.5 mm)	4
Connection cross-section, rigid	2.5 - 35 mm ²
Connection cross-section, multi-wire	2.5 - 35 mm ²
Connection cross-section, flexible	2.5 - 35 mm ²

PV complete block 1,000 V DC with remote signalling



Type	U max DC V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V-PV-T1+2-1000FS	1000	Y configuration + RS	1	41.200	5094232

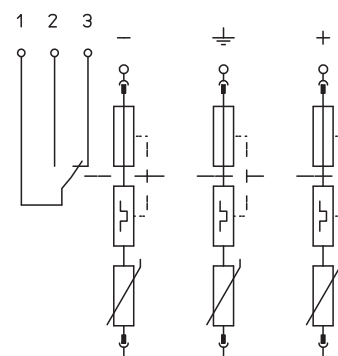
Type 1+2 combination arrester according to EN 50539-11 for lightning and surge protection of PV systems.

- Lightning protection equipotential bonding according to IEC 62305 (VDE 0185-305)
- Surge protection according to IEC 60364-7-712 (VDE 0100-712)
- Arresting capacity to 12.5 kA (10/350) and 40 kA (8/20)
- Error-resistant Y circuit with status display
- The FS variant possesses a potential-free changeover contact for remote signalling

Application: Lightning current and surge protective devices for PV systems.

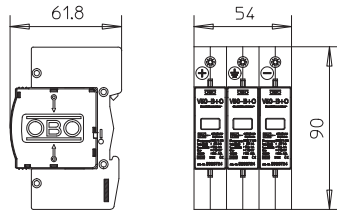
V-PV-T1+2-1000FS	
U max DC	U _c DC 1000 V
SPD to EN 61643-11	Type 1+2
Lightning protection zone LPZ	0→2
Impulse discharge current (10/350)	I _{imp} 6.25 kA
Nominal discharge current (8/20)	I _n 20 kA
Maximum discharge current (8/20 μs)	I _{max} 40 kA
Protection level	U _p < 3,3 kV
Response time	t _A < 25 ns
Temperature range	θ -40 - 80 °C
Protection rating	IP20
Division unit TE (17.5 mm)	4
Connection cross-section, rigid	2.5 - 35 mm ²
Connection cross-section, multi-wire	2.5 - 35 mm ²
Connection cross-section, flexible	2.5 - 35 mm ²

Connection options





PV combination arrester V25, 900 V DC



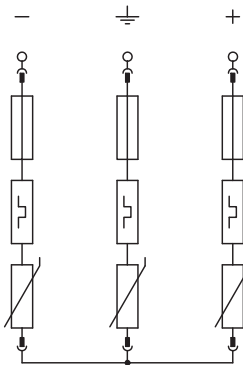
V25 combination arrester, type 1+2, for photovoltaic systems

- Complete unit, consisting of plug-in varistor arrester with cut-off unit
- Error-resistant Y circuit to VDE 0100-712 (EN 50539-12)
- Surge protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Arresting capacity up to 7 kA (10/350) and 50 kA (8/20) per pole
- Low DC protection level: < 3.0 kV and Voc max = 900 V DC
- With visual function display for use in distributor housings

Application: PV systems with lightning protection system

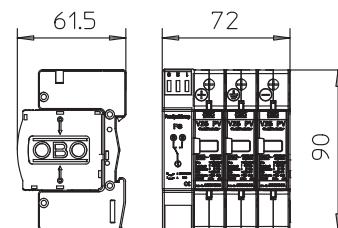
Type	U max DC V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V25-B+C 3-PH900	900	3-pole for PV systems	1	42.200	5097447

Connection options



V25-B+C 3-PH900	
U max DC	U _c DC 900 V
SPD to EN 61643-11	Type 1+2
Lightning protection zone LPZ	0-2
Impulse discharge current (10/350)	I _{imp} 7 kA
Nominal discharge current (8/20)	I _n 30 kA
Maximum discharge current (8/20 μs)	I _{max} 50 kA
Protection level	U _p < 3,0 kV
Response time	t _A < 25 ns
Temperature range	ϑ -40 - +80 °C
Protection rating	IP 20
Division unit TE (17.5 mm)	3
Connection cross-section, rigid	2.5 - 35 mm ²
Connection cross-section, multi-wire	2.5 - 35 mm ²
Connection cross-section, flexible	2.5 - 25 mm ²

PV combination arrester V25, 900 V DC with remote signalling



Type	U max DC V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V25-B+C 3PHFS900	900	3 pole for PV systems with RS	1	53.500	5097448

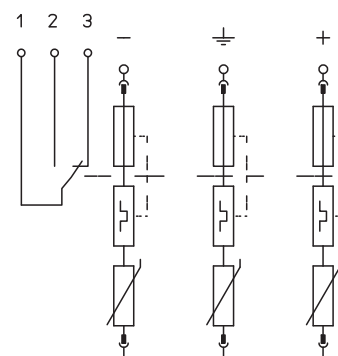
V25 combination arrester, type 1+2, for PV systems with FS contact as potential-free changeover

- Complete unit, consisting of plug-in varistor arrester with cut-off unit
- Error-resistant Y circuit for use according to VDE 0100-712 (EN 50539-12)
- Surge protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Arresting capacity to 7 kA (10/350) and 50 kA (8/20) per pole
- Low DC protection level: < 3.0 kV and Voc max. = 900 V DC
- With visual display for use in distributor housings

Application: PV systems with lightning protection system

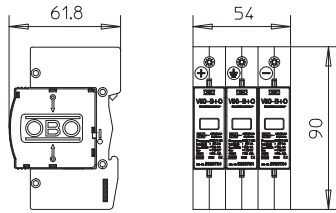
V25-B+C 3PHFS900	
U max DC	U _c DC 900 V
SPD to EN 61643-11	Type 1+2
Lightning protection zone LPZ	0→2
Impulse discharge current (10/350)	I _{imp} 7 kA
Nominal discharge current (8/20)	I _n 30 kA
Maximum discharge current (8/20 μs)	I _{max} 50 kA
Protection level	U _p < 3,0 kV
Response time	t _A < 25 ns
Temperature range	θ -40 - +80 °C
Protection rating	IP 20
Division unit TE (17.5 mm)	4
Connection cross-section, rigid	2.5 - 35 mm ²
Connection cross-section, multi-wire	2.5 - 35 mm ²
Connection cross-section, flexible	2.5 - 25 mm ²

Connection options





PV combination arrester V50, 600 V DC



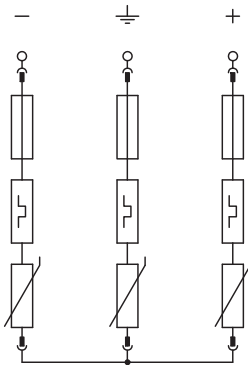
V50 combination arrester, type 1+2, for photovoltaic systems

- Complete unit, consisting of plug-in varistor arrester with cut-off unit
- Error-resistant Y circuit to VDE 0100-712 (EN 50539-12)
- Surge protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Arresting capacity up to 12.5 kA (10/350) and 50 kA (8/20) per pole
- Low DC protection level: < 2.6 kV and Voc max = 600 V DC
- With visual function display for use in distributor housings

Application: PV systems with lightning protection system

Type	U max DC V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V50-B+C 3-PH600	600	3-pole for PV systems	1	41.000	5093623

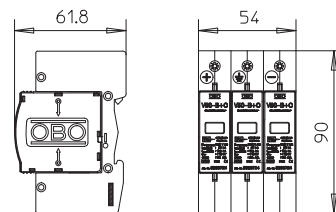
Connection options



V50-B+C 3-PH600

U max DC	U _c DC	600 V
SPD to EN 61643-11		Type 1+2
Lightning protection zone LPZ		0-2
Impulse discharge current (10/350)	I _{imp}	12.5 kA
Nominal discharge current (8/20)	I _n	30 kA
Maximum discharge current (8/20 μs)	I _{max}	50 kA
Protection level	U _p	< 2,6 kV
Response time	t _A	< 25 ns
Temperature range	θ	-40 - +80 °C
Protection rating		IP 20
Division unit TE (17.5 mm)		3
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²

PV combination arrester V50, 600 V DC with remote signalling



Type	U max DC V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V50-B+C 3PHFS600	600	3-pole for PV systems with FS	1	49.600	5093625

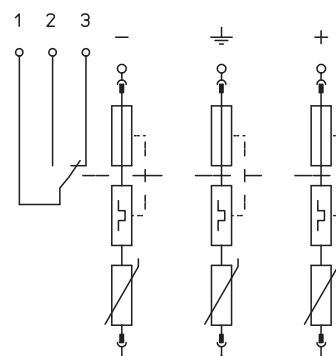
V50 combination arrester, type 1+2, for PV systems with FS contact as potential-free changeover

- Complete unit, consisting of plug-in varistor arrester with cut-off unit
- Error-resistant Y circuit for use according to VDE 0100-712 (EN 50539-12)
- Surge protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Arresting capacity to 12.5 kA (10/350) and 50 kA (8/20) per pole
- Low DC voltage protection level: < 2.6 kV and Voc max. = 600 V DC
- With visual display for use in distributor housings

Application: PV systems with lightning protection system

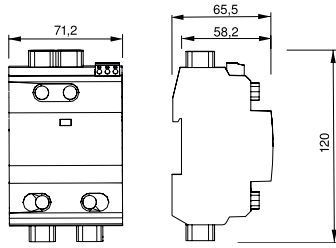
V50-B+C 3PHFS600	
U max DC	U _c DC 600 V
SPD to EN 61643-11	Type 1+2
Lightning protection zone LPZ	0→2
Impulse discharge current (10/350)	I _{imp} 12.5 kA
Nominal discharge current (8/20)	I _n 30 kA
Maximum discharge current (8/20 μs)	I _{max} 50 kA
Protection level	U _p < 2,6 kV
Response time	t _A < 25 ns
Temperature range	ϑ -40 - +80 °C
Protection rating	IP 20
Division unit TE (17.5 mm)	4
Connection cross-section, rigid	2.5 - 35 mm ²
Connection cross-section, multi-wire	2.5 - 35 mm ²
Connection cross-section, flexible	2.5 - 25 mm ²

Connection options





PV complete block 1500 V DC



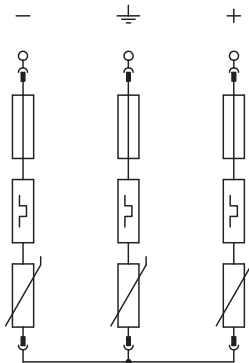
Type 2 surge protection for PV plants.

- Surge protection according to IEC 60364-7-712 (VDE 0100-712)
- Arresting capacity of 20 kA per pole and up to 40 kA (8/20)
- Error-resistant Y circuit with status display
- The FS variant possesses a potential-free changeover contact for remote signalling

Application: Surge protective devices for PV systems.

Type	U max DC V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V-PV-T2-1500	1500	Y configuration	1	33.800	5094210

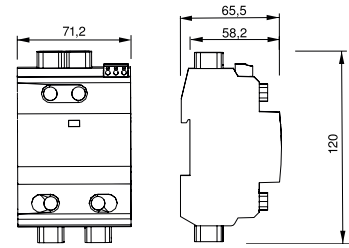
Connection options



V-PV-T2-1500

U max DC	U _e DC	1500 V
SPD to EN 61643-11		Type 2
Lightning protection zone LPZ		1→2
Nominal discharge current (8/20)	I _n	20 kA
Maximum discharge current (8/20 μs)	I _{max}	40 kA
Protection level	U _p	< 4,5 kV
Response time	t _A	< 25 ns
Temperature range	θ	-40 - 80 °C
Protection rating		IP20
Division unit TE (17.5 mm)		4
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 35 mm ²

PV complete block 1500 V DC with remote signalling



Type	U max DC V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V-PV-T2-1500+FS	1500	Y configuration + RS	1	34.400	5094212

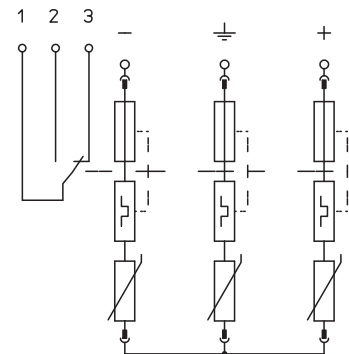
Type 2 surge protection for PV plants.

- Surge protection according to IEC 60364-7-712 (VDE 0100-712)
- Arresting capacity of 20 kA per pole and up to 40 kA (8/20)
- Error-resistant Y circuit with status display
- The FS variant possesses a potential-free changeover contact for remote signalling

Application: Surge protective devices for PV systems.

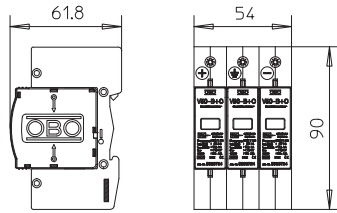
V-PV-T2-1500+FS	
U max DC	U _c DC 1500 V
SPD to EN 61643-11	Type 2
Lightning protection zone LPZ	1→2
Nominal discharge current (8/20)	I _n 20 kA
Maximum discharge current (8/20 μs)	I _{max} 40 kA
Protection level	U _p < 4,5 kV
Response time	t _A < 25 ns
Temperature range	ϑ -40 - 80 °C
Protection rating	IP20
Division unit TE (17.5 mm)	4
Connection cross-section, rigid	2.5 - 35 mm ²
Connection cross-section, multi-wire	2.5 - 35 mm ²
Connection cross-section, flexible	2.5 - 35 mm ²

Connection options





PV surge protection V20, 1000 V DC



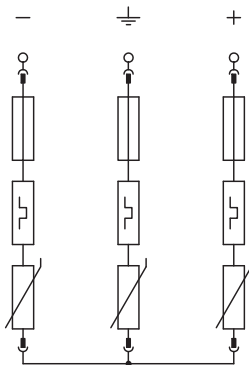
V20 surge arrester, type 2, for photovoltaic systems

- Complete unit, consisting of plug-in varistor arrester with cut-off unit
- Error-resistant Y circuit to VDE 0100-712 (EN 50539-12)
- Surge protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- V20-C 3-PH-1000 tested to EN 50539-11 (VDE / KEMA)
- Arresting capacity to 40 kA (8/20) per pole
- Low DC protection level: < 4.0 kV and Voc max = 1,000 V DC
- With visual status display for use in distributor housings

Application: PV systems with or without separate lightning protection system

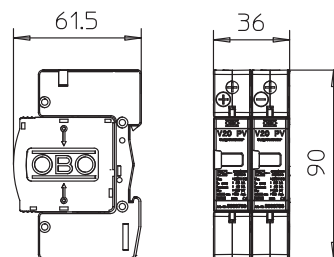
Type	U max DC V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V20-C 3-PH-1000	1000	3-pole for PV systems	1	34.519	5094608

Connection options



V20-C 3-PH-1000		
U max DC	U _c DC	1000 V
SPD to EN 61643-11		Type 2
Lightning protection zone LPZ		1→2
Nominal discharge current (8/20)	I _n	20 kA
Maximum discharge current (8/20 μs)	I _{max}	40 kA
Protection level	U _p	< 4,0 kV
Response time	t _A	< 25 ns
Temperature range	ϑ	-40 - +80 °C
Protection rating		IP 20
Division unit TE (17.5 mm)		3
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²

PV surge protection V20 2pole 1000 V DC



Type	U max DC V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V20-C 2-PH-1000	1000	2-pole for earthed PV systems	1	27.000	5094617

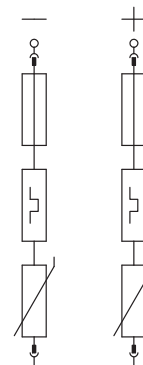
V20 surge arrester, Type 2, for earthed photovoltaic systems

- Complete unit consisting of varistor arrester with cut-off unit
- For PV systems directly earthed on DC side to VDE 0100-712 (EN 50539-12)
- Surge protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- V20-C 3-PH-1000 tested to EN 50539-11 (VDE / KEMA)
- Arresting capacity to 40 kA (8/20) per pole
- Low DC voltage protection level: < 4.0 kV and Voc max = 1,000 V DC
- With visual function display for use in distributor housings

Application: Directly earthed PV systems with or without isolated lightning protection system

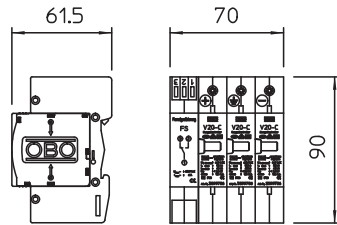
V20-C 2-PH-1000	
U max DC	U _c DC 1000 V
SPD to EN 61643-11	Type 2
Lightning protection zone LPZ	1→2
Nominal discharge current (8/20)	I _n 20 kA
Maximum discharge current (8/20 μs)	I _{max} 40 kA
Protection level	U _p < 4,0 kV
Response time	t _A < 25 ns
Temperature range	θ -40 - +80 °C
Protection rating	IP 20
Division unit TE (17.5 mm)	2
Connection cross-section, rigid	2.5 - 35 mm ²
Connection cross-section, multi-wire	2.5 - 35 mm ²
Connection cross-section, flexible	2.5 - 25 mm ²

Connection options





PV surge protection V20, 1000 V DC with remote signalling



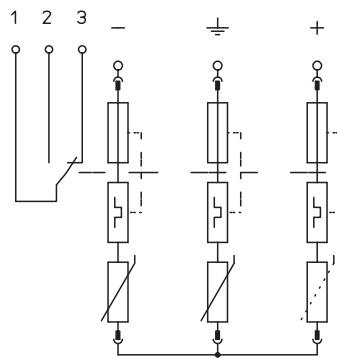
V20 surge arrester, type 2, for photovoltaic systems

- Complete unit, consisting of plug-in varistor arrester with cut-off unit
- Error-resistant Y circuit to VDE 0100-712 (EN 50539-12)
- Surge protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- V20-C 3-PH-1000 tested to EN 50539-11 (VDE / KEMA)
- Arresting capacity to 40 kA (8/20) per pole
- Low DC protection level: < 4.0 kV and Voc max = 1,000 V DC
- With visual status display for use in distributor housings

Application: PV systems with or without separate lightning protection system

Type	U max DC V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V20-C 3PHFS-1000	1000	3-pole for PV systems with FS	1	44.500	5094574

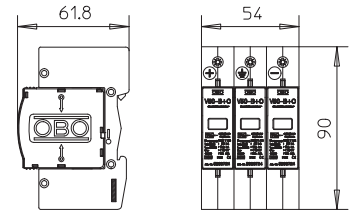
Connection options



V20-C 3PHFS-1000

U max DC	U _c DC	1000 V
SPD to EN 61643-11		Type 2
Lightning protection zone LPZ		1-2
Nominal discharge current (8/20)	I _n	20 kA
Maximum discharge current (8/20 μs)	I _{max}	40 kA
Protection level	U _b	< 4,0 kV
Response time	t _A	< 25 ns
Temperature range	θ	-40 - +80 °C
Protection rating		IP 20
Division unit TE (17.5 mm)		4
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²

PV surge protection V20, 600 V DC



Type	U max DC V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V20-C 3PH-600	600	3-pole for PV systems	1	33.500	5094605

V20 surge arrester, type 2, for PV systems

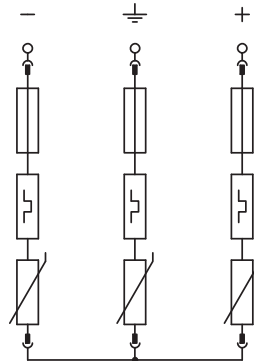
- Complete unit, consisting of plug-in varistor arrester with cut-off unit
- Error-resistant Y circuit for use according to VDE 0100-712 (EN 50539-12)
- For surge protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Arresting capacity to 40 kA (8/20) per pole
- Low DC protection level: < 2.6 kV (Voc max = 600 V DC)
- Arrester, connectable with thermodynamic cut-off unit and visual function display
- Encapsulated, zinc oxide varistor arrester for use in distributor housings

Application: PV systems with or without separate lightning protection system

V20-C 3PH-600

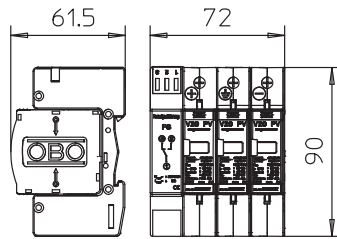
U max DC	U _c DC	600 V
SPD to EN 61643-11		Type 2
Lightning protection zone LPZ		1→2
Nominal discharge current (8/20)	I _n	20 kA
Maximum discharge current (8/20 μs)	I _{max}	40 kA
Protection level	U _p	< 2,6 kV
Response time	t _A	< 25 ns
Temperature range	ϑ	-40 - +80 °C
Protection rating		IP 20
Division unit TE (17.5 mm)		3
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²

Connection options





PV surge protection V20, 600 V DC with remote signalling



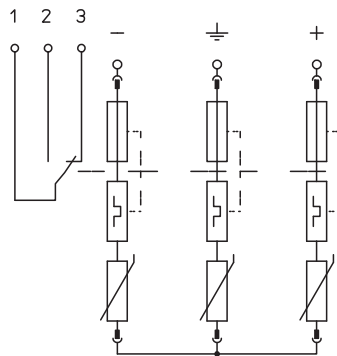
V20 surge arrester, type 2, for PV systems with FS contact as potential-free changeover

- Complete unit, consisting of plug-in varistor arrester with cut-off unit
- Error-resistant Y circuit for use according to VDE 0100-712 (EN 50539-12)
- For surge protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Arresting capacity to 40 kA (8/20) per pole
- Low DC protection level: < 2.6 kV (U_{oc} max = 600 V DC)
- Arrester, connectable with thermodynamic cut-off unit and visual function display
- Encapsulated, zinc oxide varistor arrester for use in distributor housings

Application: PV systems with or without separate lightning protection system

Type	U max DC V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V20-C 3PHFS-600	600	3-pole for PV systems; Y circuit with FS	1	41.500	5094576

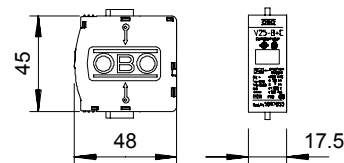
Connection options



V20-C 3PHFS-600

U max DC	U _c DC	600 V
SPD to EN 61643-11	Type	2
Lightning protection zone LPZ		1-2
Nominal discharge current (8/20)	I _n	20 kA
Maximum discharge current (8/20 μs)	I _{max}	40 kA
Protection level	U _p	< 2,6 kV
Response time	t _A	< 25 ns
Temperature range	θ	-40 - +80 °C
Protection rating		IP 20
Division unit TE (17.5 mm)		4
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²

PV CombiController V50, plug-in arrester, type 1+2



Type	U max DC V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V50-B+C 0-300PV	300	1-pole, PV upper part with Y base to 600 V DC	1	8.200	5093726

CombiController upper part – type 1+2, combination arrester for photovoltaic systems

- For surge protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Arresting capacity to 12.5 kA (10/350) and 50 kA (8/20) per pole
- Low DC voltage protection level: < 1.3 kV per pole (Y circuit: 2.6 kV and Voc max = 600 V DC)
- Plug-in arrester with thermodynamic cut-off unit and visual function display
- Encapsulated, zinc oxide varistor arrester for use in distributor housings
- High current carrying capacity with long lifespan

Application: PV systems with lightning protection system

V50-B+C 0-300PV	
U max DC	U _c DC 300 V
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
Lightning protection zone LPZ	0→2
Nominal discharge current (8/20)	I _n 30 kA
Impulse discharge current (10/350)	I _{imp} 12.5 kA
Maximum discharge current (8/20 μs)	I _{max} 50 kA
Protection level	U _p < 1,3 kV
Response time	t _A <25 ns
Maximum back-up fuse	125 A
Temperature range	θ -40 - +80 °C
Protection rating	IP 20
Division unit TE (17.5 mm)	1

Connection options



Lightning current and surge arrester MCF 35

Surge protective device for energy technology, arrester, type 1 (industry)

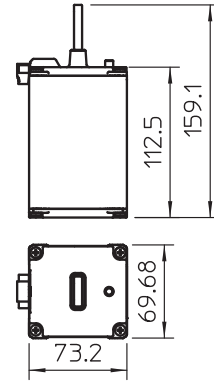
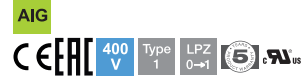


- Lightning current and surge arresters
- High arresting capacity up to 35 kA (10/350) per pin
- Arresters for buildings with lightning protection system
- Visual status display
- With remote signalling
- Simple standard DIN rail mounting
- Labelled connections
- Usable in systems with lightning protection class I-V

The MCF lightning current arresters meet the type 1 requirement class according to IEC 61643-11. These devices protect low-voltage and consumer systems against any type of surges. Several benefits are achieved through the use of the voltage-limiting carbon spark gap. A short response time, a

low protection level and high current leakage capability with long service life. In addition, the devices do not produce any line follow current. If circumstances are uncertain and there is a risk of fire from overloads, the cut-off unit disconnects the arrester safely from the mains.

Lightning arrester MCF 35, 400/690 V, 1-pole with IR



Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
MCF 35-1+FS-440	440	1-pole	1	98.000	5096974

Lightning arrester type 1

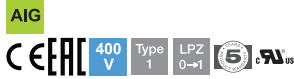
- For lightning protection equipotential bonding to DIN EN 62305 (IEC 62305)
- Lightning current arresting capacity 35 kA (10/350) per pole
- Follow current extinguishing 50 kAeff, arrester back-up fuse up to 400 A gL/gG
- Encapsulated, non-extinguishing spark gap arrester for use in distributor housings
- Cut-off unit with visual indicator
- Remote signalling with potential-free changeover contact

Application: Without exception for 400/690 V network systems

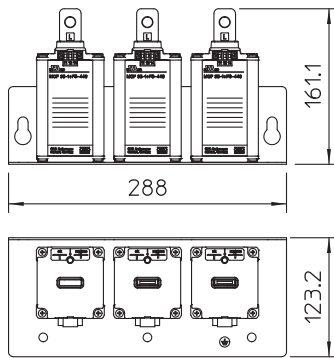
MCF 35-1+FS-440	
Nominal voltage	U_N 400 V
Max. continuous operating voltage	U_C 440 V
SPD to EN 61643-11	Type 1
SPD to IEC 61643-11	Class I
Impulse discharge current (10/350)	I_{imp} 35 kA
Nominal discharge current (8/20)	I_n 35 kA
Protection level	U_p 2,5 kV
Follow current quenching capacity Ieff	$I_{fi\ eff}$ 50 kA
Maximum back-up fuse	400 A
Protection rating	IP20
Response time	t_A < 100 ns
Temperature range	ϑ -40 - +85 °C

Connection options





Lightning arrester MCF 35, 400/690 V, 3-pole with IR

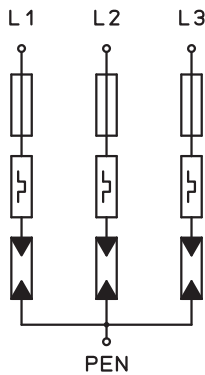


Lightning arrester type 1

- Fully assembled 3-pole connection unit
 - For lightning protection equipotential bonding according to DIN EN 62305 (IEC 62305)
 - Lightning current arresting capacity 35 kA (10/350) per pole
 - Line following current quenching 50 kA_{eff}, arrester back-up fuse up to 400 A gL/gG
 - Encapsulated, non-extinguishing spark gap arrester for use in distributor housings
 - Cut-off unit with visual indicator
 - Remote signalling with potential-free changeover contact
 - For finished mounting on busbars and walls
- Application: Without exception for 400/690 V power systems

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
MCF 35-P3+FS-440	440	3-pole	1	400.000	5096976

Connection options



MCF 35-P3+FS-440

Nominal voltage	U_N	400 V
Max. continuous operating voltage	U_C	440 V
SPD to EN 61643-11		Type 1
SPD to IEC 61643-11		Class I
Impulse discharge current (10/350)	I_{imp}	35 kA
Nominal discharge current (8/20)	I_n	35 kA
Protection level	U_p	2,5 kV
Follow current quenching capacity leff	$I_{fi,eff}$	50 kA
Maximum back-up fuse		400 A
Protection rating		IP20
Response time	t_A	< 100 ns
Temperature range	ϑ	-40 - +85 °C

LSC I+II lightning strike and surge counter

Lightning strike and surge counter for the recording of lightning and impulse currents with date and time



IP65 – suitable for outdoor use

Tested to EN/IEC 62561-6

Lightning strike and surge counter can count up to 999 lightning occurrences noting date and time

Exchangeable lithium battery with a lifespan of up to 5 years

Metering range 1 to 100 kA

The LSC I+II lightning current meter measures and permanently saves lightning and pulse currents (10/350), (8/20) and saves this event together with the date and time. This ensures constant monitoring in order to notice if any lightning has struck the lightning protection system or whether there have

been any surge voltages in the system. If a lightning or surge voltage event has occurred, then the entire lightning protection system must be maintained according to VDE 0185-305 (IEC 62305).



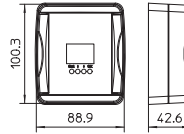
Lightning strike counter



Type	Measuring range	Pack Piece	Weight kg/100 pc.	Item no.
LSC I-II	1 kA - 100 kA	1	32.500	5091722

The LSC I-II lightning current meter measures and permanently saves pulse currents, together with the date and time. This ensures constant monitoring in order to notice if any lightning has struck the lightning protection system. Should this be the case, then the lightning protection system must be maintained according to VDE 0185-305 (IEC 62305).

- Saving and display of time and date
- Usable both inside and outside due to its protection class of IP65
- Cable clip for round conductor or flat conductor
- Direct mounting on the conductor or the PE conductor of the surge protective device
- Long lifespan of the internal lithium batteries
- LCD display
- Internal battery
- Tested according to VDE 0185-561-6 (IEC 62561-6)



Testing devices



ISOLAB measuring system arrester tester

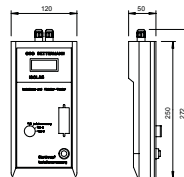
Type	Country version	Nom. V	Measuring range	Pack Piece	Weight kg/100 pc.	Item no.
ISOLAB	D/GB	6	0V-999V	1	75.000	5096812

To test the insulation resistance to DIN VDE 0100 Part 610 and the characteristic curve behaviour of the following surge voltage and lightning current arresters:

- V10-C and V20-C: Uc Tolerance range
 - 75 V -> 110 V - 130 V
 - 150 V -> 215 V - 265 V
 - 280 V -> 385 V - 475 V
 - 320 V -> 460 V - 560 V
 - 335 V -> 460 V - 560 V
 - 385 V -> 560 V - 680 V
 - 440 V -> 645 V - 785 V
 - 550 V -> 820 V - 1,000 V

- V25-B+C and V50-B+C: Uc Tolerance range
 - 150 V -> 215 V - 265 V
 - 280 V -> 385 V - 475 V
 - 320 V -> 460 V - 560 V
 - 385 V -> 560 V - 680 V

- Varistor arresters of other manufacturers can be tested for 1 or 3 mA characteristic curve behaviour
- Battery operation
- Measuring cables contained in the scope of delivery.



Testing unit for lightning barriers

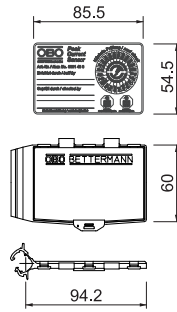
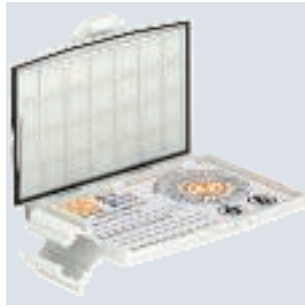
Type	Pack Piece	Weight kg/100 pc.	Item no.
LFC	1	164.500	5096786

OBO Life Control allows function control of the MDP lightning barriers. The lightning barriers can be checked while installed. Life Control will not have any influences on the measuring signal. Life Control possesses an integrated OLED with visual and acoustic defect signalling. A separate LED inside the testing pin is also integrated. Life Control is delivered in a case, complete with a CD and instructions.





Magnetic card and holder MK-B



Type	Pack	Weight	Item no.
	PU	kg/100 PUs	
MK-B	1	31.000	5091322

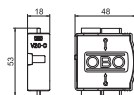
PCS magnetic card to record pulse/lightning currents including holder

- Holder can be leaded
- For mounting on round conductor Rd 8-10
- Simple holder mounting through clamping
- 1 PU = 10 units





Plug-in arrester V10 150 V

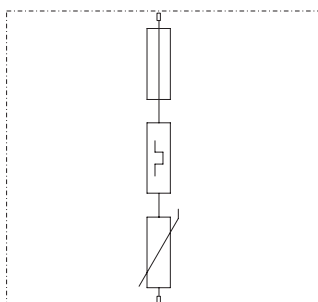


Highest continuous voltage		Pack	Weight	Item no.
Type	Version	Piece	kg/100 pc.	
V10-C 0-150	150 1-pole	1	2.900	5093400

Surge arrester, type 2+3 to EN 61643-11

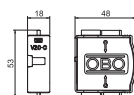
- Plug-in upper part; upper part can be separated from base without tools
- Incl. thermal and dynamic cut-off unit and visual display of defects
- High current conductivity and long service life

Connection options



V10-C 0-150		
Nominal voltage	U_N	150 V
Max. continuous operating voltage	U_C	150 V
SPD to EN 61643-11		Type 2+3
SPD to IEC 61643-11		Class II+III
Lightning protection zone LPZ		1→3
Nominal discharge current (8/20)	I_n	10 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$	10 kA
Maximum discharge current (8/20 μ s)	I_{max}	20 kA
Protection level	U_p	< 0,7 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		1
Protection rating		IP20

Plug-in arrester V10 320 V

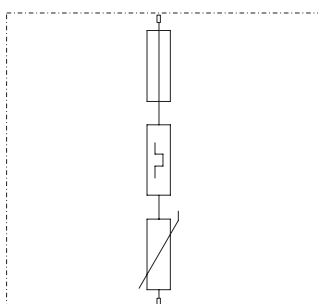


Highest continuous voltage		Pack	Weight	Item no.
Type	Version	Piece	kg/100 pc.	
V10-C 0-320	320 1-pole	1	3.510	5093404

Surge arrester, type 2+3 to EN 61643-11

- Plug-in upper part; upper part can be separated from base without tools
- Incl. thermal and dynamic cut-off unit and visual display of defects
- High current conductivity and long service life

Connection options

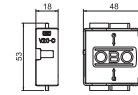


V10-C 0-320		
Nominal voltage	U_N	320 V
Max. continuous operating voltage	U_C	320 V
SPD to EN 61643-11		Type 2+3
SPD to IEC 61643-11		Class II+III
Lightning protection zone LPZ		1→3
Nominal discharge current (8/20)	I_n	10 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$	10 kA
Maximum discharge current (8/20 μ s)	I_{max}	20 kA
Protection level	U_p	< 1,2 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		1
Protection rating		IP20



Plug-in arrester V10 385 V

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V10-C 0-385	385	1-pole	30	3.630	5093406



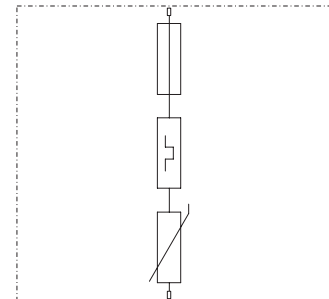
Surge arrester, type 2+3 to EN 61643-11

- Plug-in upper part; upper part can be separated from base without tools
- Incl. thermal and dynamic cut-off unit and visual display of defects
- High current conductivity and long service life

V10-C 0-385

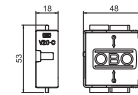
Nominal voltage	U_N	385 V
Max. continuous operating voltage	U_C	385 V
SPD to EN 61643-11		Type 2+3
SPD to IEC 61643-11		Class II+III
Lightning protection zone LPZ		1-3
Nominal discharge current (8/20)	I_n	10 kA
Arrester surge current (8/20) [total]	$I_{Total\ 8/20}$	10 kA
Maximum discharge current (8/20 μ s)	I_{max}	20 kA
Protection level	U_p	< 1,5 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		1
Protection rating		IP20

Connection options



SurgeController V20, plug-in arrester 150 V

Type	Highest continuous voltage V	$U_{max\ DC}$ V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V20-C 0-150	150	200	1-pole	1	4.794	5096707



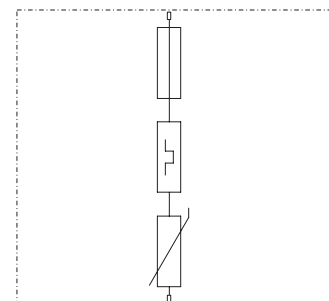
Surge arrester, type 2

- Plug-in arrester, can be separated from base without tools
- Including thermal and dynamic separating device and visual status display
- High current conductivity and long service life

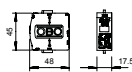
V20-C 0-150

Max. continuous operating voltage	U_C	150 V
$U_{max\ DC}$	$U_C\ DC$	200 V
SPD to EN 61643-11		Type 2
SPD to IEC 61643-11		Class II
Lightning protection zone LPZ		1-2
Nominal discharge current (8/20)	I_n	20 kA
Maximum discharge current (8/20 μ s)	I_{max}	40 kA
Protection level	U_p	< 0,8 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Protection rating		IP 20
Division unit TE (17.5 mm)		1

Connection options



CombiController V50, plug-in arrester 150 V

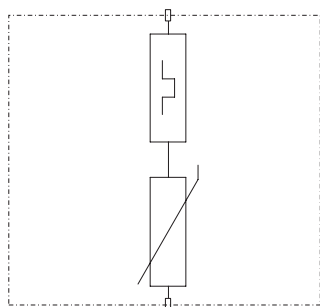


Type	Highest continuous voltage U max DC		Version	Pack Piece	Weight kg/100 pc.	Item no.
	V	V				
V 50-B+C 0-150	150	200	1-pole	1	6.500	5094400

CombiController upper part– type 1+2 combination arrester

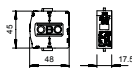
- Plug-in upper part can be fitted into the base without tools or current interruption
- Incl. thermal and dynamic cut-off unit and visual display of defects
- High current conductivity and long service life

Connection options



V 50-B+C 0-150		
Nominal voltage	U_N	130 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0→2
Impulse discharge current (10/350)	I_{imp}	12.5 kA
Lightning surge current (10/350)	I_{total}	12.5 kA
Nominal discharge current (8/20)	I_n	30 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	30 kA
Maximum discharge current (8/20 μ s)	I_{max}	50 kA
Protection level	U_o	< 1,0 kV
Response time	t_A	<25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		1
Protection rating		IP20

CombiController V50, plug-in arrester 280 V

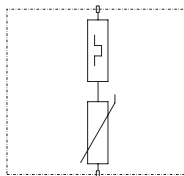


Type	Highest continuous voltage U max DC		Version	Pack Piece	Weight kg/100 pc.	Item no.
	V	V				
V50-B+C 0-280	280	350	1-pole	1	8.000	5093724

CombiController upper part– type 1+2 combination arrester

- Plug-in upper part can be fitted into the base without tools or current interruption
- Incl. thermal and dynamic cut-off unit and visual display of defects
- High current conductivity and long service life

Connection options

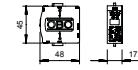


V50-B+C 0-280		
Nominal voltage	U_N	230 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0→2
Impulse discharge current (10/350)	I_{imp}	12.5 kA
Lightning surge current (10/350)	I_{total}	12.5 kA
Nominal discharge current (8/20)	I_n	30 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	30 kA
Maximum discharge current (8/20 μ s)	I_{max}	50 kA
Protection level	U_o	< 1,3 kV
Response time	t_A	<25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		1
Protection rating		IP20



CombiController V25, plug-in arrester 150 V

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V25-B+C 0-150	150	1-pole	1	9.500	5097088

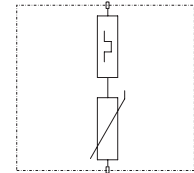


Combination arrester – type 1+2

- Plug-in arrester can be separated from base without tools and current cut-off in base
- Including thermal and dynamic cut-off unit and visual fault display
- High current conductivity and long service life

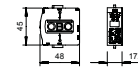
V25-B+C 0-150		
Nominal voltage	U_N	130 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0-2
Impulse discharge current (10/350)	I_{imp}	8 kA
Lightning surge current (10/350)	I_{total}	8 kA
Nominal discharge current (8/20)	I_n	30 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	30 kA
Protection level	U_p	< 0,6 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		160 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		1
Protection rating		IP20

Connection options



CombiController V25, upper part 280 V

Type	Highest continuous voltage V	Version	Pack Piece	Weight kg/100 pc.	Item no.
V25-B+C 0-280	280	1-pole	1	9.500	5097053

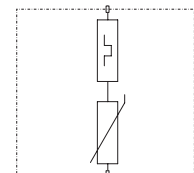


Combination arrester – type 1+2

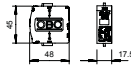
- Plug-in arrester can be separated from base without tools and current cut-off in base
- Including thermal and dynamic cut-off unit and visual fault display
- High current conductivity and long service life

V25-B+C 0-280		
Nominal voltage	U_N	230 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0-2
Impulse discharge current (10/350)	I_{imp}	7 kA
Lightning surge current (10/350)	I_{total}	7 kA
Nominal discharge current (8/20)	I_n	30 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	30 kA
Protection level	U_p	< 0,9 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		160 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		1
Protection rating		IP20

Connection options



CombiController V25, plug-in arrester 320 V

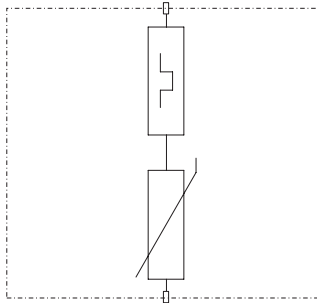


Type	Highest continuous voltage V		Version	Pack Piece	Weight kg/100 pc.	Item no.
	V	Version				
V25-B+C 0-320	320	1-pole		1	10.000	5097290

Combination arrester – type 1+2

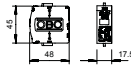
- Plug-in arrester can be separated from base without tools and current cut-off in base
- Including thermal and dynamic cut-off unit and visual fault display
- High current conductivity and long service life

Connection options



V25-B+C 0-320		
Nominal voltage	U_N	320 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0-2
Impulse discharge current (10/350)	I_{imp}	7 kA
Lightning surge current (10/350)	I_{total}	7 kA
Nominal discharge current (8/20)	I_n	30 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	30 kA
Protection level	U_p	< 1,3 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		160 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		1
Protection rating		IP20

CombiController V25, plug-in arrester 385 V

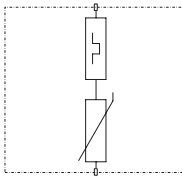


Type	Highest continuous voltage V		Version	Pack Piece	Weight kg/100 pc.	Item no.
	V	Version				
V25-B+C 0-385	385	1-pole		1	9.500	5097061

Combination arrester – type 1+2

- Plug-in arrester can be separated from base without tools and current cut-off in base
- Including thermal and dynamic cut-off unit and visual fault display
- High current conductivity and long service life

Connection options

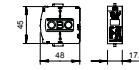


V25-B+C 0-385		
Nominal voltage	U_N	350 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0-2
Impulse discharge current (10/350)	I_{imp}	7 kA
Lightning surge current (10/350)	I_{total}	7 kA
Nominal discharge current (8/20)	I_n	30 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	30 kA
Protection level	U_p	< 1,5 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		160 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		1
Protection rating		IP20



Plug-in arrester, total spark gap between N and PE 255 V

Highest continuous voltage			Pack	Weight	Item no.
Type	V	Version	Piece	kg/100 pc.	
C 25-B+C 0	255	NPE	1	5.300	5095603



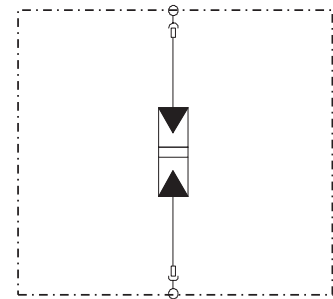
Plug-in total discharge gap for use between neutral lines (N) and protector (PE) Suitable for use in combination with:

- CombiController, type V 25-B+C
- SurgeController, type V 20-C
- SurgeController, type V 10-C

C 25-B+C 0

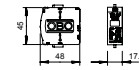
Nominal voltage	U_N	230 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0-2
Lightning impulse current (10/350) (N-PE)	I_{imp}	25 kA
Nominal discharge current (8/20)	I_n	30 kA
Maximum discharge current (8/20 μ s)	I_{max}	50 kA
Protection level	U_p	<1,2 kV
Response time	t_A	< 100 ns
Follow current quenching capacity (eff) [N-PE]	I_{fi}	0.1 kA
Maximum back-up fuse		160 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		1
Protection rating		IP20

Connection options



Plug-in arrester, total spark gap between N and PE 255 V

Highest continuous voltage			Pack	Weight	Item no.
Type	V	Version	Piece	kg/100 pc.	
C25BCONPE	255	1-pole	30	5.195	5095599



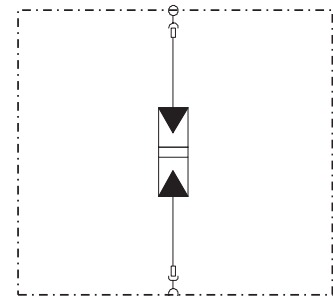
Plug-in total discharge gap for use between neutral lines (N) and protector (PE) Suitable for use in combination with:

- CombiController, type V 25-B+C
- SurgeController, type V 20-C
- SurgeController, type V 10-C

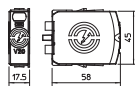
C25BCONPE

Nominal voltage	U_N	230 V
SPD to EN 61643-11		Type 1+2
SPD to IEC 61643-11		Class I+II
Lightning protection zone LPZ		0-2
Lightning impulse current (10/350) (N-PE)	I_{imp}	25 kA
Nominal discharge current (8/20)	I_n	30 kA
Maximum discharge current (8/20 μ s)	I_{max}	50 kA
Protection level	U_p	<1,2 kV
Response time	t_A	< 100 ns
Follow current quenching capacity (eff) [N-PE]	I_{fi}	0.1 kA
Maximum back-up fuse		160 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		—
Protection rating		IP20

Connection options



Plug-in arrester V20 150 V



	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
Type	V					
V20-0-150	150	1	IP20	1	4.160	5095362

Surge arrester, type 2

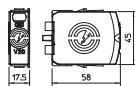
- For surge protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular, plug-in arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic (UL 94 V-0)

Connection options



V20-0-150		
SPD to EN 61643-11		Type 2
SPD to IEC 61643-11		Class II
SPD to UL 1449		Type 4
Nominal voltage AC (50/60 Hz)	U_n	120 V
Maximum continuous voltage AC	U_C	150 V
Protection level	U_p	0.8 kV
Nominal discharge current (8/20 μ s)	$I_{n/L-N}$	20 kA
Maximum discharge current (8/20 μ s)	I_{max}	40 kA
Operating temperature range	T_u	-40 - +80 °C
Protection rating		IP20
Approvals		UL, ÖVE, VDE, KEMA

Plug-in arrester V20 280 V



	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
Type	V					
V20-0-280	280	1	IP20	1	5.000	5095364

Surge arrester, type 2

- For surge protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular, plug-in arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic (UL 94 V-0)

Connection options

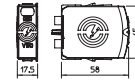


V20-0-280		
SPD to EN 61643-11		Type 2
SPD to IEC 61643-11		Class II
SPD to UL 1449		Type 4
Nominal voltage AC (50/60 Hz)	U_n	230 V
Maximum continuous voltage AC	U_C	280 V
Protection level	U_p	1.3 kV
Nominal discharge current (8/20 μ s)	$I_{n/L-N}$	20 kA
Maximum discharge current (8/20 μ s)	I_{max}	40 kA
Operating temperature range	T_u	-40 - +80 °C
Protection rating		IP20
Approvals		UL, ÖVE, VDE, KEMA



Plug-in arrester V50 150 V

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-0-150	150	1	IP20	1	7.660	5093505



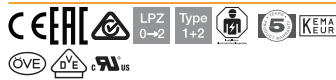
Combination arrester, type 1+2

- For lightning protection equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current discharge capacity of 12.5 kA (10/350) per pole
- Modular, plug-in arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic (UL 94 V-0)

V50-0-150

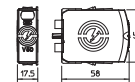
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 120 V
Maximum continuous voltage AC	U_c 150 V
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE

Connection options



Plug-in arrester V50 280 V

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-0-280	280	1	IP20	1	8.500	5093508



Combination arrester, type 1+2

- For lightning protection equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current discharge capacity of 12.5 kA (10/350) per pole
- Modular, plug-in arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic (UL 94 V-0)

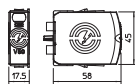
V50-0-280

SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_c 280 V
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE

Connection options



Plug-in arrester V50 320 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-0-320	320	1	IP20	1	9.160	5093509

Combination arrester, type 1+2

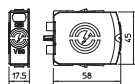
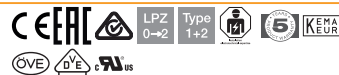
- For lightning protection equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current discharge capacity of 12.5 kA (10/350) per pole
- Modular, plug-in arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic (UL 94 V-0)

Connection options



V50-0-320	
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 230 V
Maximum continuous voltage AC	U_c 320 V
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	UL, KEMA, ÖVE, VDE

Plug-in arrester V50 385 V



Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
V50-0-385	385	1	IP20	1	10.510	5093510

Combination arrester, type 1+2

- For lightning protection equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current discharge capacity of 12.5 kA (10/350) per pole
- Modular, plug-in arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic (UL 94 V-0)

Connection options

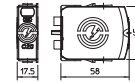


V50-0-385	
SPD to EN 61643-11	Type 1+2
SPD to IEC 61643-11	Class I+II
SPD to UL 1449	Type 4
Nominal voltage AC (50/60 Hz)	U_n 350 V
Maximum continuous voltage AC	U_c 385 V
Lightning surge current (10/350 μ s)	I_{imp} 12.5 kA
Nominal discharge current (8/20 μ s)	$I_n / L-N$ 30 kA
Maximum discharge current (8/20 μ s)	I_{max} 50 kA
Short-circuit withstand for max. mains-side overcurrent protection	50 kA eff
Operating temperature range	T_u -40 - +80 °C
Protection rating	IP20
Approvals	—



Plug-in arrester C20

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
C20-0-255	255	N/PE	IP20	1	3.680	5095600



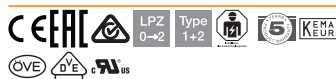
N-PE surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 40 kA (8/20) per pole through high-performance varistors
- Modular connectable arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic (UL 94 V-0)

Application: Equipotential bonding in main and sub-distributors.

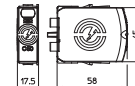
C20-0-255			
SPD to EN 61643-11			Type 2
SPD to IEC 61643-11			Class II
SPD to UL 1449			Type 4
Nominal voltage AC (50/60 Hz)	U_n		230 V
Maximum continuous voltage AC	U_c		255 V
Protection level [N-PE]	$U_p / N-PE$		1.3 kV
Nominal discharge current (8/20 μ s)	$I_n / L-N$		20 kA
Maximum discharge current (8/20 μ s)	I_{max}		40 kA
Operating temperature range	T_u		-40 - +80 °C
Protection rating			IP20
Approvals			UL, ÖVE, VDE, KEMA

Connection options



Plug-in arrester NPE-C50

Type	Max. continuous voltage AC V	Pole version	Protection rating	Pack Piece	Weight kg/100 pc.	Item no.
C50-0-255	255	N/PE	IP20	1	7.215	5095609



Upper part NPE, lightning current combination arrester, type 1+2

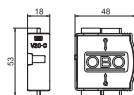
- For lightning protection equipotential bonding to VDE 0185-305 (IEC 62305)
- Lightning current discharge capacity up to 50 kA (10/350) in total
- Modular, plug-in arrester with dynamic cut-off unit and visual status display
- Locking mechanism with vibration protection and voltage keying
- Plastic according to UL 94 V-0

C50-0-255			
SPD to EN 61643-11			Type 1+2
SPD to IEC 61643-11			Class III
SPD to UL 1449			Type 4
Maximum continuous voltage AC	U_c		255 V
Nominal discharge current (8/20 μ s)	$I_n / L-N$		30 kA
Maximum discharge current (8/20 μ s)	I_{max}		50 kA
Lightning surge current (10/350 μ s)	I_{imp}		50 kA
Protection level [N-PE]	$U_p / N-PE$		1.5 kV
Short-circuit withstand for max. mains-side overcurrent protection			25 kA
Operating temperature range	T_u		-40 - +80 °C
Protection rating			IP20
Approvals			UL, KEMA, ÖVE, VDE
Conductor cross-section, flexible (fine-wire)			1.5 - 35 mm ²
Conductor cross-section, rigid (single wire/multi-wire)			1.5 - 35 mm ²
Conductor cross-section, flexible (fine-wire)			16 - 2 AWG
Conductor cross-section, rigid (single wire/multi-wire)			16 - 2 AWG

Connection options



SurgeController V20, plug-in arrester 320 V

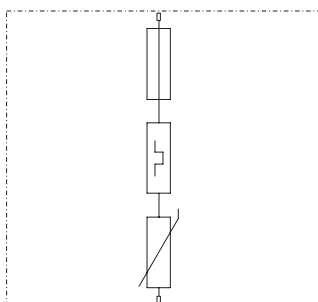


Type	Highest continuous voltage		Version	Pack Piece	Weight kg/100 pc.	Item no.
	V	U max DC V				
V20-C 0-320	320	420	1-pole	1	5.545	5099848

Surge arrester, type 2

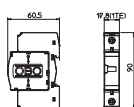
- Plug-in arrester, can be separated from base without tools
- Including thermal and dynamic separating device and visual status display
- High current conductivity and long service life

Connection options



V20-C 0-320		
Max. continuous operating voltage	U_c	320 V
U max DC	U_c DC	420 V
SPD to EN 61643-11		Type 2
SPD to IEC 61643-11		Class II
Lightning protection zone LPZ		1→2
Nominal discharge current (8/20)	I_n	20 kA
Maximum discharge current (8/20 μ s)	I_{max}	40 kA
Protection level	U_p	< 1,4 kV
Response time	t_A	< 25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Protection rating		IP 20
Division unit TE (17.5 mm)		1

Upper part, surge arrester V10 280 V



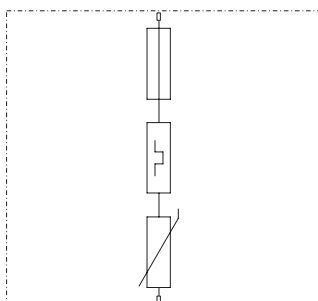
Type	Highest continuous voltage		Version	Pack Piece	Weight kg/100 pc.	Item no.
	V	U max DC V				
V10-C 1-280	280	380	1-pole	1	10.000	5093415

Surge arrester, type 2+3

- Surge protection in sub-distributors to VDE 0100-443 (IEC 60364-4-44)
- Arresting capacity to 20 kA (8/20) per pole
- Arrester, connectable with dynamic cut-off unit and visual function display
- High-performance varistor technology
- Base with multiple connection terminals

Application: Equipotential bonding in sub-distributors and device protection

Connection options



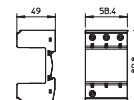
V10-C 1-280		
Nominal voltage	U_N	230 V
Max. continuous operating voltage	U_c	280 V
SPD to EN 61643-11		Type 2+3
SPD to IEC 61643-11		Class II+III
Lightning protection zone LPZ		1→3
Nominal discharge current (8/20)	I_n	10 kA
Arrester surge current (8/20) [total]	$I_{Total 8/20}$	10 kA
Maximum discharge current (8/20 μ s)	I_{max}	20 kA
Protection level	U_p	< 1,1 kV
Response time	t_A	<25 ns
Maximum back-up fuse		125 A
Temperature range	ϑ	-40 - +80 °C
Division unit TE (17.5 mm)		1
Protection rating		IP20
Connection cross-section, rigid		2.5 - 35 mm ²
Connection cross-section, multi-wire		2.5 - 35 mm ²
Connection cross-section, flexible		2.5 - 25 mm ²



MultiBase base

Type	Version	Dividing unit TE (17.5 mm)	Pack Piece	Weight kg/100 pc.	Item no.
MB 3	3-pole	3	1	16.000	5096665

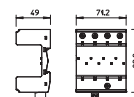
- Suitable for V25-B+C, V20-C and V10-C
- Pre-mounted and ready for connection
- For TN systems
- Multifunction terminals for easy circuit of series-mounted devices
- Upper parts can be rotated through 180 degrees



Base, MultiBase with remote signalling

Type	Version	Dividing unit TE (17.5 mm)	Pack Piece	Weight kg/100 pc.	Item no.
MB 1+FS	1-pole	1	1	7.932	5096649
MB 2+FS	2-pole	2	1	11.700	5096654
MB 3+FS	3-pole	3	1	16.500	5096667

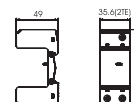
- Suitable for V 25-B+C, V 20-C and V10-C
- Pre-mounted and ready for connection
- Multifunction terminals for easy connection to series-mounted devices
- Upper parts can be rotated through 180 degrees
- With remote signalling, potential-free NO contact, for function monitoring



MultiBase base + NPE

Type	Version	Dividing unit TE (17.5 mm)	Pack Piece	Weight kg/100 pc.	Item no.
MB 1+NPE	1+NPE	2	1	11.500	5096650

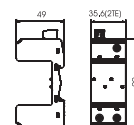
- Suitable for V 25-B+C, V 20-C and V10-C
- Pre-mounted and ready for connection
- Multifunction terminals for easy connection to series-mounted devices
- Upper parts can be rotated through 180 degrees
- For TN-S and TT network systems



Base, MultiBase + NPE with remote signalling

Type	Version	Dividing unit TE (17.5 mm)	Pack Piece	Weight kg/100 pc.	Item no.
MB 1+NPE+FS	1+NPE	2	1	11.600	5096651

- Suitable for V 25-B+C, V 20-C and V10-C
- Pre-mounted and ready for connection
- Multifunction terminals for easy connection to series-mounted devices
- Upper parts can be rotated through 180 degrees
- With remote signalling, potential-free NO contact, for function monitoring
- 3+1 protection circuit for TN-S and TT network systems

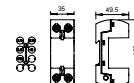


Lightning arrester/combination arrester base

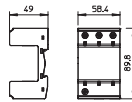
Type	Version	Pack Piece	Weight kg/100 pc.	Item no.
MC 50-B U VDE	1-pole	1	18.000	5096839

LightningController base, fits type:

- MC 50-B VDE
- MCD 50-B
- Incl. plug caps for labelling the connections



MultiBase base

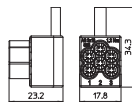


Type	Dividing unit		Pack Piece	Weight kg/100 pc.	Item no.
	Version	TE (17.5 mm)			
MB 1	1-pole	1	1	9.900	5096648
MB 2	2-pole	2	1	14.400	5096653
MB 3	3-pole	3	1	16.000	5096665
MB 4	4-pole	4	1	21.000	5096680

- Suitable for V25-B+C, V20-C and V10-C
- Pre-mounted and ready for connection
- For TN systems
- Multifunction terminals for easy circuit of series-mounted devices
- Upper parts can be rotated through 180 degrees

Accessories

Connection terminal for through-wiring



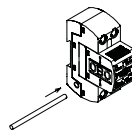
Type	Colour Version		Pack Piece	Weight kg/100 pc.	Item no.
	Light grey	3x16 mm ²			
AS 3x16	Light grey	3x16 mm ²	5	2.474	5012010

Connection terminal type: AS 3 x 16
 Connection cross-section: 3 x 1.5 - 16 mm² rigid/ multiple strands
 3 x 1.5 - 10 mm² fine-wire/with wire end sleeve
 Stripping length: 16 mm
 Rec. tightening torque: 1.2 Nm
 Nominal current: 50 A
 Width: 17.5 mm (1 PU)

For EMC-optimised V through-wiring to IEC 60364-5-53 (VDE 0100-534).

Accessories for lightning current arrester

Cu



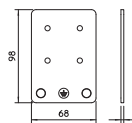
Type	Pack Piece	Weight kg/100 pc.	Item no.
MC V4	10	2.300	5096886

Copper bridge 16 mm², suitable for bridging MC arresters in side channel.

- V3 for 3-pole circuits
- V4 for 4-pole circuits

Mounting plate, 1-pole

VA



Type	Version	Pack Piece	Weight kg/100 pc.	Item no.

Mounting plate 1-pole

- Mounting plate for installation of the arrester MCF 35-1+FS-440
- Prefabricated hole pattern for mounting the arrester on busbars
- Required screws for installation of the arrester enclosed

VA

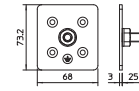


Mounting plate, 1-pole, M10

Type	Version	Pack Piece	Weight kg/100 pc.	Item no.
MCF-MS-M10	1-pole	1	14.200	5096990

Mounting plate with threaded connector M10

- Mounting plate with threaded M10 connector to install the arrester MCF 35-1+FS-440
- M10 bolts for direct installation of the arrester on busbars
- Required screws for installation enclosed



VA

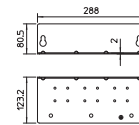


Mounting plate, 3-pole

Type	Version	Pack Piece	Weight kg/100 pc.	Item no.
MCF-MS-P3	3-pole	1	99.800	5096994

Mounting plate 3-pole

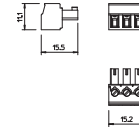
- Mounting plate 3-pole for installation of the arrester MCF 35-1+FS-440
- Prefabricated hole pattern for mounting the arrester on busbars
- Suitable for wall mounting
- Required screws for installation enclosed



Replacement connector for VF remote signalling

Type	Version	Pack Piece	Weight kg/100 pc.	Item no.
VF-FS	3-pole	25	0.320	5098475

Replacement telephony connector, 3-pin version, for VF variant



Cu



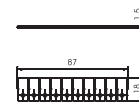
Earthing strip

Type	Pack Piece	Weight kg/100 pc.	Item no.
VB-MDP 10-MD	1	2.300	5098470

Connecting bridge for 8 mm lightning barriers

- Length of bridge can be adjusted
- Material: Copper
- Allows quick equipotential bonding




Application: Parallel switching of the MDP lightning barriers



Explosion protection



Explosion protection

	Surge protection	306
	Spark gaps	316
	Equipotential bonding	324



MDP Ex family

MCR protection for Ex areas



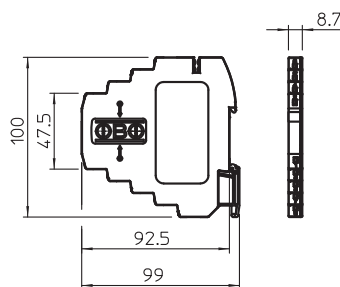
- Protection device for multi-wire systems (4-pole)
- Direct shield earthing
- Easy-mounting, screwless connection option
- Space-saving width of just 8.7 mm
- Ex-tested for intrinsically safe measuring circuits
- High frequency bandwidth up to 100 MHz

Surge protection in potentially explosive areas is an important topic. Here, it is important to protect costly measuring technology against the influence of surge voltages through atmospheric discharge. OBO lightning barriers are tested for intrinsic safety

(ia) and are independently certified. With a high arresting capacity of 10 kA, they offer optimum protection for four-pole measurement and control applications. Different voltage variants offer a wide range of applications.



Series protection device, 4-pole, 5 V version



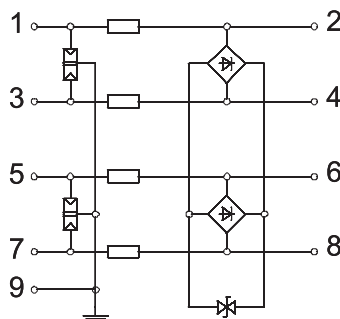
Lightning barrier for intrinsically safe measuring circuits

- Protection device for multi-wire systems
- Direct shield earthing and screwless connection terminals
- Space-saving width of just 8.7 mm
- High frequency range of 0–100 MHz
- ATEX approval: II 2(1) G Ex ia [ja Ga] IIC T4 (BVS 11 ATEX E 131 X)
- UL-listed (4UM2)

Application: Universal use on 35 mm DIN profile rail in any standard distribution housing.

Type	Max. continuous voltage AC V	Max. continuous voltage DC V	Number of poles	Pack Piece	Weight kg/100 pc.	Item no.
MDP-4 D-5-EX	7	10	4	1	5.800	5098412

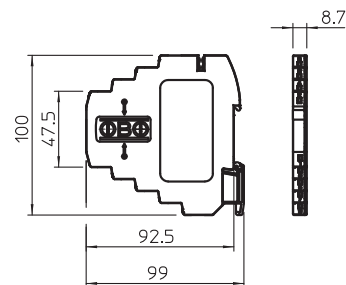
Connection options



MDP-4 D-5-EX	
Maximum continuous voltage AC	U_c 7 V
Maximum continuous voltage DC	U_c 10 V
Category	Type 1+2+3 / D1+C2+C1
Lightning protection zone LPZ	0→3
Number of poles	4
Rated current	I_L 0.58 A
Series resistance per wire	2,35 Ω \pm 5 %
Impulse durability wire-wire	C1: 0,5 kV / 0,25 kA (8/20 μ s)
Impulse durability wire-earth	C2: 5 kV / 2,5 kA (8/20 μ s)
Total discharge current (8/20)	10 kA
Total discharge current (10/350)	D1: 2 kA
Protection level wire-wire	< 35 V
Protection level wire-earth	<800 V
Frequency range	0-100 MHz
Temperature range	ϑ -40 - +80 °C
Installation type	DIN rail
Connection system	Terminal
Protection rating	IP20
Shielding connection available	Yes
Shield connection	Direct
Connection cross-section, flexible	0.14 - 2.5 mm ²
Connection cross-section, multi-wire	0.14 - 1.5 mm ²
Connection cross-section, rigid	0.14 - 2.5 mm ²
Earthing via:	DIN rail
EX approval	II 2(1)G Ex ia [ja Ga] IIC T4 Gb
Testing standard	IEC 61643-21
Approvals	UL



Series protection device, 4-pole, 24 V version



Type	Max. continuous voltage AC V	Max. continuous voltage DC V	Number of poles	Pack Piece	Weight kg/100 pc.	Item no.
MDP-4 D-24-EX	20	28	4	1	5.800	5098432

Lightning barrier for intrinsically safe measuring circuits

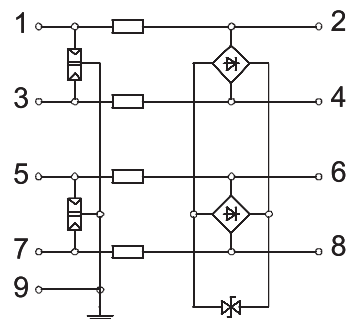
- Protection device for multi-wire systems
- Direct shield earthing and screwless connection terminals
- Space-saving width of just 8.7 mm
- High frequency range of 0–100 MHz
- ATEX approval: II 2(1) G Ex ia [ia Ga] IIC T4 (BVS 11 ATEX E 131 X)
- UL-listed (4UM2)

Application: Universal use on 35 mm DIN profile rail in any standard distribution housing.

MDP-4 D-24-EX

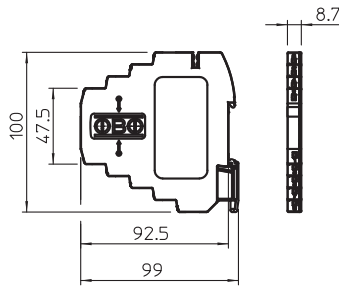
Maximum continuous voltage AC	U_c	20 V
Maximum continuous voltage DC	U_c	28 V
Category		Type 1+2+3 / D1+C2+C1
Lightning protection zone LPZ		0→3
Number of poles		4
Rated current	I_L	0.58 A
Series resistance per wire		2,35 $\Omega \pm 5\%$
Impulse durability wire-wire		C1: 0,5 KV / 0,25 kA (8/20 μ s)
Impulse durability wire-earth		C2: 5 KV / 2,5 kA (8/20 μ s)
Total discharge current (8/20)		10 kA
Total discharge current (10/350)		D1: 2 kA
Protection level wire-wire		< 55 V
Protection level wire-earth		<800 V
Frequency range		0-100 MHz
Temperature range	ϑ	-40 - +80 °C
Installation type		DIN rail
Connection system		Terminal
Protection rating		IP20
Shielding connection available		Yes
Shield connection		Direct
Connection cross-section, flexible		0.14 - 2.5 mm ²
Connection cross-section, multi-wire		0.14 - 1.5 mm ²
Connection cross-section, rigid		0.14 - 2.5 mm ²
Earthing via:		DIN rail
EX approval		II 2(1)G Ex ia [ia Ga] IIC T4 Gb
Testing standard		IEC 61643-21
Approvals		UL

Connection options





Series protection device, 4-pole, 48 V version



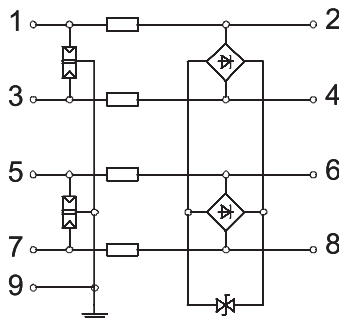
Lightning barrier for intrinsically safe measuring circuits

- Protection device for multi-wire systems
- Direct shield earthing and screwless connection terminals
- Space-saving width of just 8.7 mm
- High frequency range of 0–100 MHz
- ATEX approval: II 2(1) G Ex ia [ja Ga] IIC T4 (BVS 11 ATEX E 131 X)
- UL-listed (4UM2)

Application: Universal use on 35 mm DIN profile rail in any standard distribution housing.

Type	Max. continuous AC voltage V	Max. continuous DC voltage V	Number of poles	Pack Piece	Weight kg/100 pc.	Item no.
MDP-4 D-48-EX	41	58	4	1	5.800	5098452

Connection options

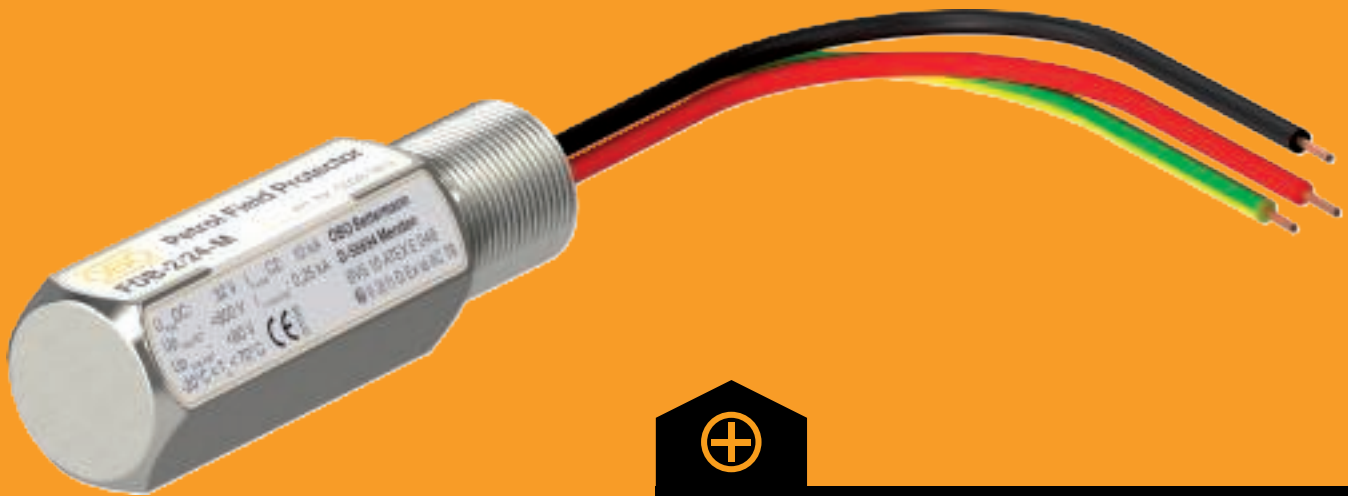
**MDP-4 D-48-EX**

Maximum continuous voltage AC	U_c	41 V
Maximum continuous voltage DC	U_c	58 V
Category		Type 1+2+3 / D1+C2+C1
Lightning protection zone LPZ		0→3
Number of poles		4
Rated current	I_L	0.58 A
Series resistance per wire		2,35 $\Omega \pm 5\%$
Impulse durability wire-wire		C1: 0,5 kV / 0,25 kA (8/20 μ s)
Impulse durability wire-earth		C2: 5 kV / 2,5 kA (8/20 μ s)
Total discharge current (8/20)		10 kA
Total discharge current (10/350)		D1: 2 kA
Protection level wire-wire		< 95 V
Protection level wire-earth		< 800 V
Frequency range		0-100 MHz
Temperature range	ϑ	-40 - +80 °C
Installation type		DIN rail
Connection system		Terminal
Protection rating		IP20
Shielding connection available		Yes
Shield connection		Direct
Connection cross-section, flexible		0.14 - 2.5 mm ²
Connection cross-section, multi-wire		0.14 - 1.5 mm ²
Connection cross-section, rigid		0.14 - 2.5 mm ²
Earthing via:		DIN rail
EX approval		II 2(1)G Ex ia [ja Ga] IIC T4 Gb
Testing standard		IEC 61643-21
Approvals		UL



Petrol Field Protector FDB

MCR protection for explosive areas



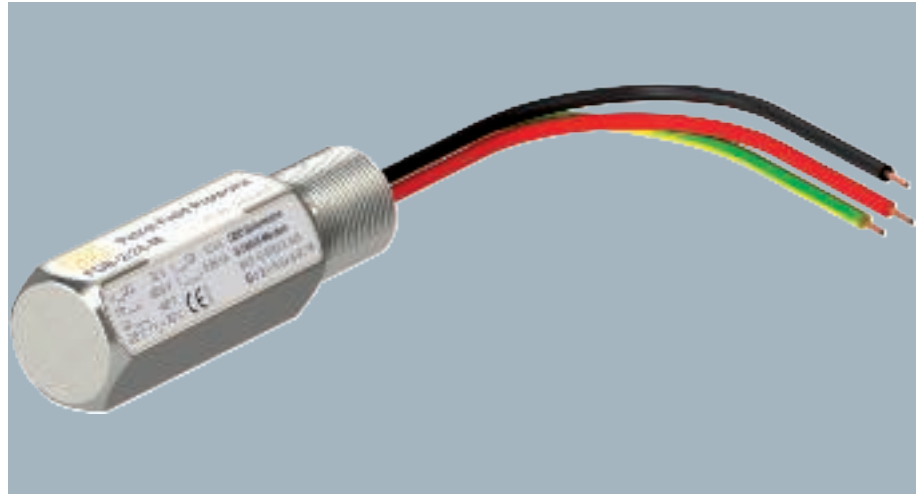
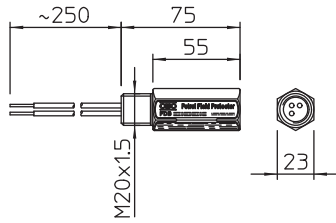
- For potentially explosive areas
- Two or three-pole protection of various sensors
- Metric or NPT thread
- Robust VA housing
- High arresting capacity

With the Petrol Field Protector for data cable protection devices, OBO Bettermann can offer a surge protective device for sensors in potentially explosive areas. The Petrol Field Protector permits two or three-pole protection of all kinds of sensors. The protection device can be fastened directly on the sensor and wired in using the appropriate metric or

NPT thread. The robust VA housing means that aggressive atmospheres are no problem. The intrinsic safety of the Petrol Field Protector has been independently tested and certified. The Petrol Field Protector is your partner for safety-relevant applications in which effective surge protection must be guaranteed.



Protection for field devices, 2-pole, 24 V, metric



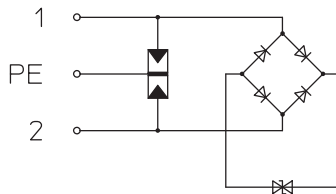
Petrol Field Protector FDB for intrinsically safe measuring circuits and bus systems

- Metric connection technology
- Low protection level at high current load
- Easy mounting on field devices
- Negligible internal capacitance and inductance
- Stainless steel housing with pressure-resistant encapsulation
- ATEX approval: II 2(1) G Ex ia [ia Ga] IIC T4..T6 Gb (BVS 10 ATEX E 048)

Application: Flow sensors, temperature sensors

Type	Max. continuous voltage AC V	Max. continuous voltage DC V	Version	Pack Piece	Weight kg/100 pc.	Item no.
FDB-2 24-M	22	32	2-pole; metric	1	18.500	5098380

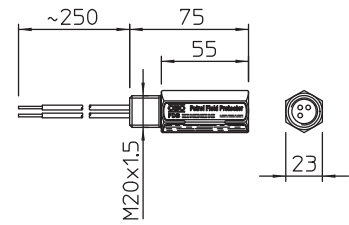
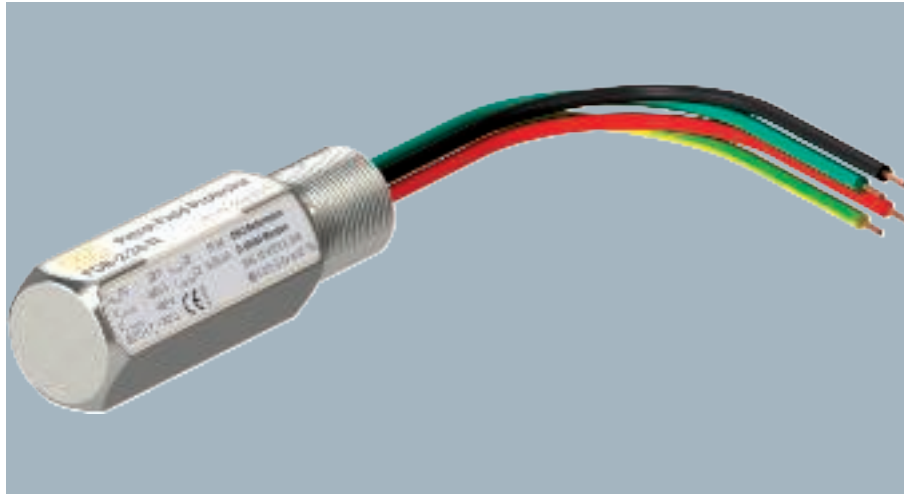
Connection options



FDB-2 24-M

Maximum continuous voltage AC	U_c	22 V
Maximum continuous voltage DC	U_c	32 V
Category		Type 2+3 / C2+C1
Lightning protection zone LPZ		1-3
Number of poles		2
Impulse durability wire-wire		C1: 0,5 kV / 0,25 kA (8/20 μ s)
Impulse durability wire-earth		C2: 5 kV / 2,5 kA (8/20 μ s)
Total discharge current (8/20)		10 kA
Protection level wire-wire		<80 V
Protection level wire-earth		<800 V
Temperature range	ϑ	-20 - +70 °C
Installation type		Screw-on
Protection rating		IP65/67
Mounting of input / output		M20 x 1.5 external thread
Mounting of field / device side:		Connection cable 1.5 mm ² Length ~ 250 mm
Earthing via:		Connection cable
Housing material		V2A
EX approval		II 2(1)G Ex ia [ia Ga] IIC T4..T6 Gb (BVS 10 ATEX E 048)
Testing standard		IEC 61643-21

Protection for field devices, 3-pole, 24 V, metric



Type	Max. continuous voltage AC V	Max. continuous voltage DC V	Version	Pack Piece	Weight kg/100 pc.	Item no.
FDB-3 24-M	22	32	3-pole; metric	1	19.000	5098382

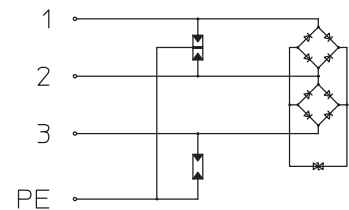
Petrol Field Protector FDB for intrinsically safe measuring circuits and bus systems

- Metric connection technology
- Low protection level at high current load
- Easy mounting on field devices
- Negligible internal capacitance and inductance
- Stainless steel housing with pressure-resistant encapsulation
- ATEX approval: II 2(1) G Ex ia [ia Ga] IIC T4..T6 Gb (BVS 10 ATEX E 048)

Application: Flow sensors, temperature sensors

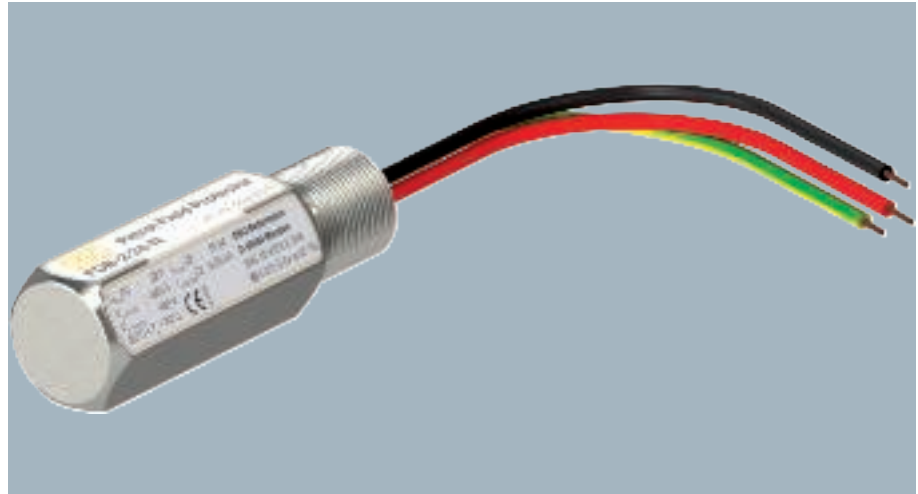
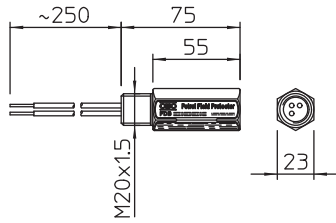
FDB-3 24-M	
Maximum continuous voltage AC	U_c 22 V
Maximum continuous voltage DC	U_c 32 V
Category	Type 2+3 / C2+C1
Lightning protection zone LPZ	1→3
Number of poles	3
Impulse durability wire-wire	C1: 0,5 kV / 0,25 kA (8/20 μ s)
Impulse durability wire-earth	C2: 5 kV / 2,5 kA (8/20 μ s)
Total discharge current (8/20)	10 kA
Protection level wire-wire	<80 V
Protection level wire-earth	<800 V
Temperature range	ϑ -20 - +70 °C
Installation type	Screw-on
Protection rating	IP65/67
Mounting of input / output	M20 x 1.5 external thread
Mounting of field / device side:	Connection cable 1.5 mm ² Length ~ 250 mm
Earthing via:	Connection cable
Housing material	V2A
EX approval	II 2(1)G Ex ia [ia Ga] IIC T4..T6 Gb (BVS 10 ATEX E 048)
Testing standard	IEC 61643-21

Connection options





Protection for field devices, 2-pole, 24 V, NPT



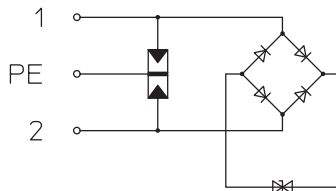
Petrol Field Protector FDB for intrinsically safe measuring circuits and bus systems

- NPT connection technology
- Low protection level at high current load
- Easy mounting on field devices
- Negligible internal capacitance and inductance
- Stainless steel housing with pressure-resistant encapsulation
- ATEX approval: II 2(1) G Ex ia [ja Ga] IIC T4..T6 Gb (BVS 10 ATEX E 048)

Application: Flow sensors, temperature sensors

Type	Max. continuous voltage AC V	Max. continuous voltage DC V	Version	Pack Piece	Weight kg/100 pc.	Item no.
FDB-2 24-N	22	32	2-pole; NPT	1	19.000	5098390

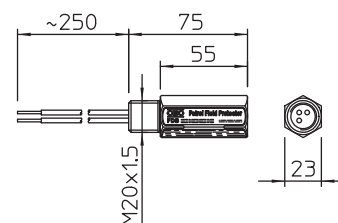
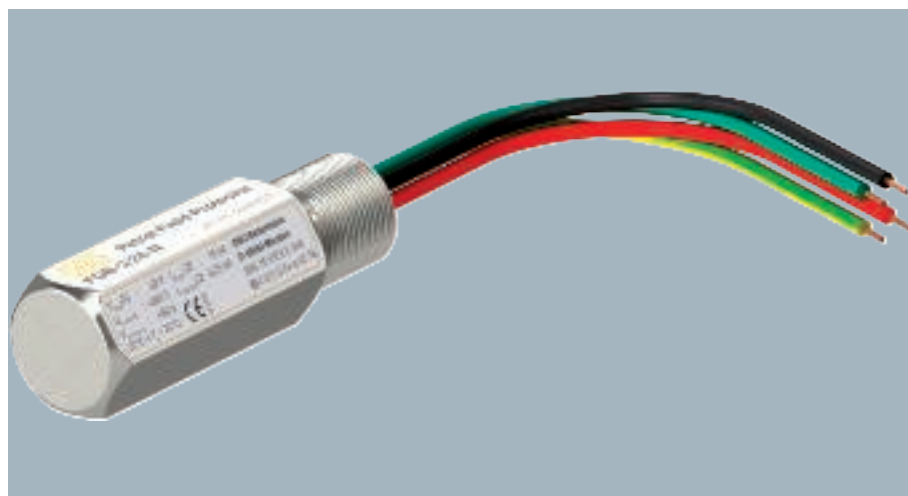
Connection options



FDB-2 24-N	
Maximum continuous voltage AC	U_c 22 V
Maximum continuous voltage DC	U_c 32 V
Category	Type 2+3 / C2+C1
Lightning protection zone LPZ	1-3
Number of poles	2
Impulse durability wire-wire	C1: 0,5 kV / 0,25 kA (8/20 μ s)
Impulse durability wire-earth	C2: 5 kV / 2,5 kA (8/20 μ s)
Total discharge current (8/20)	10 kA
Protection level wire-wire	<80 V
Protection level wire-earth	<800 V
Temperature range	ϑ -20 - +70 °C
Installation type	Screw-on
Protection rating	IP65/67
Mounting of input / output	1/2" NPT
Mounting of field / device side:	Connection cable 1.5 mm ² Length ~ 250 mm
Earthing via:	Connection cable
Housing material	V2A
EX approval	II 2(1)G Ex ia [ja Ga] IIC T4..T6 Gb (BVS 10 ATEX E 048)
Testing standard	IEC 61643-21



Protection for field devices, 3-pole, 24 V, NPT



Type	Max. continuous voltage AC V	Max. continuous voltage DC V	Version	Pack Piece	Weight kg/100 pc.	Item no.
FDB-3 24-N	22	32	3-pole; NPT	1	19.500	5098392

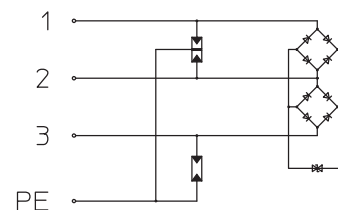
Petrol Field Protector FDB for intrinsically safe measuring circuits and bus systems

- NPT connection technology
- Low protection level at high current load
- Easy mounting on field devices
- Negligible internal capacitance and inductance
- Stainless steel housing with pressure-resistant encapsulation
- ATEX approval: II 2(1) G Ex ia [ia Ga] IIC T4..T6 Gb (BVS 10 ATEX E 048)

Application: Flow sensors, temperature sensors

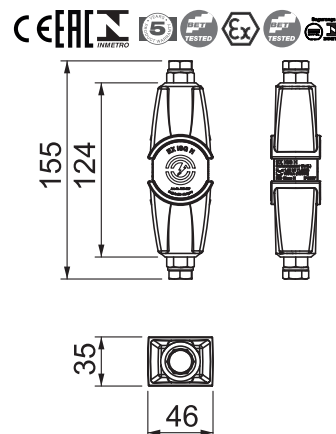
FDB-3 24-N	
Maximum continuous voltage AC	U_c 22 V
Maximum continuous voltage DC	U_c 32 V
Category	Type 2+3 / C2+C1
Lightning protection zone LPZ	1-3
Number of poles	3
Impulse durability wire-wire	C1: 0,5 kV / 0,25 kA (8/20 μ s)
Impulse durability wire-earth	C2: 5 kV / 2,5 kA (8/20 μ s)
Total discharge current (8/20)	10 kA
Protection level wire-wire	<80 V
Protection level wire-earth	<800 V
Temperature range	ϑ -20 - +70 °C
Installation type	Screw-on
Protection rating	IP65/67
Mounting of input / output	1/2" NPT
Mounting of field / device side:	Connection cable 1.5 mm ² Length ~ 250 mm
Earthing via:	Connection cable
Housing material	V2A
EX approval	II 2(1)G Ex ia [ia Ga] IIC T4..T6 Gb (BVS 10 ATEX E 048)
Testing standard	IEC 61643-21

Connection options





EX ISG H spark gap



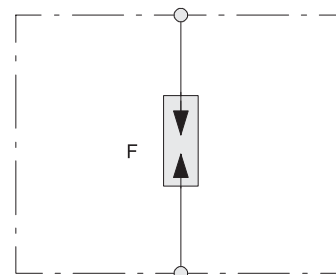
Type	Pack Piece	Weight kg/100 pc.	Item no.
EX ISG H	1	41.360	5240030

- Spark gap to VDE 0185-561-3 (IEC 62561-3)
- Ex certificate to ATEX
- Labelling to EN 60079-0/-1: II 2 G Ex db IIC T6 Gb
- Labelling to EN 60079-0/-31: II 2 D Ex td IIIC T80 °C Db IP67
- Ex certificate to IECEx
- Labelling to IEC 60079-0/-1: Ex db IIC T6 Gb
- Labelling to IEC 60079-0/-31: Ex td IIIC T80 °C Db IP67
- Ex certificate to INMETRO
- Labelling to ABNT NBR IEC 60079-0/-1: Ex db IIC T6 Gb
- Labelling to ABNT NBR IEC 60079-31: Ex tb IIIC T80 °C Db IP67

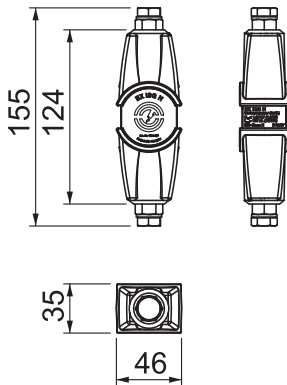
Application: In potentially explosive areas zone 1/21 and 2/22, indirect bridging of insulating flanges and insulating glands, e.g. in cathodic, corrosion-protected (KKS) systems.

EX ISG H		
Connecting cable length		0 m
Rated impulse sparkover voltage	$U_{r,imp}$	1.25 kV
Rated DC withstand voltage	U_{wDC}	354 V
Rated power frequency withstand voltage	U_{wAC}	250 V
Power frequency spark-over voltage	U_{AS}	0.56 kV
Impulse discharge current (10/350)	I_{imp}	100 kA
Nominal discharge current (8/20)	I_n	100 kA
Lightning current carrying capacity		H/100 kA
Temperature range	ϑ	-20 - +60 °C

Connection options



ES ISG H spark gap, with one cable



- Spark gap to VDE 0185-561-3 (IEC 62561-3)
- Ex certificate to ATEX
- Labelling to EN 60079-0/-1: II 2 G Ex db IIC T6 Gb
- Labelling to EN 60079-0/-31: II 2 D Ex td IIIC T80 °C Db IP67
- Ex certificate to IECEX
- Labelling to IEC 60079-0/-1: Ex db IIC T6 Gb
- Labelling to IEC 60079-0/-31: Ex td IIIC T80 °C Db IP67
- Ex certificate to INMETRO
- Labelling to ABNT NBR IEC 60079-0/-1: Ex db IIC T6 Gb
- Labelling to ABNT NBR IEC 60079-31: Ex tb IIIC T80 °C Db IP67

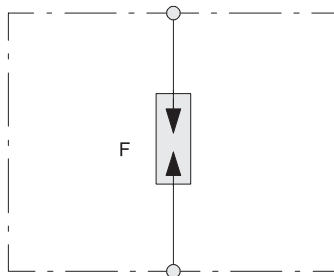
Application: In potentially explosive areas zone 1/21 and 2/22, indirect bridging of insulating flanges and insulating glands, e.g. in cathodic, corrosion-protected (KKS) systems.

Type

EX ISG H 350

Pack	Weight	Item no.
Piece	kg/100 pc.	
1	57.260	5240031

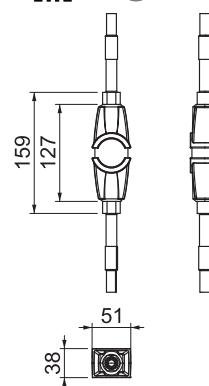
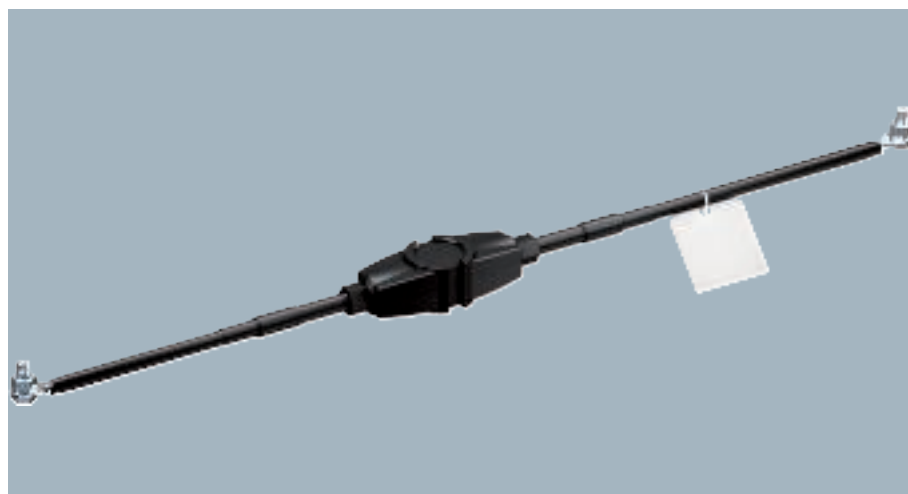
Connection options



EX ISG H 350

Connecting cable length		0.35 m
Rated impulse sparkover voltage	$U_{f \text{ imp}}$	1.25 kV
Rated DC withstand voltage	U_{wDC}	354 V
Rated power frequency withstand voltage	U_{wAC}	250 V
Power frequency spark-over voltage	U_{AS}	0.56 kV
Impulse discharge current (10/350)	I_{imp}	100 kA
Nominal discharge current (8/20)	I_n	100 kA
Lightning current carrying capacity		H/100 kA
Temperature range	ϑ	-20 - +60 °C

EX ISG H spark gap, jacketed



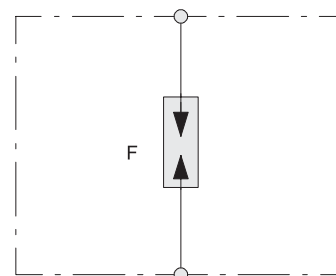
Type	Pack Piece	Weight kg/100 pc.	Item no.
EX ISG H KU	1	210.300	5240032

- Spark gap to VDE 0185-561-3 (IEC 62561-3)
- Ex certificate to ATEX
- Labelling to EN 60079-0/-1: II 2 G Ex db IIC T6 Gb
- Labelling to EN 60079-0/-31: II 2 D Ex td IIIC T80 °C Db IP67
- Ex certificate to IECEx
- Labelling to EN 60079-0/-1: Ex db IIC T6 Gb
- Labelling to EN 60079-0/-31: Ex td IIIC T80 °C Db IP67
- Ex certificate to INMETRO
- Labelling to ABNT NBR IEC 60079-0/-1: Ex db IIC T6 Gb
- Labelling to ABNT NBR IEC 60079-31: Ex td IIIC T80 °C Db IP67
- Water-proof shrinkage
- NYY-0 1 x 25 mm² cable, mounted on both sides
- Particularly suitable for connections in the ground

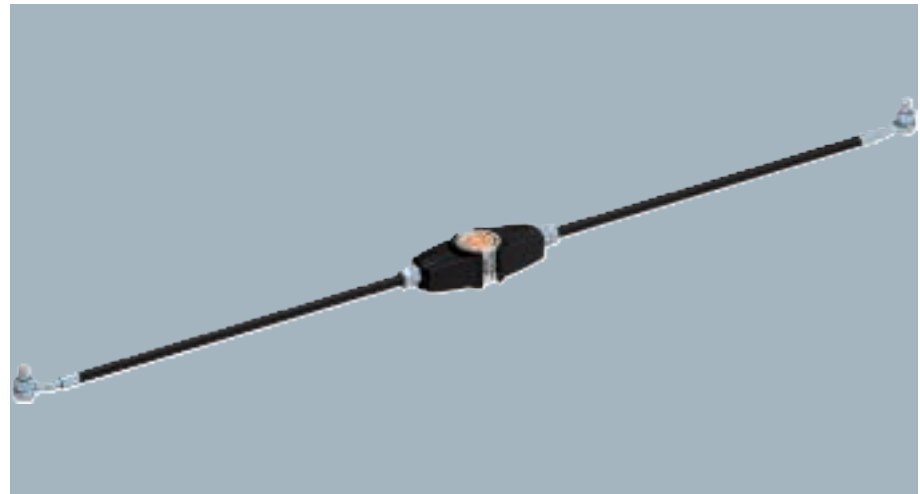
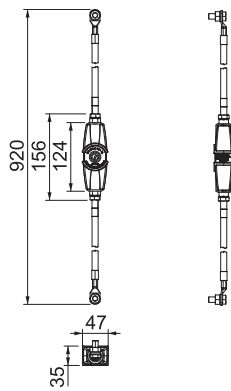
Application: In potentially explosive areas zone 1/21 and 2/22, indirect bridging of insulating flanges and insulating glands, e.g. in cathodic, corrosion-protected (KKS) systems.

EX ISG H KU		
Connecting cable length		2 m
Rated impulse sparkover voltage	$U_{r\text{imp}}$	1.25 kV
Rated DC withstand voltage	$U_{w\text{DC}}$	354 V
Rated power frequency withstand voltage	$U_{w\text{AC}}$	250 V
Power frequency spark-over voltage	U_{AS}	0.56 kV
Impulse discharge current (10/350)	I_{imp}	100 kA
Nominal discharge current (8/20)	I_n	100 kA
Lightning current carrying capacity		H/100 kA
Temperature range	ϑ	-20 - +60 °C

Connection options



EX ISG H spark gap, with 2 cables



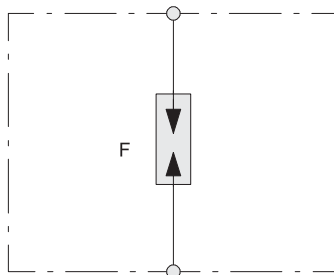
- Spark gap to VDE 0185-561-3 (IEC 62561-3)
- Ex certificate to ATEX
- Labelling to EN 60079-0/-1: II 2 G Ex db IIC T6 Gb
- Labelling to EN 60079-0/-31: II 2 D Ex td IIIC T80 °C Db IP67
- Ex certificate to IECEX
- Labelling to EN 60079-0/-1: Ex db IIC T6 Gb
- Labelling to EN 60079-0/-31: Ex td IIIC T80 °C Db IP67
- Ex certificate to INMETRO
- Labelling to ABNT NBR IEC 60079-0/-1: Ex db IIC T6 Gb

- Labelling to ABNT NBR IEC 60079-31: Ex td IIIC T80 °C Db IP67
- Connection cable (25 mm²) on both sides, pre-mounted with M10 bolt, lock washer and nut

Application: In potentially explosive areas zone 1/21 and 2/22, indirect bridging of insulating flanges and insulating glands, e.g. in cathodic, corrosion-protected (KKS) systems.

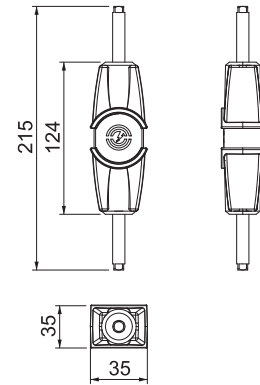
Type	Pack Piece	Weight kg/100 pc.	Item no.
EX ISG H 350 2L	1	74.155	5240033

Connection options



EX ISG H 350 2L		
Connecting cable length		0.35 m
Rated impulse sparkover voltage	$U_{f \text{ imp}}$	1.25 kV
Rated DC withstand voltage	U_{WDC}	354 V
Rated power frequency withstand voltage	U_{WAC}	250 V
Power frequency spark-over voltage	U_{AS}	0.56 kV
Impulse discharge current (10/350)	I_{imp}	100 kA
Nominal discharge current (8/20)	I_n	100 kA
Lightning current carrying capacity		H/100 kA
Temperature range	ϑ	-20 - +60 °C

ISG N spark gap

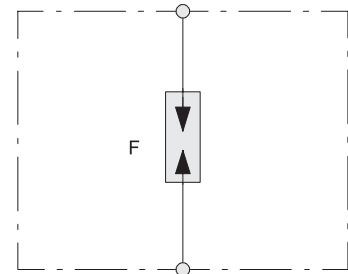


Type	Pack Piece	Weight kg/100 pc.	Item no.
ISG N	1	41.300	5240089

- For indirect connection of operatively separated system parts in case of lightning impact
- Use according to lightning protection equipotential bonding according to DIN EN 62305/VDE 0185
- With corrosion-resistant stainless steel connections
- Suitable for installation in indoor and outdoor areas and in wet rooms
- Low maintenance thanks to long-life graphite technology
- Particularly low rated contact surge voltage

ISG N		
Connecting cable length		— m
Rated impulse sparkover voltage	$U_{r,imp}$	1.5 kV
Rated DC withstand voltage	$U_{w,DC}$	354 V
Rated power frequency withstand voltage	$U_{w,AC}$	250 V
Power frequency spark-over voltage	U_{AS}	— kV
Impulse discharge current (10/350)	I_{imp}	50 kA
Nominal discharge current (8/20)	I_n	100 kA
Lightning current carrying capacity		N/50 kA
Temperature range	ϑ	-20 - +80 °C

Connection options

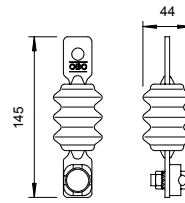


Protective spark gap

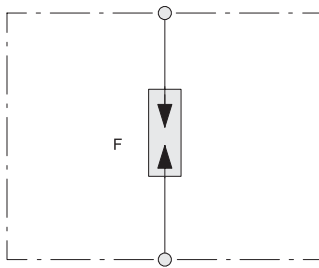
Type	Protection level kV	Nominal discharge current (8/20) kA	Power frequency spark-over voltage kV	Pack Piece	Weight kg/100 pc.	Item no.
482	< 10	25	10	1	56.000	5240050

Closed spark gap for bridging a proximity point between roof standard of low-voltage system and components of outer lightning protection system

- Protection rating IP 54
- With pre-mounted type 5001 connector for attaching round conductors Rd 8 - 10



Connection options



Connection components

Cu

Connection cable – AL EX ISG

Type	Dimension mm	Pack Piece	Weight kg/100 pc.	Item no.
AL EX ISG 100	100	1	9.600	5240102
AL EX ISG 200	200	1	12.300	5240104
AL EX ISG 300	300	1	15.200	5240106

UV-resistant connection cable (copper 25 mm²) for mounting the OBO Ex spark gap, type EX ISG, on insulating flanges and insulating pieces. With cable shoe for M10 bolts on both sides, on one side with M10 screw, nuts and spring ring.

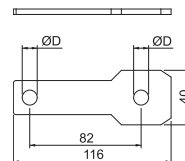


St FT

Connection clamp AB EX ISG straight

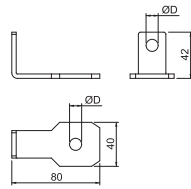
Type	Drill hole Ø mm	Version	Pack Piece	Weight kg/100 pc.	Item no.
AB EX ISG S M10	11	For M10 bolt	2	9.000	5240360
AB EX ISG S M12	14	For M12 bolt	2	8.900	5240362
AB EX ISG S M16	18	For M16 bolt	2	8.600	5240366
AB EX ISG S M20	22	For M20 bolt	2	8.200	5240370
AB EX ISG S M24	26	For M24 bolt	2	7.800	5240374

Connection clamp for mounting the OBO Ex spark gap, type EX ISG, on insulating flanges and insulating pieces.



Connection clamp AB EX ISG, angled

St FT



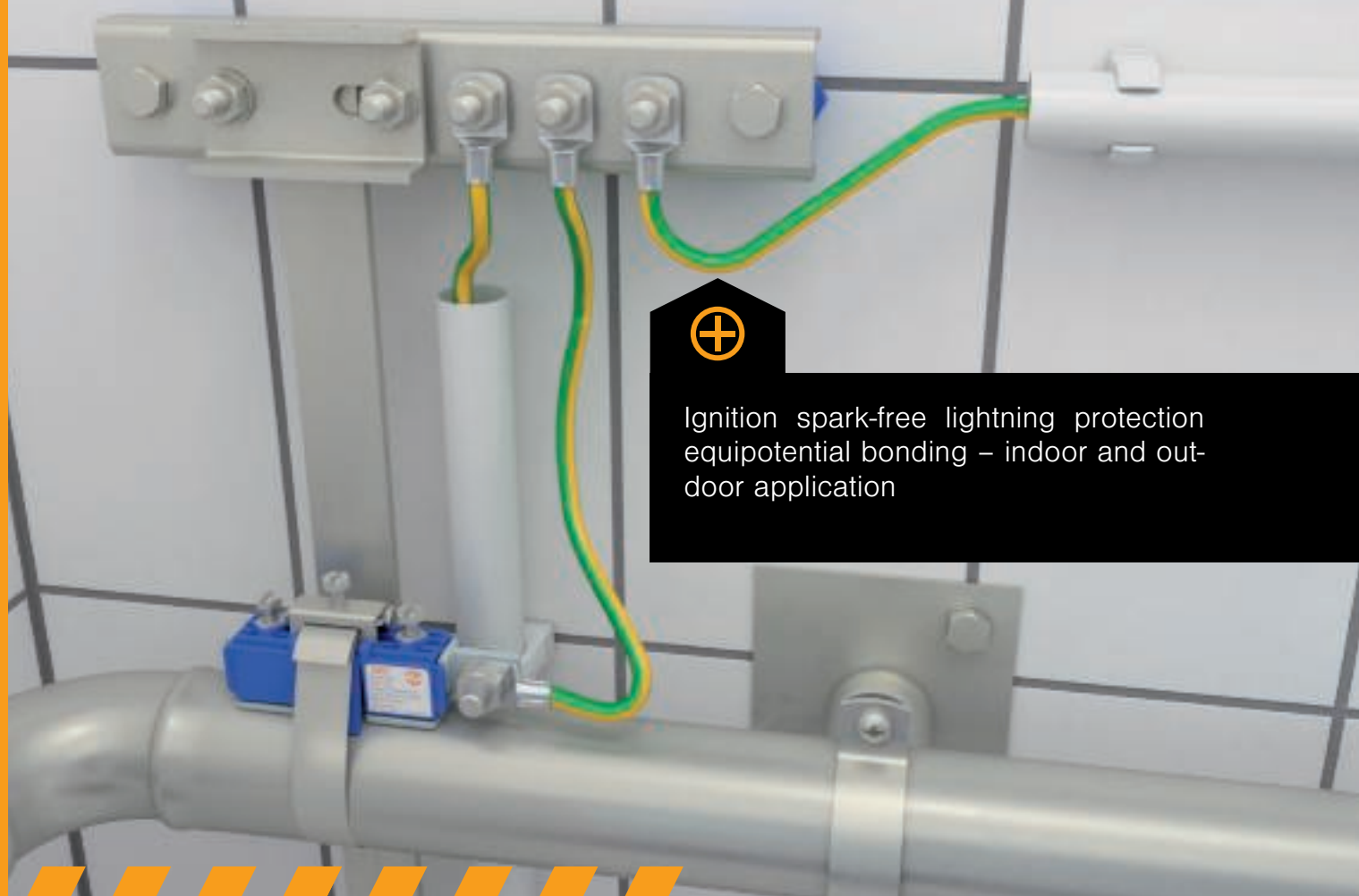
Type	Drill hole		Pack Piece	Weight kg/100 pc.	Item no.
	Ø mm	Version			
AB EX ISG SW M10	11	For M10 bolt	2	10.900	5240380
AB EX ISG SW M12	14	For M12 bolt	2	10.800	5240382
AB EX ISG SW M16	18	For M16 bolt	2	10.500	5240386
AB EX ISG SW M20	22	For M20 bolt	2	10.100	5240390
AB EX ISG SW M24	26	For M24 bolt	2	9.700	5240394

Connection clamp for mounting the OBO Ex spark gap, type EX ISG, on insulating flanges and insulating pieces.



Safe together

The EX BES earthing pipe clamp augments the OBO portfolio for equipotential bonding in potentially explosive areas



Ignition spark-free lightning protection equipotential bonding – indoor and outdoor application

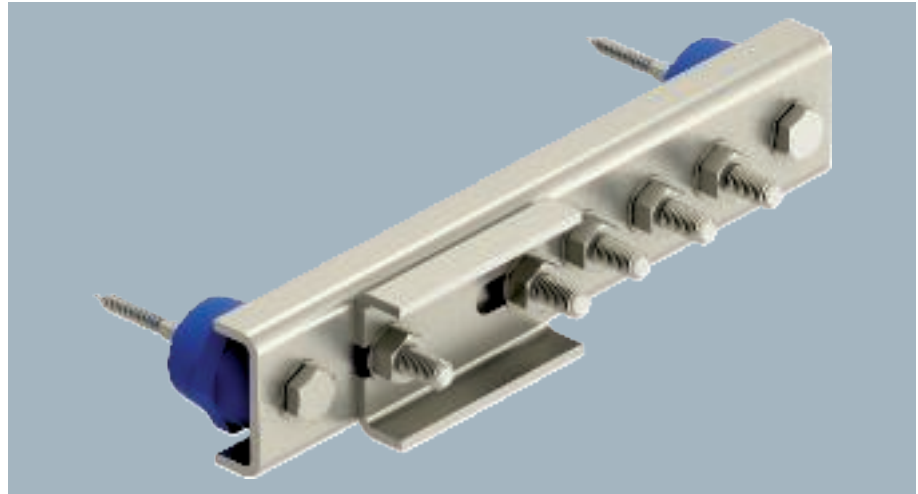
The earthing pipe clamp for Ex areas augments the OBO portfolio for equipotential bonding in potentially explosive areas. Like the EX BES, the EX PAS equipotential busbar has been independently tested in compliance with VDE 0185-561-1 (EN / IEC 62561-1) and independently certified for every explosion group in Ex zones 1/21 and 2/22.

- For pipes of 6–500 mm outer diameter
- UV-stabilised and halogen-free plastic hood
- Screws prevented from loosening as defined in VDE 0185-305-3 Supplement 2
- Suitable for indoor and outdoor applications



VA

Equipotential busbar for EX zone 1/21, 2/22



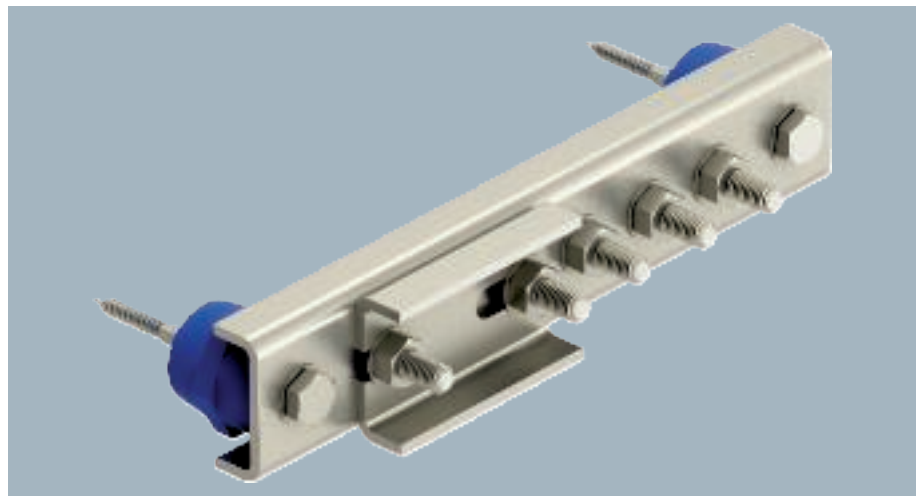
For ignition spark-free protection/functional equipotential bonding to DIN VDE 0100-410/-540 as well as ignition spark-free lightning protection equipotential bonding to VDE 0185-305 (IEC 62305) in systems to VDE 0165-1 (IEC/ EN 60079-14)

- Use in potentially explosive areas, Ex zone 1 and 2/21 and 22
- Tested according to explosion group IIC
- Lightning current carrying capacity class H (100 kA) to VDE 0185-561-1 (IEC/EN 62561-1)
- UV-stabilised and halogen-free insulation feet
- With spring washer for locking screws against self-loosening to VDE 0185-305-3 Supplementary sheet 2
- Suitable for indoor and outdoor applications

Type	Number of connections	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
EX PAS 5	5	H/100	1	152.000	5015265

VA

Equipotential busbar for EX zone 1/21, 2/22

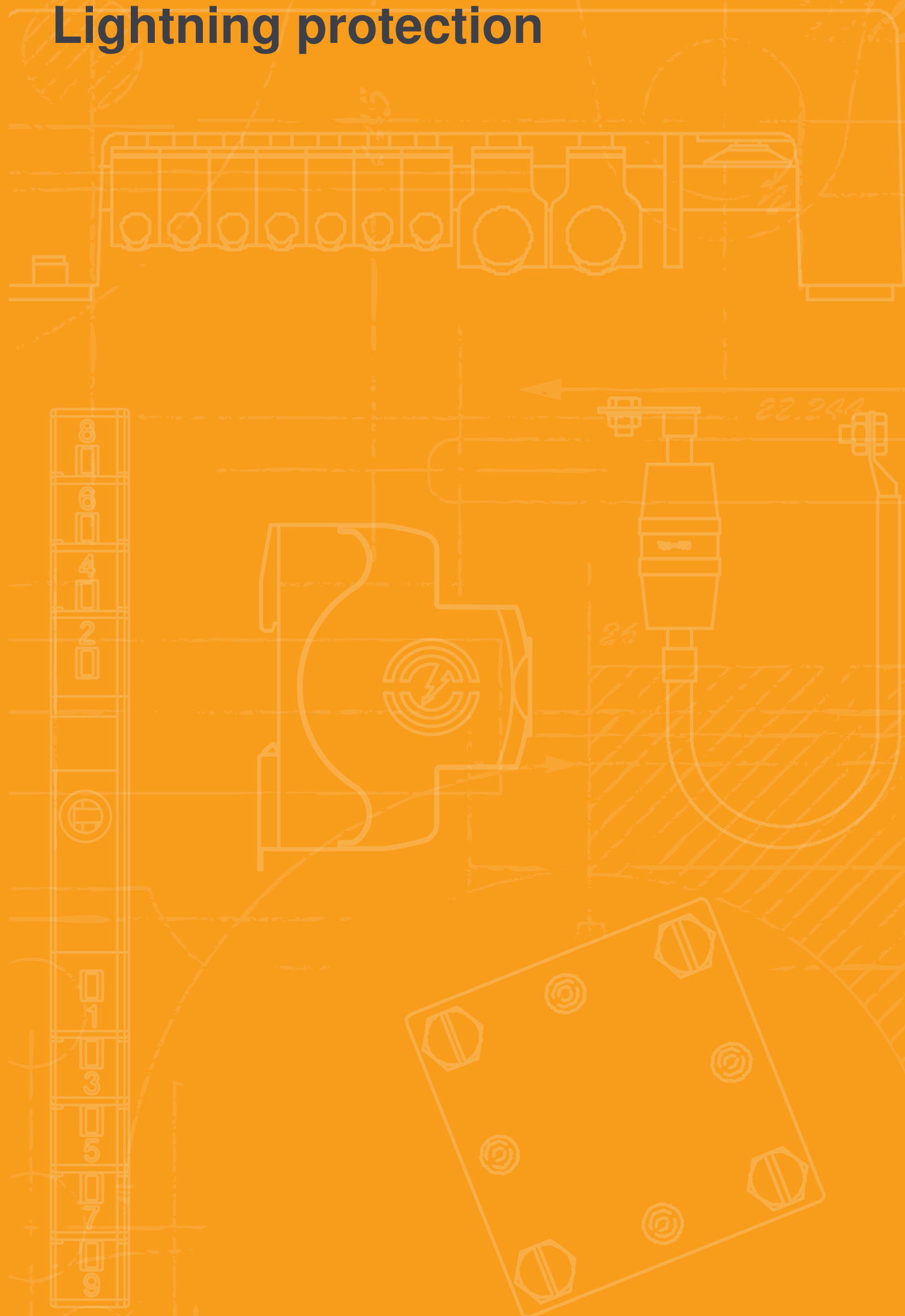


For ignition spark-free protection/functional equipotential bonding to DIN VDE 0100-410/-540 as well as ignition spark-free lightning protection equipotential bonding to VDE 0185-305 (IEC 62305) in systems to VDE 0165-1 (IEC/ EN 60079-14)











- Use in potentially explosive areas, Ex zone 1 and 2/21 and 22
- Tested according to explosion group IIC
- Lightning current carrying capacity class H (100 kA) to VDE 0185-561-1 (IEC/EN 62561-1)
- UV-stabilised and halogen-free insulation feet
- With spring washer for locking screws against self-loosening to VDE 0185-305-3 Supplementary sheet 2
- Suitable for indoor and outdoor applications

Type	Number of connections	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
EX PAS 10	10	H/100	1	214.000	5015270

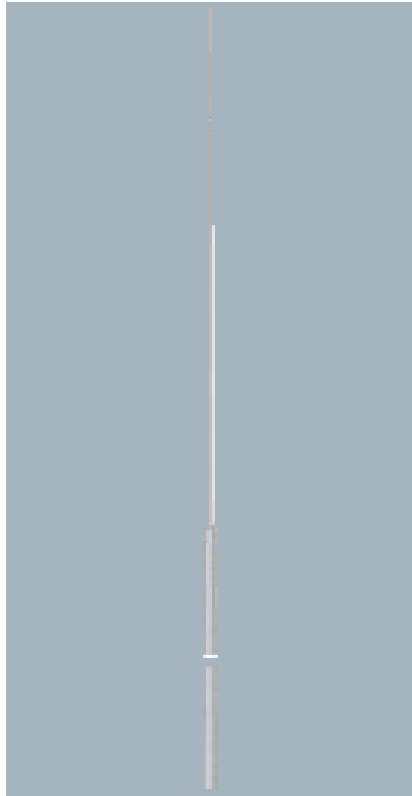
Lightning protection



Lightning protection

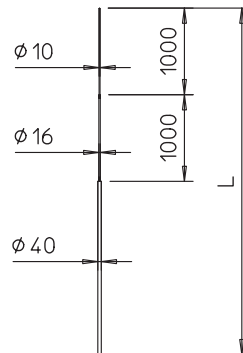
	Accessories, air-termination rods	334
	isCon® conductors	340
	isCon® conductor accessories	346
	Insulated air-termination systems	350
	Air-termination systems	356
	Conductor material	376
	Cable brackets	380
	Connection clamps and connection terminals	388
	Connection and separating terminals	408
	Accessories	412

isFang air-termination rod

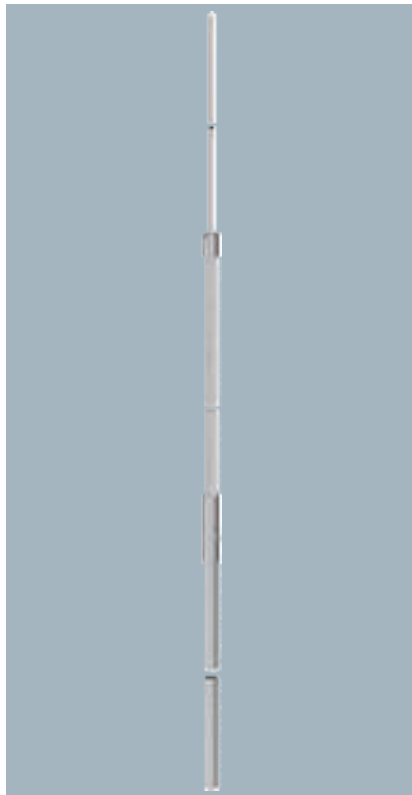


Type	Dim.		Length mm	Pack Piece	Weight kg/100 pc.	Item no.
	B mm	D mm				
101 3B-4000	2000	1000	4000	1	400.000	5402864
101 3B-4500	2500	1000	4500	1	480.000	5402866
101 3B-5000	3000	1000	5000	1	550.000	5402868
101 3B-5500	3000	1500	5500	1	630.000	5402870
101 3B-6000	4000	1000	6000	1	700.000	5402872
101 3B-6500	4500	1000	6500	1	780.000	5402874
101 3B-7000	5000	1000	7000	1	850.000	5402876
101 3B-7500	5500	1000	7500	1	930.000	5402878
101 3B-8000	5500	1000	8000	1	1,000.000	5402880

- Suitable for wind loads according to Eurocode 1: DIN EN 1991-1-4
- Tapered air-termination rod
- Suitable for 40 mm isFang tripod stand and isFang support systems

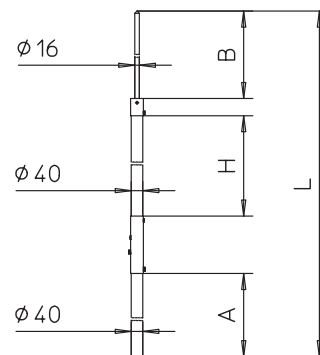


Insulated air-termination rod



Type	Dim.		Dim. B mm	Length mm	Pack Piece	Weight kg/100 pc.	Item no.
	A mm	H mm					
isFang 4000 AL	1240	1500	1000	4000	1	580.000	5408943
isFang 6000 AL	3340	1500	1000	6000	1	600.000	5408947
isFang 4000	1240	1500	1000	4000	1	680.000	5408942
isFang 6000	3340	1500	1000	6000	1	680.000	5408946

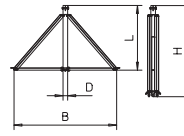
- For isolated creation of air-termination systems
- Suitable for isFang air-termination rod stands, type isFang 3B-100/150
- Suitable for wind loads according to Eurocode 1: DIN EN 1991-1-4
- For installation on the building structure with isFang support
- Fastening of the OBO isCon® conductor possible using accessories
- Suitable for externally routed isCon® conductors



VA Alu

Type	Dim. B mm	Dim. D Ø mm	Dim. L mm	Dim. H mm	Pack Piece	Weight kg/100 pc.	Item no.
isFang 3B-100 AL	1000	40	600	885	1	380.000	5408966
isFang 3B-150 AL	1500	40	900	1275	1	560.000	5408967
isFang 3B-100	1000	40	600	885	1	620.000	5408968
isFang 3B-150	1500	40	900	1275	1	950.000	5408969

- Installation of free-standing air-termination rods as well as insulated air-termination rods with 40 mm diameter
- Roof slope to max. 5 degrees
- Incl. Rd 8-10 crossbar for quick round conductor fastening
- Concrete base as well as threaded rods should be ordered separately



isFang tripod



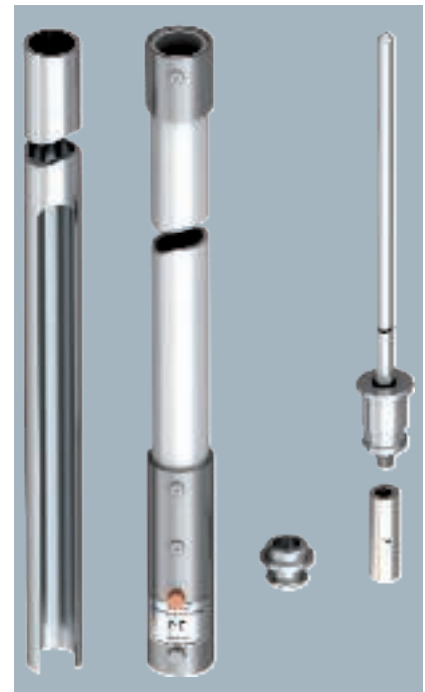
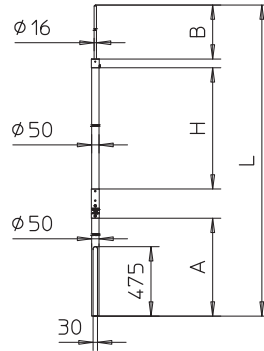
Insulated air-termination rods

GFK

Insulated air-termination rod for inner-routed isCon conductor with side exit

Type	Dim. D Ø mm	Dim. A mm	Dim. H mm	Dim. B mm	Length mm	Pack Piece	Weight kg/100 pc.	Item no.
isFang IN-A 4000	50	1325	1500	1000	4000	1	535.000	5408938
isFang IN-A 6000	50	3325	1500	1000	6000	1	835.000	5408940
isFang IN-A 8000	50	5335	1500	1000	8000	1	1,385.000	5408888
isFang IN-A10000	50	6000	1733	2000	10000	1	1,540.000	5408890

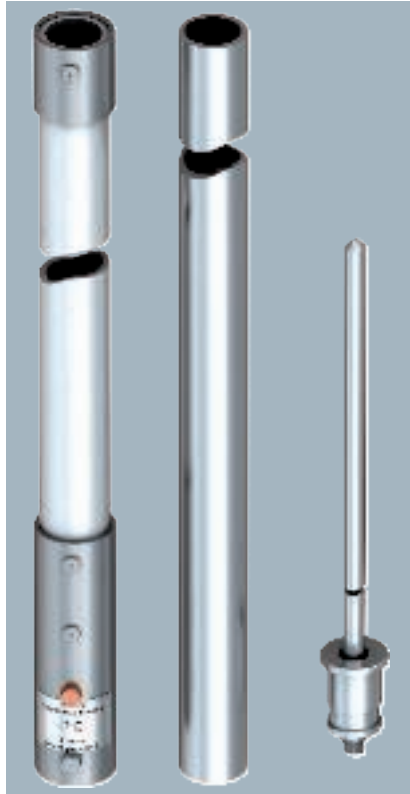
- For installation of the OBO isCon® Pro+ conductor in the pipe
- With side conductor outlet matching isFang air-termination rod stand with side outlet, type isFang 3B-A
- Suitable for wind loads according to Eurocode 1: DIN EN 1991-1-4
- Inclusive connection element (type isCon IN connect)
- Inclusive potential connection (type isCon In PAE)



Insulated air-termination rods

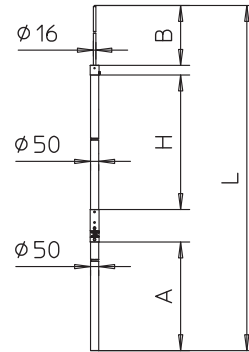


Insulated air-termination rod for inner-routed isCon® conductor

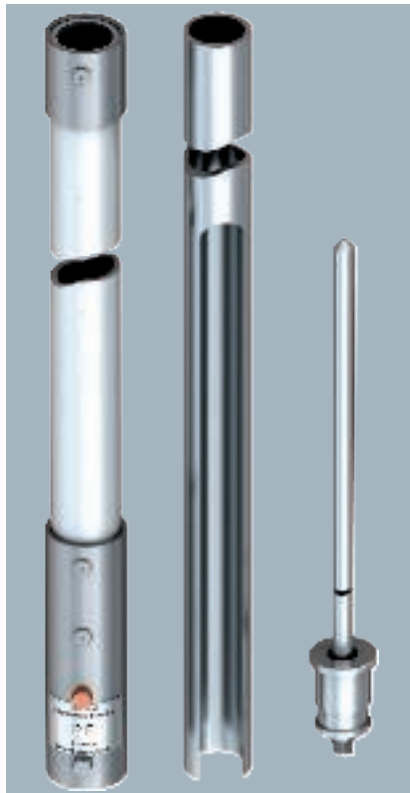


Type	Dim. D Ø mm	Dim. A mm	Dim. H mm	Dim. B mm	Length mm	Pack Piece	Weight kg/100 pc.	Item no.
isFang IN L4	50	1325	1500	1000	4000	1	535.741	5408854
isFang IN L6	50	3325	1500	1000	6000	1	835.741	5408856
isFang IN L8	50	5335	1500	1000	8000	1	1,315.741	5408858
isFang IN L10	50	6000	1733	2000	10000	1	1,540.741	5408860

- For routing OBO isCon® conductors in pipes
- For installation on the building structure with isFang support
- Suitable for wind loads according to Eurocode 1: DIN EN 1991-1-4
- Tested according to VDE V 0185-561-8 (IEC TS 62561-8)

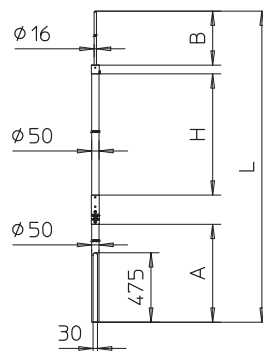


Insulated air-termination rod for inner-routed isCon® conductor with side exit



Type	Dim. D Ø mm	Dim. A mm	Dim. H mm	Dim. B mm	Length mm	Pack Piece	Weight kg/100 pc.	Item no.
isFang IN-A L4	50	1325	1500	1000	4000	1	535.000	5408874
isFang IN-A L6	50	3325	1500	1000	6000	1	835.741	5408876
isFang IN-A L8	50	5335	1500	1000	8000	1	1,385.741	5408878
isFang IN-A L10	50	6000	1733	2000	10000	1	1,540.741	5408880

- For routing OBO isCon® conductors in pipes
- For mounting on the building structure with isFang support
- Suitable for wind loads according to Eurocode 1: DIN EN 1991-1-4
- Tested according to VDE V 0185-561-8 (IEC TS 62561-8)

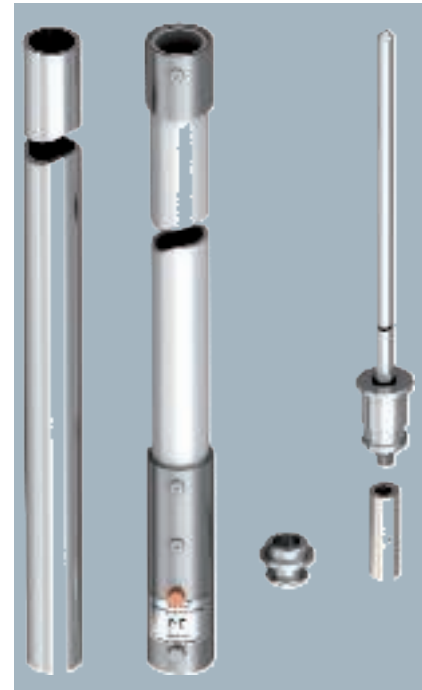
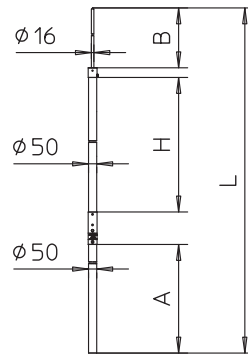




isFang, insulated air-termination rod for inner-routed isCon® conductor Professional Plus

Type	Dim.	Dim.	Dim.	Dim.	Length	Pack Piece	Weight kg/100 pc.	Item no.
	D Ø mm	A mm	H mm	B mm				
isFang IN 4000	50	1325	1500	1000	4000	1	535.000	5408934
isFang IN 6000	50	3325	1500	1000	6000	1	835.000	5408936
isFang IN 8000	50	5335	1500	1000	8000	1	1,315.000	5408868
isFang IN 10000	50	6000	1733	2000	10000	1	1,540.000	5408870

- For installation of the OBO isCon® Pro+ conductor in the pipe
- For mounting on the building structure with isFang support
- Suitable for wind loads according to Eurocode 1: DIN EN 1991-1-4
- Inclusive connection element (type isCon IN connect)
- Inclusive potential connection (type isCon In PAE)



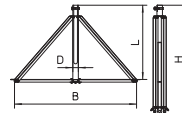
Tripod



isFang tripod with side outlet

Type	Dim.	Dim.	Dim.	Dim.	Pack Piece	Weight kg/100 pc.	Item no.
	B mm	D Ø mm	L mm	H mm			
isFang 3B-100-A	1026	50	600	885	1	610.000	5408930
isFang 3B-150-A	1500	50	900	1275	1	950.000	5408932
isFang 3B-250-A	2900	50	1450	2055	1	2,500.000	5408902

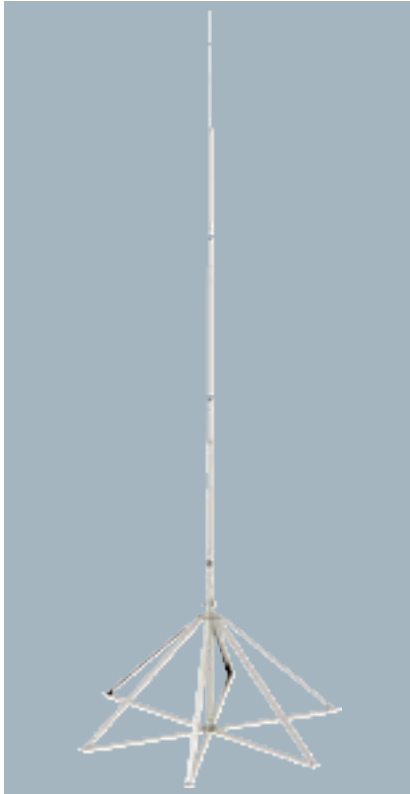
- Screwless installation of freestanding air-termination rods as well as insulated air-termination rods with 50 mm diameter
- E.g. for internal OBO isCon® conductor
- Roof slope to max. 5 degrees
- Incl. Rd 8–10 crossbar for quick round conductor fastening
- Concrete plinths as well as threaded rods should be ordered separately



Tele air-termination rod irod

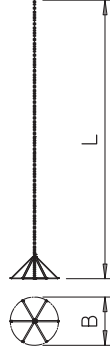
VA

10 m air-termination rod with 6-legged air-termination rod stand



Type	Dim.	Dim.	Length mm	Pack	Weight	Item no.
	D Ø mm	B mm		Piece	kg/100 pc.	
irod 10	48.3	1800	10000	1	6,500.000	5400810

- Tele lightning protection system against direct lightning strikes into plants, such as biogas plants
- Consisting of air-termination rod and air-termination rod stand
- Please order concrete foot, edge protection and threaded rods separately



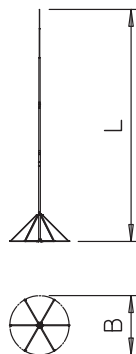
12 m air-termination rod with 6-legged air-termination rod stand

VA



Type	Dim.	Dim.	Length mm	Pack	Weight	Item no.
	D Ø mm	B mm		Piece	kg/100 pc.	
irod 12	85	3000	12000	1	10,900.000	5400812

- Tele lightning protection system against direct lightning strikes into plants, such as biogas plants
- Consisting of air-termination rod and air-termination rod stand
- Please order concrete foot, edge protection and threaded rods separately

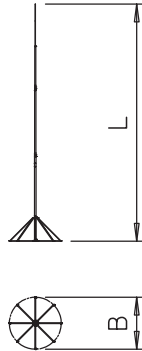


VA

14 m air-termination rod with 8-legged air-termination rod stand

Type	Dim.	Dim.	Length	Pack	Weight	Item no.
	D	B		Piece	kg/100 pc.	
irod 14	85	3200	14000	1	15,400.000	5400814

- Tele lightning protection system against direct lightning strikes into plants, such as biogas plants, gas pressure regulation plants, control and greenfield photovoltaic systems
- Consisting of air-termination rod and air-termination rod stand
- Please order concrete foot, edge protection and threaded rods separately

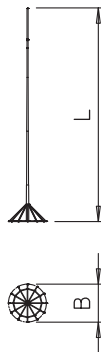


VA

19 m air-termination rod with 12-legged air-termination rod stand

Type	Dim.	Dim.	Length	Pack	Weight	Item no.
	D	B		Piece	kg/100 pc.	
irod 19	198	3400	19500	1	41,500.000	5400817

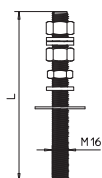
- Tele lightning protection system against direct lightning strikes into plants, such as biogas plants, gas-pressure regulation plants, control and greenfield photovoltaic systems
- Consisting of air-termination rod and air-termination rod stand
- Please order concrete foot and edge protection separately
- Including 800-mm threaded rods



Threaded rods

VA

isFang-3B threaded rod

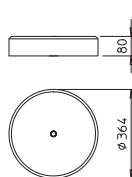


Type	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
isFang 3B-G1	270	3	48.000	5408971
isFang 3B-G2	340	3	60.400	5408972
isFang 3B-G3	430	3	69.500	5408973
isFang 3B-G4	500	3	75.000	5408905

- For fastening on one, two, three or four FangFix concrete bases with tripod stand

Concrete blocks

Concrete base for FangFix system, min. 16 kg

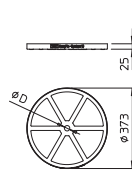


Type	Nominal size Ø mm	Pack Piece	Weight kg/100 pc.	Item no.
F-FIX-S16	365	1	1,700.000	5403227

- Min. 16 kg block of Ø 365 mm, high level of stability
- Frost-resistant concrete
- Stackable

Base for FangFix system 16 kg for mounting the isFang tripod

PP

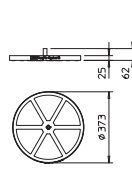


Type	Nominal size Ø mm	Dim. D Ø mm	Pack Piece	Weight kg/100 pc.	Item no.
F-FIX-B16 3B	373	25	10	15.800	5403238

- Edge protection with through hole
- For mounting isFang-3B threaded rod and FangFix concrete block F-FIX-S16

Base for FangFix system 16 kg

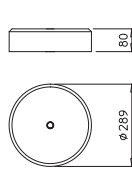
PP



Type	Nominal size Ø mm	Pack Piece	Weight kg/100 pc.	Item no.
F-FIX-B16	373	10	16.400	5403235

- Edge protection with integrated dowel (basic) suitable for FangFix system.

Concrete base for FangFix system, min. 10 kg



Type	Nominal size Ø mm	Pack Piece	Weight kg/100 pc.	Item no.
F-FIX-S10	289	1	1,000.000	5403117

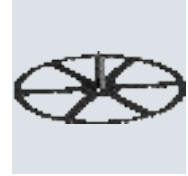
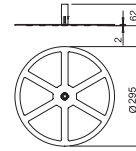
- Min. 10 kg block of Ø 289 mm, high level of stability
- Frost-resistant concrete
- Stackable

PP

Base for FangFix system 10 kg

Type	Nominal size Ø mm	Pack Piece	Weight kg/100 pc.	Item no.
F-FIX-B10	295	10	7.600	5403124

Edge protection with integrated dowel (basic) suitable for FangFix 10 kg system.



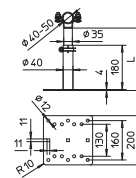
Supports

VA

Support for wall mounting, 200 mm spacing

Type	Dim. D Ø mm	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
isFang TW200 12	50	200	2	240.000	5408910

Fastening clip to fasten the insulated support pipes on the structure to be protected or on the wall.

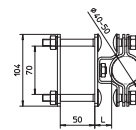


VA

isFang support for corner pipe mounting, 50 x 50 mm

Type	Dim. D Ø mm	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
isFang TS50x50	50	30	2	82.000	5408964

Fastening clip to fasten the insulated support pipes on the structure to be protected or for construction-side corner pipes of 50x50 mm.

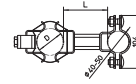


VA

isFang support for spaced pipe mounting, Ø 50–300 mm

Type	Dim. D Ø mm	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
isFang TR100 100	300	100	2	95.500	5408955
isFang TR100 200	300	200	2	121.000	5408957
isFang TR100 300	300	300	2	146.000	5408959

Tightening strap clip to fasten the insulated support pipes on the structure to be protected or for construction-side pipes of Ø 50–300 mm.

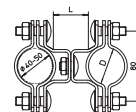


VA

isFang support for pipe mounting, Ø 40–50 mm

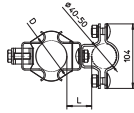
Type	Dim. D Ø mm	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
isFang TS40-50	50	40	2	90.000	5408958

Tightening strap clip to fasten the insulated support pipes on the structure to be protected or for construction-side pipes of Ø 40–50 mm.



isFang support for pipe mounting, \varnothing 50–300 mm

VA

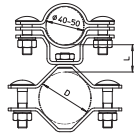


Type	Dim.	Dim.	Pack Piece	Weight kg/100 pc.	Item no.
	D \varnothing mm	L mm			
isFang TR100	300	40	2	77.000	5408956

Tightening strap clip to fasten the insulated support pipes on the structure to be protected or for construction-side pipes of \varnothing 50–300mm.

isFang support for pipe mounting, \varnothing 50–60 mm

VA

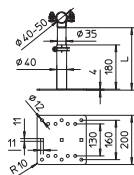


Type	Dim.	Dim.	Pack Piece	Weight kg/100 pc.	Item no.
	D \varnothing mm	L mm			
isFang TS50-60	60	30	2	76.000	5408960

Tightening strap clip to fasten the insulated support pipes on the structure to be protected or for construction-side pipes of \varnothing 50–60 mm.

isFang support for wall mounting, 200–300 mm spacing

VA

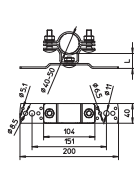


Type	Dim.	Pack Piece	Weight kg/100 pc.	Item no.
	L mm			
isFang TW200	300	2	230.000	5408954

Fastening clip to fasten the insulated support pipes on the structure to be protected or on the wall.

isFang support for wall mounting, 30 mm spacing

VA

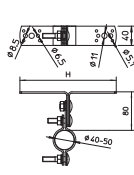


Type	Dim.	Pack Piece	Weight kg/100 pc.	Item no.
	L mm			
isFang TW30	30	2	62.000	5408952

Fastening clip to fasten the insulated support pipes on the structure to be protected or on the wall.

isFang support for wall mounting, 80 mm spacing

VA



Type	Dim.	Pack Piece	Weight kg/100 pc.	Item no.
	L mm			
isFang TW80	80	2	63.000	5408950

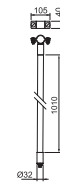
Fastening clip to fasten the insulated support pipes on the structure to be protected or on the wall.

VA

isFang support for installation on insulated air-termination rod

Type	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
isFang TS-S 1000	1010	2	140.000	5408949

- For mounting on insulated air-termination rods
- For installation with aluminium cables



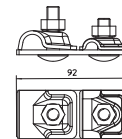
Connection plates

VA

Connection plate for one isCon® conductor

Type	Dimension	Pack Piece	Weight kg/100 pc.	Item no.
isCon AP1-16 VA	16x8-10mm	1	27.400	5408026

Connection plate to connect an isCon® conductor with air-termination rod Ø 16 mm, tested up to 150 kA (lightning protection class II)

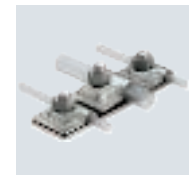
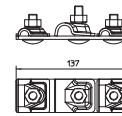


VA

Connection plate for two isCon® conductors

Type	Dimension	Pack Piece	Weight kg/100 pc.	Item no.
isCon AP2-16 VA	16x8-10mm	1	39.500	5408028

Connection plate to connect two isCon® conductors with air-termination rod Ø 16 mm, tested up to 150 kA (lightning protection class II)



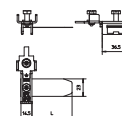
Connection clips

VA

Potential connection clamp for mounting on isFang

Type	For pipe Ø inch	Dim. L mm	For pipe Ø mm	Pack Piece	Weight kg/100 pc.	Item no.
927 2 6-K	3/8-4	595	17.2-114	10	5.500	5057599

Potential connection for isCon® conductor for mounting on insulated air-termination rods of type isFang.

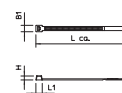


PA

Cable tie, black, UV and weather-resistant

Type	Dim. B mm	Dim. L mm	Dim. t mm	Max. bundle Ø mm	Colour	Pack Piece	Weight kg/100 pc.	Item no.
565 7.6x380 SWUV	7.6	380	1.8	105	Black	100	0.533	2331924

Cable ties are used for quick, uncomplicated fixing or bundling of cables and pipes to cable support systems or other mounting structures.



isCon® information panel

PS



Type

isCon HWS

Pack Piece	Weight kg/100 pc.	Item no.
1	2.000	5408058

Label: "NOTE! Insulated lightning protection with the OBO isCon® system. Only a lightning protection specialist may carry out changes"

- To label the lightning protection system
- Self-adhesive and with 4 fastening holes \varnothing 6.5 mm

isCon® information panel EN

PS



Type

isCon HWS EN

Pack Piece	Weight kg/100 pc.	Item no.
1	2.000	5408059

Label: "NOTE! Insulated lightning protection with the OBO isCon® system. Only a lightning protection specialist may carry out changes"

- To label the lightning protection system
- Self-adhesive and with 4 fastening holes \varnothing 6.5 mm



isCon®



The high-voltage-resistant, insulated isCon® down-conductor is the modern solution for planners and erectors of lightning protection systems, in order to maintain the necessary separation distances safely according to VDE 0185-305-3 (IEC/EN 62305-3).

As an innovative international provider of complete lightning and surge protection systems, OBO has adjusted its product range according to the different demands of our customers in the area of insulated lightning protection.

The result: We can now offer the appropriate isCon® conductor system with external certification according to the most recent testing norms (VDE V 0185-561-8/IEC TS 62561-8) for any lightning protection project.

Lightning protection

BASIC

$s_e \leq 45 \text{ cm}$



PROFESSIONAL

$s_e \leq 75 \text{ cm}$



EX

PROFESSIONAL+

$s_e \leq 75 \text{ cm}$



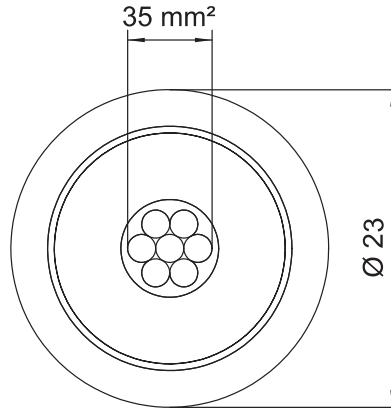
PREMIUM

$s_e \leq 90 \text{ cm}$



isCon® conductor, Professional plus black

Type	Cross-section mm ²	Nominal size Ø mm	Equivalent separation distance m	Pack m	Weight kg/100 m	Item no.
isCon Pro+ 75 SW	35	23	0.75	25	69.400	5408002
isCon Pro+ 75 SW	35	23	0.75	100	69.400	5408004
isCon Pro+ 75 SW	35	23	0.75	250	69.400	5408006



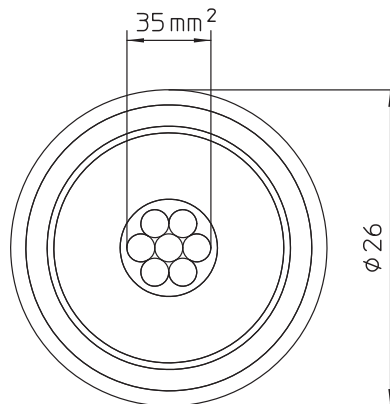
Please refer to the mounting instructions for information on routing the OBO isCon® conductor.

- Highly voltage-resistant, insulated conductor
- Floating discharge-free
- Additional mechanical protection (black protective jacket)
- For maintenance of the separation distance according to IEC 62305 (VDE 0185-305-3)
- Tested according to IEC/EN 62561-1 (VDE 0185-561-1) with H1/150 kA
- Equivalent separation distance $se \leq 0.75$ m (air) and $se \leq 1.5$ (solid material)
- Tested according to IEC TS 62561-8 (VDE V 0185-561-8)
- Halogen-free
- Fire load 4.3 kWh/m
- Can be used in potentially explosive areas Ex zone 1/2 and 21/22 when taking the current mounting instructions into account

isCon® conductor, Professional plus light grey



Type	Cross-section mm ²	Nominal size Ø mm	Equivalent separation distance m	Pack m	Weight kg/100 m	Item no.
isCon Pro+ 75 GR	35	26	0.75	25	86.800	5407995
isCon Pro+ 75 GR	35	26	0.75	100	86.800	5407997

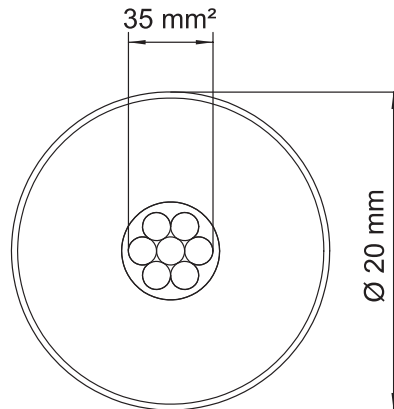


Please refer to the mounting instructions for information on routing the OBO isCon® conductor.

- Highly voltage-resistant, insulated arrester
- Protection against contact voltage during rain (VDE 0432-1 (IEC/EN 60060-1))
- Floating discharge-free
- Additional mechanical protection (double protective jacket)
- For maintenance of the separation distance according to IEC 62305 (VDE 0185-305-3)
- Tested according to IEC/EN 62561-1 (VDE 0185-561-1) with H1/150 kA
- Equivalent separation distance $se \leq 0.75$ m (air) and $se \leq 1.5$ (solid material)
- Tested according to IEC TS 62561-8 (VDE V 0185-561-8)
- Halogen-free
- Fire load 5.1 kWh/m
- Protection against contact voltage under sprinkling (VDE 0432-1 (IEC/EN 60060-1))
- Can be used in potentially explosive areas Ex zone 1/2 and 21/22 when taking the current mounting instructions into account

isCon® conductor, professional black

Type	Cross-section mm ²	Nominal size Ø mm	Equivalent separation distance m	Pack m	Weight kg/100 m	Item no.
isCon Pro 75 SW	35	20	0.75	100	57.000	5408008



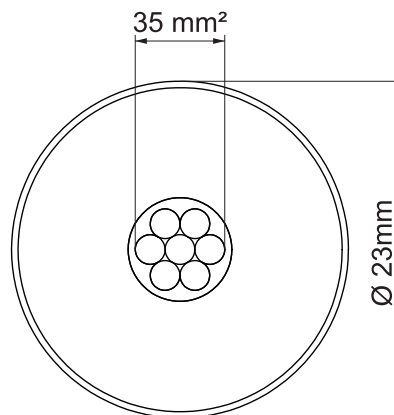
Please refer to the mounting instructions for information on routing the OBO isCon® Pro conductor.

- Highly voltage-resistant, insulated conductor
- Floating discharge-free
- For maintenance of the separation distance according to IEC 62305 (VDE 0185-305-3)
- Tested according to IEC/EN 62561-1 (VDE 0185-561-1) with H1/150 kA
- Equivalent separation distance $se \leq 0.75$ m (air) and $se \leq 1.5$ m (solid material)
- Tested according to IEC TS 62561-8 (VDE V 0185-561-8)
- Halogen-free
- Fire load 3.3 kWh/m

isCon® conductors, Premium

isCon® conductor, Premium black

Type	Cross-section mm ²	Nominal size Ø mm	Equivalent separation distance m	Pack m	Weight kg/100 m	Item no.
isCon PR 90 SW	35	23	0.9	100	66.600	5408018



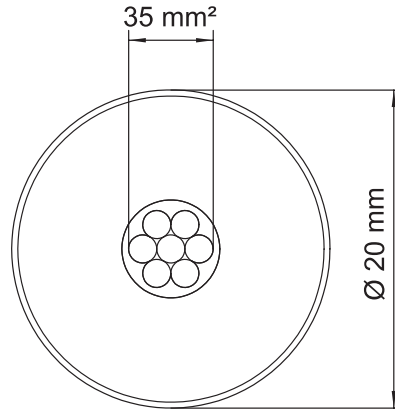
Please refer to the mounting instructions for information on routing the OBO isCon® Premium conductor.

- Highly voltage-resistant, insulated conductor
- Floating discharge-free
- Tested according to IEC/EN 62561-1 (VDE 0185-561-1) with H2/200 kA
- Equivalent separation distance $se \leq 0.90$ m (air) and $se \leq 1.8$ m (solid material)
- Tested according to IEC TS 62561-8 (VDE V 0185-561-8)
- Halogen-free
- Fire load 4.2 kWh/m

isCon® conductor, Basic black



Type	Cross-section mm ²	Nominal size Ø mm	Equivalent separation distance m	Pack m	Weight kg/100 m	Item no.
isCon BA 45 SW	35	20	0.45	100	57.000	5408014

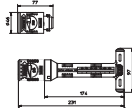


Please refer to the mounting instructions for information on routing the OBO isCon® Basic conductor.

- Highly voltage-resistant, insulated conductor
- For maintenance of the separation distance according to IEC 62305 (VDE 0185-305-3)
- Tested according to IEC/EN 62561-1 (VDE 0185-561-1) with H1/150 kA
- Equivalent separation distance $se \leq 0.45$ m (air) and $se \leq 0.90$ m (solid material)
- Tested according to IEC TS 62561-8 (VDE V 0185-561-8)
- Halogen-free
- Fire load 3.3 kWh/m



Stripping tool for isCon® conductor

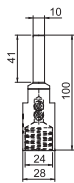


Type	Clamping range D mm	Pack	Weight	Item no.
		Piece	kg/100 pc.	
isCon stripper 2	20-23	1	170.000	5408013

Stripping tool to remove the insulation of the OBO isCon® conductor.

isCon® connection elements

IsCon® connection element



Type	Dim. D Ø mm	Fit mm	Lightning current carrying capacity kA	Pack	Weight	Item no.
				Piece	kg/100 pc.	
isCon con 2	20	10	H1/150	2	21.500	5408021
isCon connect	23	10	H1/150	2	21.500	5408022
isCon con PRE	23	10	H2/200	2	21.500	5408023

- Screw-on termination of the connection for the isCon® conductor
- Incl. heat-shrinkable sleeve, hexagonal
- Tested up to 200 kA (lightning protection class I)

isCon® Professional+ connection elements

Connection element for installation in the insulated air-termination rod isFang IN



Type	Dim. D Ø mm	Lightning current carrying capacity kA	Pack	Weight	Item no.
			Piece	kg/100 pc.	
isCon IN connect	23	H1/150	1	26.900	5408024

- Screw-on termination of the connection for the isCon® conductor
- Connection and installation of the cable in the insulated air-termination rod
- Tested up to 200 kA (lightning protection Class I)

isCon® Basic, Premium and Professional connection elements

Connection element for installation in the insulated air-termination rod isFang IN



Type	Dim. D Ø mm	Lightning current carrying capacity kA	Pack	Weight	Item no.
			Piece	kg/100 pc.	
isCon IN con 2	20	H1/150	1	27.800	5408019
isCon IN con PRE	23	H2/200	1	27.800	5408020

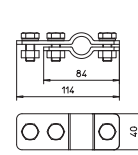
- Screw-on termination of the connection for the isCon® conductor
- Connection and installation of the cable in the insulated air-termination rod
- Tested up to 200 kA (lightning protection Class I)



VA

Potential connection

Type	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
isCon PAE	ø 17.25	2	36.500	5408036

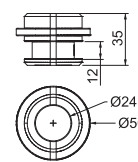


- Potential connection
- To avoid floating discharges on the isCon® conductor
- With sprung discs to protect screws against loosening

Alu

Potential connection for isCon® Basic and Professional in the isFang IN insulated air-termination rod

Type	Dim. D Ø mm	Dimension d Ø mm	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
isCon IN PAE 2	20	49.9	35	1	5.900	5408032

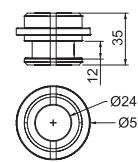


- To avoid surface discharges
- For the isCon® Basic and Professional conductor
- Installation takes place in the insulated air-termination rod, type isFang IN

Alu

Potential connection for isCon® Professional+ and Premium in the isFang IN insulated air-termination rod

Type	Dim. D Ø mm	Dimension d Ø mm	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
isCon IN PAE	23	49.9	35	1	5.900	5408031



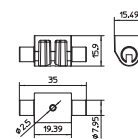
- To avoid surface discharges on the isCon® conductor
- For the isCon® Professional+ and Premium conductor system
- Installation takes place after the first 1.5 metres in the insulated air-termination rod, type isFang IN

Cable brackets

PP

Universal flat conductor adapter for roof conductor holder, type 165/MBG

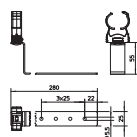
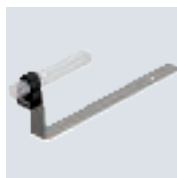
Type	Fit Colour	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
165 MBG UH	Black	Rd 8	25	0.254	5218882



- Universal adapter with drill hole Ø 2.5 mm
- E.g. for OBO Golden Sprint screw, type 4758 4 x L (L = depending on application)
- For fastening to 165/MBG

PA roof conductor holder, sloping roof

PA

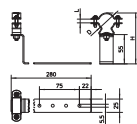


Type	Colour	Dimension	Installation height	Pack Piece	Weight kg/100 pc.	Item no.
isCon H280 PA	Black	280mm	55	25	13.950	5408049
isCon H280 26 PA	Light grey	280mm	55	25	14.060	5408072

To route the isCon® conductor on pitched roofs.

VA roof conductor holder, sloping roof

VA

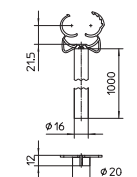


Type	Dimension	Installation height	Pack Piece	Weight kg/100 pc.	Item no.
isCon H280 VA	280mm	55	25	16.100	5408047
isCon H280 26 VA	280mm	55	25	16.900	5408074

- For routing of the isCon® conductor on pitched roofs
- Cable bracket with sprung discs to protect the screws against loosening

Spacer

GFK

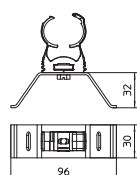


Type	Clamping range D	Pack Piece	Weight kg/100 pc.	Item no.
isCon DH	23-26	2	41.400	5408043

For stand-off installation of the isCon® conductor in the area of the connection, incl. reducing sleeve for mounting on FangFix concrete block 10 Kg.

PA cable bracket with tightening strap

PA

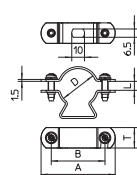


Type	Colour	Dimension	Dim. D	Pack Piece	Weight kg/100 pc.	Item no.
isCon HS 26 PA	Light grey	ø 26mm	26	10	23.200	5408066

For isCon® conductor for pipe mounting including 2 m tightening strap.

VA cable bracket for isCon® conductor for mounting on roof/wall structures

VA



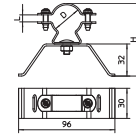
Type	Dim. D	Pack Piece	Weight kg/100 pc.	Item no.
isCon H VA	21-23	50	2.850	5408056
isCon H 26 VA	26	20	3.400	5408064

- For isCon® conductor for mounting on roof/wall structures
- With sprung discs to protect the screws against loosening

VA

VA cable bracket with tightening strap

Type	Dim. D Ø mm	Pack Piece	Weight kg/100 pc.	Item no.
isCon HS VA	23	10	25.200	5408052
isCon HS 26 VA	26	10	25.900	5408068

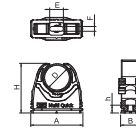


- For isCon® conductor for pipe mounting
- Including 2 m tightening strap
- Cable bracket with sprung discs to protect the screws against loosening

PA

Multi-Quick clip, metric

Type	Clamping range D mm	Pull- out value N	Colour	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
M-Quick M32 LGR	25-32	60	Light grey	600	50	1.390	2153734

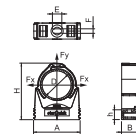


- Multi-Quick metric
- Simple fastening
- Secure locking
- Radial arrangement
- Simplified storage
- Universally applicable

PA

starQuick clip

Type	Colour	Dim. A mm	Dim. B mm	Dim. H mm	Pack Piece	Weight kg/100 pc.	Item no.
SQ-25 LGR	Light grey	40	17	49.5	50	0.970	2146207

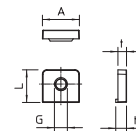


Cable brackets for isCon® conductors for mounting on the building structure. Can also be used in the first 1.5 m. Can be arranged next to each other.

PC

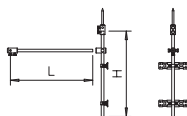
starQuick nut

Type	Colour	Nominal size	Dim. A mm	Dim. L mm	Dim. Dim. mm	Dim. t mm	Pack Piece	Weight kg/100 pc.	Item no.
SQ M6	Light grey	M6	17	15	5	4	100	0.070	2146509



Nut for insertion in starQuick clip, to mount the clip on an M6 thread.

Insulated lightning protection set, 3-corner fastening

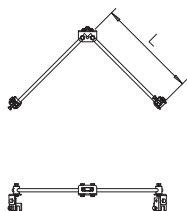


Type	Dim.	Dim.	Dim.	Pack Piece	Weight kg/100 pc.	Item no.
	Ø mm	L mm	H mm			
101 3-ES-16	16	750	1500	1	207.100	5408976

3-corner fastening for an insulated air-termination unit at the separating distance s.

- Mounting on walls and roof structures with two fastening plates
- For maintenance of the separation distance to electrically conductive parts according to VDE 0185-305-3 (IEC 62305-3)
- Acceptance of air-termination rods and round conductors with 8, 16 and 20 mm diameter
- UV-stabilised and weatherproof
- Continuous temperature range -50°C to +100°C
- Material factor $k_m = 0.7$

Insulated lightning protection set, IR fastening

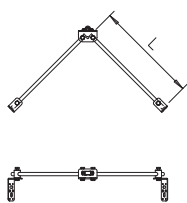
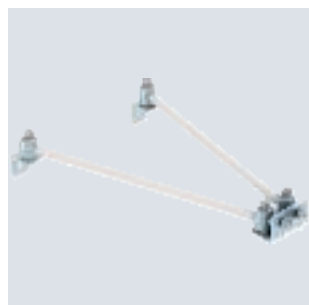


Type	Dim.	Dim.	Pack Piece	Weight kg/100 pc.	Item no.
	Ø mm	L mm			
101 FS-16	16	750	1	235.500	5408980

Fold fastening for an insulated air-termination unit at the separating distance s.

- Mounting on folds with a thickness of up to 20 mm
- For maintenance of the separation distance to electrically conductive parts according to VDE 0185-305-3 (IEC 62305-3)
- Acceptance of air-termination rods and round conductors with 8, 16 and 20 mm diameter
- UV-stabilised and weatherproof
- Continuous temperature range -50°C to +100°C
- Material factor $k_m = 0.7$

Insulated lightning protection set, V fastening

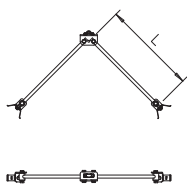
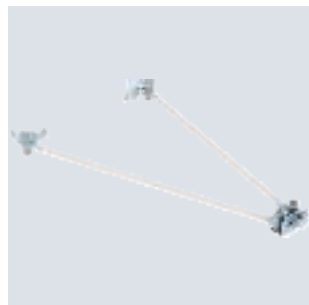


Type	Dim.	Dim.	Pack Piece	Weight kg/100 pc.	Item no.
	Ø mm	L mm			
101 VS-16	16	750	1	201.800	5408978

V fastening for an insulated air-termination unit at the separating distance s.

- Mounting on walls and roof structures with two wall connection brackets
- For maintenance of the separation distance to electrically conductive parts according to VDE 0185-305-3 (IEC 62305-3)
- Acceptance of air-termination rods and round conductors with 8, 16 and 20 mm diameter
- UV-stabilised and weatherproof
- Continuous temperature range -50°C to +100°C
- Material factor $k_m = 0.7$

Insulated lightning protection set, VRS fastening



Type	Dim.	Dim.	Pack Piece	Weight kg/100 pc.	Item no.
	Ø mm	L mm			
101 VRS-16	16	750	1	209.400	5408982

Pipe V fastening for an insulated air-termination unit at the separating distance s.

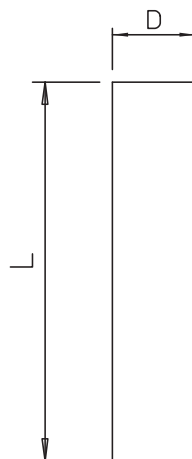
- Mounting on pipes with two pipe clips
- Including 2 m tightening strip and tension jack
- For maintenance of the separation distance to electrically conductive parts according to VDE 0185-305-3 (IEC 62305-3)
- Acceptance of air-termination rods and round conductors with 8, 16 and 20 mm diameter
- UV-stabilised and weatherproof
- Continuous temperature range -50°C to +100°C
- Material factor $k_m = 0.7$

GFK

Insulating rod

Type	Nominal size Ø mm	Length mm	Pack Piece	Weight kg/100 pc.	Item no.
101 16-750	16	750	5	30.000	5408107
101 16-1500	16	1500	5	60.000	5408108
101 16-3000	16	3000	5	120.000	5408109

- For the erection of insulated air-termination systems to VDE 0185-305 (IEC 62305)
- UV-stabilised and weatherproof
- Continuous temperature range -50°C to +100°C
- Material factor $k_m = 0.7$

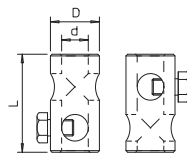


Alu

T connector

Type	Dimension d Ø mm	Length mm	Dim. D Ø mm	Pack Piece	Weight kg/100 pc.	Item no.
101 IT-16	16	60	30	10	11.475	5408158

- T connector for installation of insulating rods
- With M10 bolts

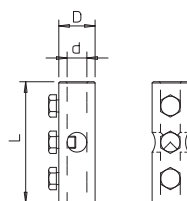


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K connector

Type	Dimension d Ø mm	Length mm	Dim. D Ø mm	Pack Piece	Weight kg/100 pc.	Item no.
101 IK-16	16	100	30	10	17.500	5408298

- K connector for installation of insulating rods
- With M10 bolts

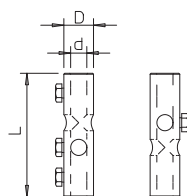


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DK connector

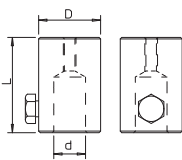
Type	Dimension d Ø mm	Length mm	Dim. D Ø mm	Pack Piece	Weight kg/100 pc.	Item no.
101 IDK	20	125	40	10	35.300	5408245

- DK connector link for installing insulating rods
- With M10 bolts



Alu

Wall connection

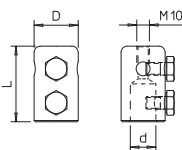


Type	Dimension		Dim.	Pack Piece	Weight kg/100 pc.	Item no.
	d Ø mm	Length mm	D Ø mm			
101 W-16	16	60	30	10	14.200	5408689

- For mounting insulating rods to structures or walls
- With M8 internal thread, e.g. for mounting the cable bracket type 177 (5207347) for loose conductor routing of round conductors
- Incl. M10 bolts

End piece

Alu

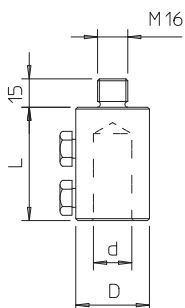


Type	Dimension		Dim.	Pack Piece	Weight kg/100 pc.	Item no.
	d Ø mm	Length mm	D Ø mm			
101 IES-16	16	60	30	10	10.000	5408395

- End piece for attaching round conductors Rd 8-10 and air-termination tips, type 101 ISP
- With M10 internal thread, e.g. for mounting a Vario quick connector for fixed conductor routing at intersections
- With M10 bolts

Connection piece

Alu

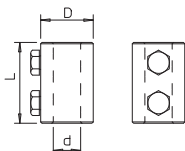


Type	Dimension		Dim.	Pack Piece	Weight kg/100 pc.	Item no.
	d Ø mm	Length mm	D Ø mm			
101 A-M16	20	60	40	10	20.000	5408350
101 A-16	16	60	30	10	13.000	5408352

- Fitting with M16 thread
- For mounting on stands with M16 female thread such as type 101 (5402891,5402958)
- With M10 bolts

Extension

Alu



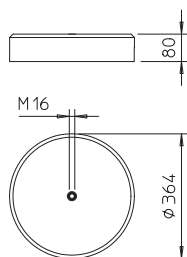
Type	Dimension		Dim.	Pack Piece	Weight kg/100 pc.	Item no.
	d Ø mm	Length mm	D Ø mm			
101 IV-16	16	60	30	10	16.000	5408557

- Extension of insulating rods
- With M10 bolts

Concrete base min. 16 kg with female thread

Type	Nominal size \varnothing		Thread	Pack Piece	Weight kg/100 pc.	Item no.
	mm	mm				
101 B2-16 M16	364		M16	1	1,600.000	5402958

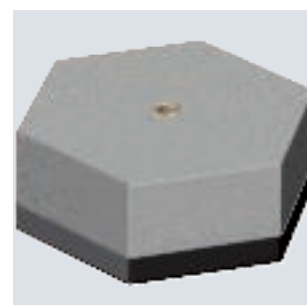
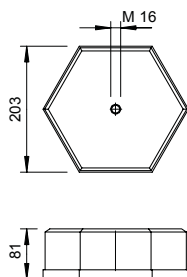
- Weight min. 16 kg
- Frost-resistant concrete
- Female thread M16
- Recommended air-termination rod length max. 3.0 m, depending on wind load zone



Stand 6.9 kg with female thread

Type	Thread		Pack Piece	Weight kg/100 pc.	Item no.
	M16				
101 ST	M16		4	690.000	5402891

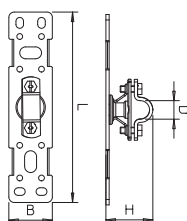
- Weight 6.9 kg
- Frost-resistant concrete
- Female thread M16
- Recommended air-termination rod length max. 1.0 m



Fastening plate

Type	Dim. L	Dim. B	Dim. D	Dim. H	Pack Piece	Weight kg/100 pc.	Item no.
	mm	mm	\varnothing mm	mm			
101 BP-16	175	40	16	42	1	21.200	5408984

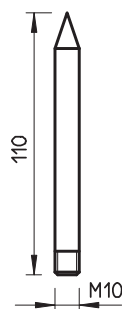
- To mount insulating rods on constructions or walls
- Plate made of VA stainless steel
- Holder and crosspiece for 16 and 20 mm rods and Rd 8–10 mm



Alu

Type	Length	Pack Piece	Weight kg/100 pc.	Item no.
	mm			
101 ISP M10	110	10	10.000	5408458

Air-termination tip for attaching to end piece, type 101 IES, with M10 thread



Adjustable insulating beam – pipe

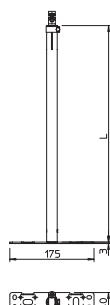


Type	Pack Piece	Weight kg/100 pc.	Item no.
ISAV1000R	1	130.000	5408849

Variable spacer for conductors and air-termination rods to maintain the separation distance.

- Infinitely adjustable distance range (L = 550–1,000 mm)
- Made of fibre-glass-reinforced plastic (km = 0.7)
- For pipe mounting (including 2 m tightening strap and tension jack)

Adjustable insulating beam – wall

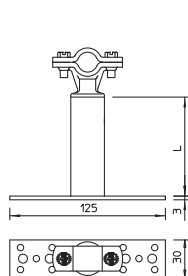


Type	Pack Piece	Weight kg/100 pc.	Item no.
ISAV1000W	1	130.000	5408852

Variable spacer for conductors and air-termination rods to maintain the separation distance.

- Infinitely adjustable distance range (L = 550–1,000 mm)
- Made of fibre-glass-reinforced plastic (km = 0.7)
- For wall mounting with 10 fastening holes (4.2 mm) and 4 fastening holes (6.9 mm)

Insulated spacer

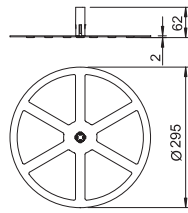
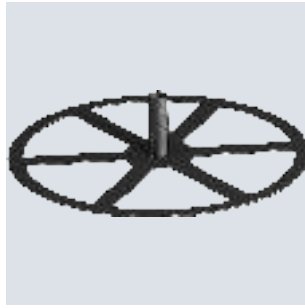


Type	Length mm	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
ISO-A-500	500	Rd 16	15	36.000	5408806
ISO-A-800	800	Rd 16	15	55.000	5408814
ISO-A-1030	1030	Rd 16	15	68.000	5408820
ISO-A-150 8	150	Rd 8	15	13.800	5408800

- Mounting foot with 10 connection holes Ø 6.5 mm and 4 connection holes Ø 8.5 mm
- Type ...150 8 with holder suitable for round conductor RD 8
- Application for shelters, e.g. golf, barbecue or mountain huts



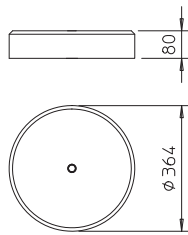
Base for FangFix system 10 kg



Type	Nominal size Ø mm	Pack Piece	Weight kg/100 pc.	Item no.
F-FIX-B10	295	10	7.600	5403124

Edge protection with integrated dowel (basic) suitable for FangFix 10 kg system.

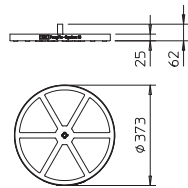
Concrete base for FangFix system, min. 16 kg



Type	Nominal size Ø mm	Pack Piece	Weight kg/100 pc.	Item no.
F-FIX-S16	365	1	1,700.000	5403227

- Min. 16 kg block of Ø 365 mm, high level of stability
- Frost-resistant concrete
- Stackable

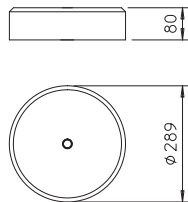
Base for FangFix system 16 kg



Type	Nominal size Ø mm	Pack Piece	Weight kg/100 pc.	Item no.
F-FIX-B16	373	10	16.400	5403235

Edge protection with integrated dowel (basic) suitable for FangFix system.

Concrete base for FangFix system, min. 10 kg



Type	Nominal size Ø mm	Pack Piece	Weight kg/100 pc.	Item no.
F-FIX-S10	289	1	1,000.000	5403117

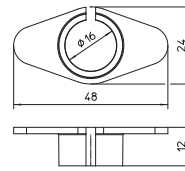
- Min. 10 kg block of Ø 289 mm, high level of stability
- Frost-resistant concrete
- Stackable

PA

FangFix reducing sleeve

Type	Fit Colour	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
101 RH-16	Black	16	25	0.187	5408101

Reduces the drill hole of the FangFix block from Ø 20 mm to Ø 16 mm. Suitable for the installation of GFK insulating rods of Ø 16 mm.

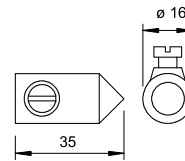


Zn G

Air-termination tip

Type	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
120 A	Rd 8-10	10	2.500	5405068

- To be used for Rd 8–10 (corrosion protection)
- With cylinder bolt M6 x 10
- Made of die-cast zinc, bolts made of hot-galvanised steel

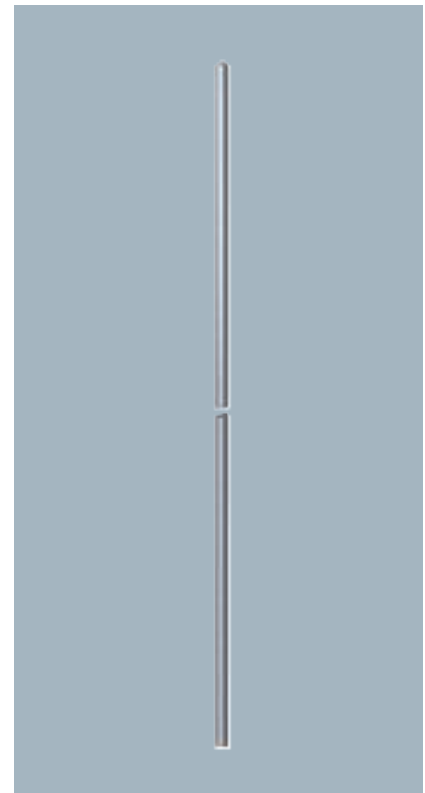
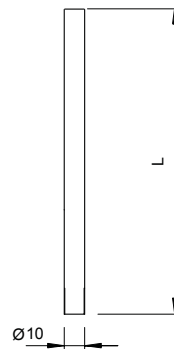


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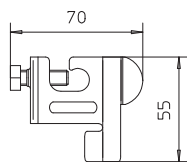
Air-termination rod for FangFix-Junior

Type	Length mm	Nominal size Ø mm	Pack Piece	Weight kg/100 pc.	Item no.
101 J1000	1000	10	10	21.800	5401970

- Suitable for wind loads according to Eurocode 1: DIN EN 1991-1-4
- Ø 10 mm, aluminium
- Without thread
- Suitable for use in FangFix-Junior



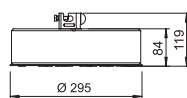
Terminal for FangFix system



Type	Fit mm	Nominal size Ø mm	Pack Piece	Weight kg/100 pc.	Item no.
F-FIX-KL	Rd 8		5	8.700	5403219

- FangFix terminal, VA for RD 8 mm
- Tested with H (100 kA) to DIN EN 50164-1
- Round conductor installed on the air-termination rod with only one screw

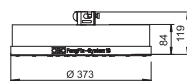
Stand for FangFix system, min. 10 kg



Type	Fit mm	Nominal size Ø mm	Pack Piece	Weight kg/100 pc.	Item no.
F-FIX-10	Rd 8	295	1	1,058.000	5403103
F-FIX-10B	Rd 8	295	77	1,058.000	5403110

- System consists of FangFix block with base and clamp
- FangFix clamp made of VA; complies with the requirements of VDE 0185-305 (IEC 62305)
- Min. 10 kg block of Ø 289 mm, high level of stability
- Quick and easy installation of air-termination rod using anchors
- Frost-resistant concrete
- The FangFix stone can be stacked
- Suitable for Ø 16 mm pipe air-termination rods

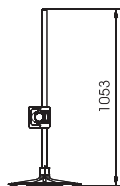
Stand for FangFix system, min. 16 kg



Type	Fit mm	Nominal size Ø mm	Pack Piece	Weight kg/100 pc.	Item no.
F-FIX-16	Rd 8	373	1	1,732.500	5403200
F-FIX-16B	Rd 8	373	54	1,732.500	5403205

- System consisting of FangFix block with edge protection and clamp
- FangFix clamp made of VA; complies with the requirements of VDE 0185-305 (IEC 62305)
- Min. 16 kg block of Ø 365 mm, high level of stability
- Quick and easy installation of air-termination rod using anchors
- Frost-resistant concrete
- The FangFix block can be stacked
- Suitable for Ø 16 mm pipe air-termination rods

Stand for FangFix Junior system



Type	Length mm	Nominal size Ø mm	Pack Piece	Weight kg/100 pc.	Item no.
F-FIX-JUNIOR	1000	10	10	32.000	5403308

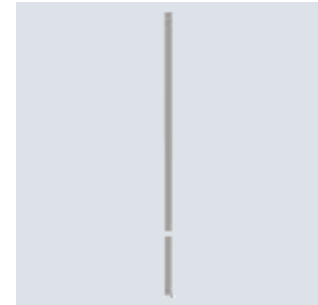
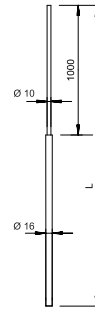
- Incl. aluminium air-termination rod 1,000 mm long (Ø 10 mm)
- Quick mounting of the air-termination rod in the base using plug technology
- With Vario quick connector 249

Alu

Tapered pipe air-termination rod

Type	Length mm	Nominal size Ø mm	Pack Piece	Weight kg/100 pc.	Item no.
101 VL1500	1500	10/16	10	38.000	5401980
101 VL2000	2000	10/16	10	55.000	5401983
101 VL2500	2500	10/16	10	72.000	5401986
101 VL3000	3000	10/16	10	88.000	5401989
101 VL3500	3500	10/16	10	105.000	5401993
101 VL4000	4000	10/16	10	120.000	5401995

- Suitable for wind loads according to Eurocode 1: DIN EN 1991-1-4
- From a free length of > 2.5 m, an additional fastening, e.g. insulated spacer is recommended
- Last metre is tapered from Ø 16 mm to Ø 10 mm, material: AlMgSi
- Matches stand system FangFix

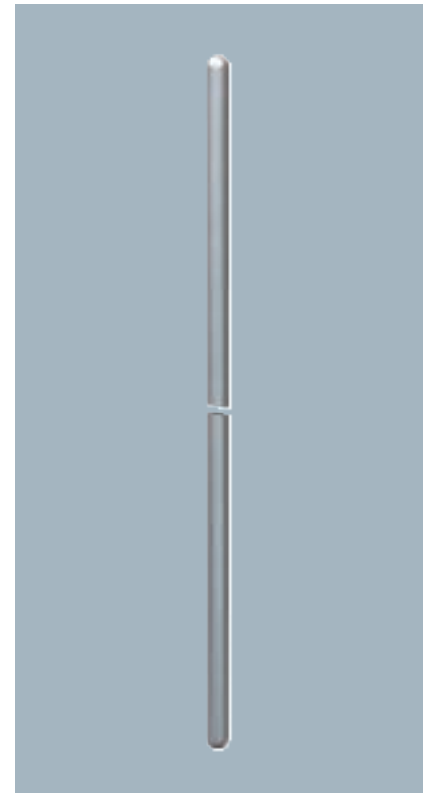
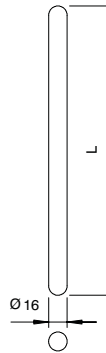


St FT

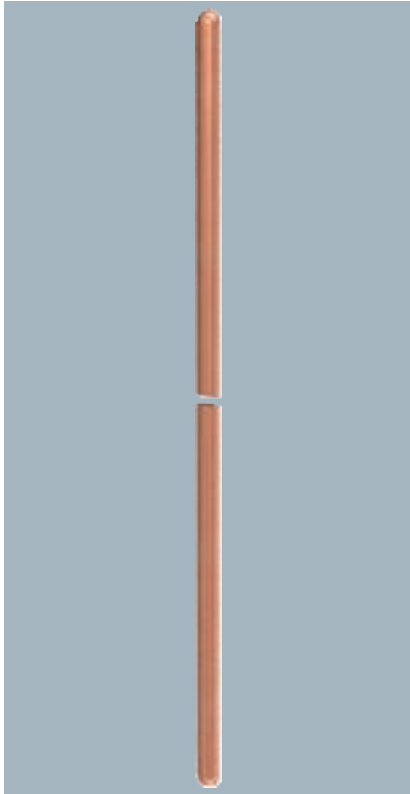
Air-termination/earth entry rod, rounded-off on both ends

Type	Length mm	Nominal size Ø mm	Pack Piece	Weight kg/100 pc.	Item no.
101 A-1500	1500	16	10	240.000	5400155

- Full material Ø 16 mm
- Rounded on both ends
- Suitable for FangFix stand system



Air-termination/earth entry rod, rounded-off on both ends



Type	Length mm	Nominal size Ø		Pack Piece	Weight kg/100 pc.	Item no.
		mm	mm			
101 A-CU	1500	16		10	272.100	5400627

- Full material Ø 16 mm
- Both ends rounded

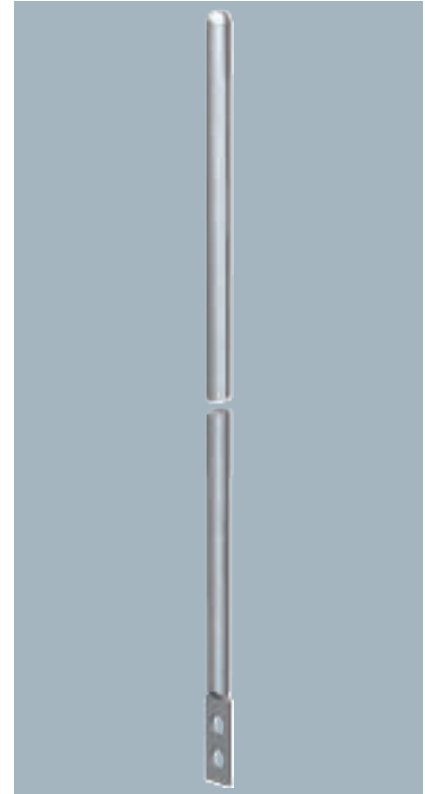
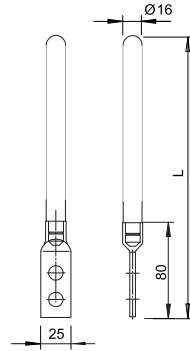


St FT

Air-termination/earth entry rod with connection tabs

Type	Length mm	Nominal size \varnothing mm	Pack Piece	Weight kg/100 pc.	Item no.
101 F1000	1000	16	10	160.000	5424100
101 F1500	1500	16	10	240.000	5424151
101 F2000	2000	16	10	320.000	5424208

- With 2 attaching holes \varnothing 12 mm
- One end rounded

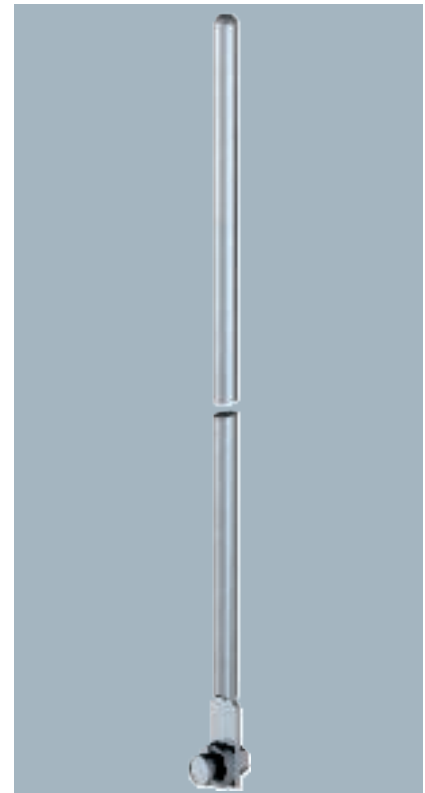
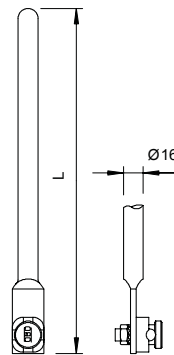


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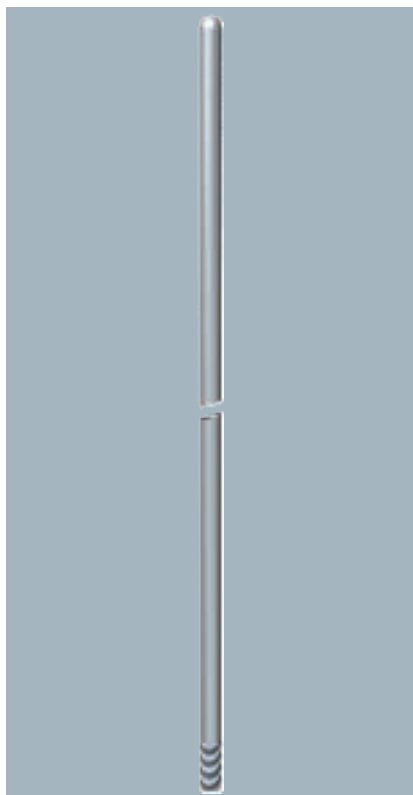
Air-termination/earth entry rod with connection tabs and connector

Type	Length mm	Nominal size \varnothing mm	Pack Piece	Weight kg/100 pc.	Item no.
101 G1000	1000	16	10	164.300	5402107
101 G1500	1500	16	10	240.000	5402158

- 1 attaching hole \varnothing 12 mm
- With pre-mounted conductor for Rd 8-10
- One end rounded

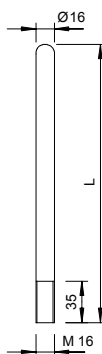


Air-termination rod, one end rounded, M16 thread



Type	Length mm	Nominal size Ø mm	Pack Piece	Weight kg/100 pc.	Item no.
101 ALU-1000	1000	16	10	55.000	5401771
101 ALU-1500	1500	16	10	81.000	5401801
101 ALU-2000	2000	16	10	109.000	5401836
101 ALU-2500	2500	16	10	136.000	5401852
101 ALU-3000	3000	16	5	162.000	5401879

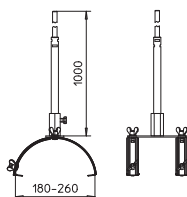
- Suitable for wind loads according to Eurocode 1: DIN EN 1991-1-4
- From a free length of > 2.5 m, an additional fastening, e.g. insulated spacer is recommended
- Ø 16 mm, aluminium
- For stand system with M16 internal thread



Lightning protection

Roof conductor holder, ridge

Air-termination rod holder for ridge tiles



Type	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
F-FIX-132	110	1	62.000	5403330
F-Fix-132-300	300	1	78.000	5403333

Rod holder for ridge tiles, for simple, quick and safe fastening of Ø 16 mm air-termination rods

- System consisting of holder made of V2A stainless steel and aluminium air-termination rods
- Quick and easy mounting thanks to pre-mounted air-termination rod
- Air-termination rod length: 1,000 mm
- Width adjustable between 180–260 mm
- Spacing of the ridge holders: 110 mm (5403330)
- Spacing of the ridge holders: 300 mm (5403333)

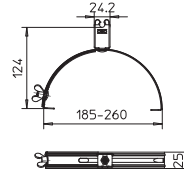
Application: To protect roof structures such as photovoltaic and TV/SAT systems.

VA

Roof conductor holder for ridge tiles, 185–260 mm, Rd 8

Type	Installation		Pack Piece	Weight kg/100 pc.	Item no.
	Fit mm	height mm			
132 VA 35	Rd 8	35	20	13.700	5202836

- Adjustable width from 185-260 mm
- Fast installation using wing screw

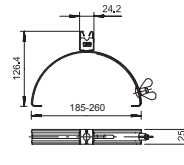


VA

Roof conductor holder for ridge tiles, 185–260 mm, Rd 8

Type	Installation		Pack Piece	Weight kg/100 pc.	Item no.
	Fit mm	height mm			
132 VA	Rd 8	20	20	12.900	5202833

- Adjustable width from 185-260 mm
- Fast installation using wing screw

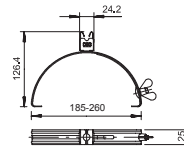


Cu

Roof conductor holder for ridge tiles, 185–260 mm, Rd 8

Type	Installation		Pack Piece	Weight kg/100 pc.	Item no.
	Fit mm	height mm			
132 CU	Rd 8	20	10	13.400	5202868

- Adjustable width from 185-260 mm
- Fast installation using wing screw

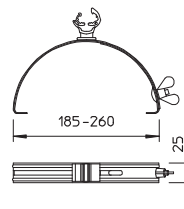


VA

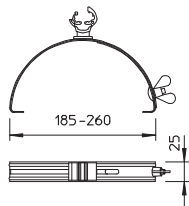
Roof conductor holder for ridge tiles, 185–260 mm, Rd 8–10

Type	Installation		Pack Piece	Weight kg/100 pc.	Item no.
	Fit mm	height mm			
132 K-VA	Rd 8-10	20	20	10.900	5202515

- Adjustable width from 185-260 mm
- Bottom part made of non-rusting stainless steel (V2A)
- Infinitely adjustable conductor holder
- Conductor holder of polyamide
- Fast installation using wing screw



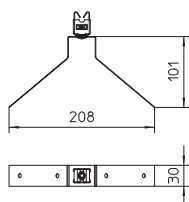
Roof conductor holder for ridge tiles, 185–260 mm, Rd 8–10



Type	Fit mm	Installation height mm	Pack	Weight	Item no.
			Piece	kg/100 pc.	
132 K-CU	Rd 8-10	20	10	11.600	5202590

- Adjustable width from 185-260 mm
- Bottom part made of copper
- Infinitely adjustable conductor holder
- Conductor holder of polyamide
- Fast installation using wing screw

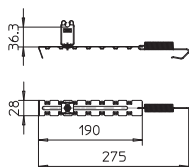
Roof conductor holder for ridge tiles, metal roofs, Rd 8



Type	Fit mm	Installation height mm	Pack	Weight	Item no.
			Piece	kg/100 pc.	
132 P VA	Rd 8	20	20	8.420	5202510

- For round conductors Rd 8
- Suitable for metal roofs

Ridge conductor holder with tensioning spring



Type	Fit mm	Installation height mm	Pack	Weight	Item no.
			Piece	kg/100 pc.	
132 U 35	RD 8	35	20	6.800	5203018

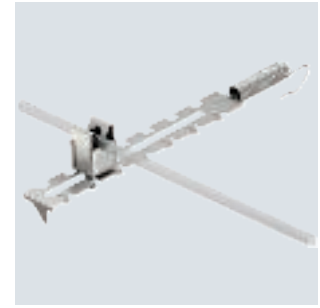
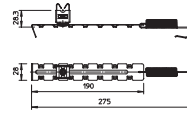
- For round conductor Rd 8
- Clamping range 280-380 mm

VA

Ridge conductor holder with tensioning spring

Type	Installation		Pack Piece	Weight kg/100 pc.	Item no.
	Fit mm	height mm			
132 U	Rd 8	20	20	6.000	5203015

- For round conductor Rd 8
- Clamping range 280-380 mm

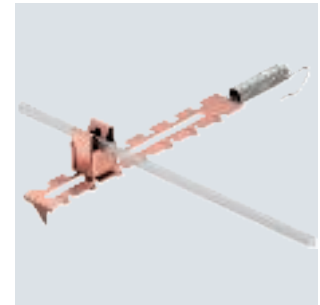
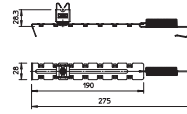


VA Cu

Ridge conductor holder with tensioning spring

Type	Installation		Pack Piece	Weight kg/100 pc.	Item no.
	Fit mm	height mm			
132 U-CU	Rd 8	20	10	0.600	5203023

- For round conductor Rd 8
- Clamping range 280-380 mm



Roof conductor holder, tiled roofs

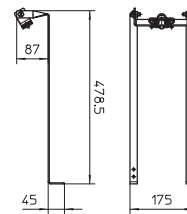
VA

Air-termination rod holder for sloping roof

Type	Pack Piece	Weight kg/100 pc.	Item no.
SD-Fix	1	81.000	5403335

Stand system: rod holder for sloping roofs, for simple, quick and secure fastening of Ø 16 mm air-termination rods.

- System consists of a bracket made of V2A stainless steel
- Quick and easy mounting
- Adjustable angle
- In the case of high air-termination rods (> 1 m), additional fastening with insulated spaces is necessary

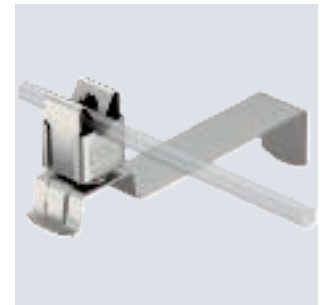
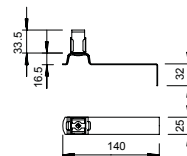


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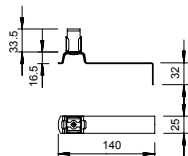
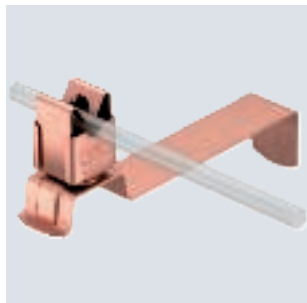
Roof conductor holder for tiled roofs, angled, Rd 8

Type	Installation			Pack Piece	Weight kg/100 pc.	Item no.
	Fit mm	height mm	Length mm			
157 FX-AL	Rd 8	26.5	140	20	3.900	5215875

- With flexible bottom section from aluminium for matching to roof tiles (easy to flex)
- Holder from stainless steel (V2A)
- Curved bottom section for quick installation



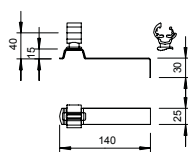
Roof conductor holder for tiled roofs, angled, Rd 8



Type	Fit mm	Installation		Pack Piece	Weight kg/100 pc.	Item no.
		height mm	Length mm			
157 FX-CU	Rd 8	26.5	140	10	7.500	5215879

- With flexible bottom section from copper for matching to roof tiles (easy to flex)
- Holder from copper plated stainless steel (V2A)
- Curved bottom section for quick installation

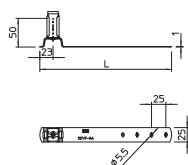
Roof conductor holder for tiled roofs, angled, Rd 8-10



Type	Fit mm	Installation		Pack Piece	Weight kg/100 pc.	Item no.
		height mm	Length mm			
157 IK-VA	Rd 8-10	40	140	20	7.150	5215668

- Conductor holder of polyamide
- Curved bottom strip for quick installation

Roof conductor holder for tiled roofs, Rd 8



Type	Fit mm	Installation		Pack Piece	Weight kg/100 pc.	Item no.
		height mm	Length mm			
157 F-VA 230 35	Rd 8	50	230	20	8.300	5215555
157 F-VA 280 35	Rd 8	50	280	20	9.700	5215582

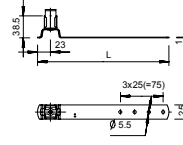
- Conductor holder from stainless steel (V2A)
- Including drill hole in bottom section for quick installation

VA

Roof conductor holder for tiled roofs, Rd 8

Type	Fit mm	Installation		Pack Piece	Weight kg/100 pc.	Item no.
		height mm	Length mm			
157 F-VA 230	Rd 8	38.5	230	20	8.350	5215552
157 F-VA 280	Rd 8	38.5	280	20	10.170	5215579
157 F-VA 410	Rd 8	38.5	410	20	14.880	5215595

- Conductor holder from stainless steel (V2A)
- Including drill hole in bottom section for quick installation

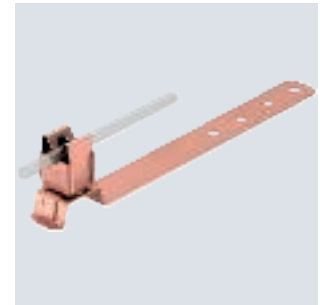
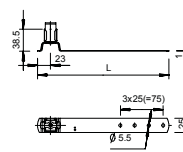


Cu

Roof conductor holder for tiled roofs, Rd 8

Type	Fit mm	Installation		Pack Piece	Weight kg/100 pc.	Item no.
		height mm	Length mm			
157 F-CU 230	Rd 8	38.5	230	10	10.300	5216192
157 F-CU 280	Rd 8	38.5	280	10	11.100	5216206
157 F-CU 410	Rd 8	38.5	410	10	14.500	5216257

- Conductor holder from copper plated stainless steel (V2A)
- Including drill hole in bottom section for quick installation

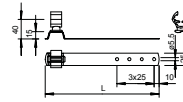


VA

Roof conductor holder for tiled roofs, Rd 8-10

Type	Fit mm	Installation		Pack Piece	Weight kg/100 pc.	Item no.
		height mm	Length mm			
157 FK-VA 230	Rd 8-10	40	230	20	7.800	5215544
157 FK-VA 280	Rd 8-10	40	280	20	10.170	5215587
157 FK-VA 410	Rd 8-10	40	410	20	14.880	5215609

- Conductor holder of polyamide
- Including drill hole in bottom section for quick installation

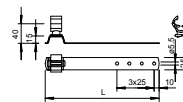


Cu

Roof conductor holder for tiled roofs, Rd 8-10

Type	Fit mm	Installation		Pack Piece	Weight kg/100 pc.	Item no.
		height mm	Length mm			
157 FK-CU 230	Rd 8-10	40	230	10	8.800	5216184
157 FK-CU 280	Rd 8-10	40	280	10	9.600	5216214

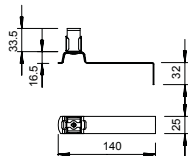
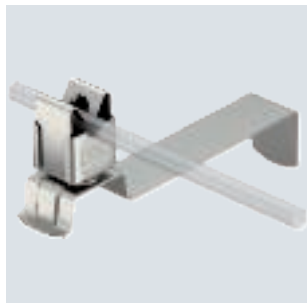
- Conductor holder of polyamide
- Including drill hole in bottom section for quick installation



Roof conductor holder, tiled roofs

Roof conductor holder for tiled roofs, angled, Rd 8

VA



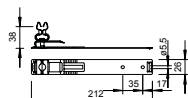
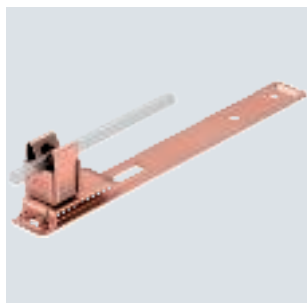
Type	Installation			Pack Piece	Weight kg/100 pc.	Item no.
	Fit mm	height mm	Length mm			
157 I-VA	Rd 8	26.5	140	20	7.150	5215625

- Conductor holder high-grade stainless steel (V2A)
- Curved bottom strip for quick installation

Roof conductor holder, slated roofs

Roof conductor holder for slated roofs, Rd 8

Cu



Type	Installation			Pack Piece	Weight kg/100 pc.	Item no.
	Fit mm	height mm	Length mm			
157 L-CU	Rd 8	32	212	10	9.900	5215471

- With Ø 5.5 mm drill hole and beading

Type 165 MBG 8-10 Roof conductor holder

For both Ø 8 and 10 mm round wire



Now with larger base for green (living) flat roofs



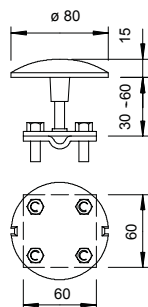
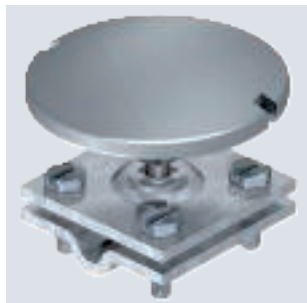
Mounting of any round conductor of Ø 8 mm or Ø 10 mm

UV-stabilised and weather-resistant closed shape with base

Can be used on almost all roofing felt systems



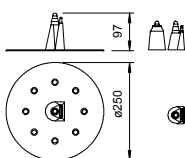
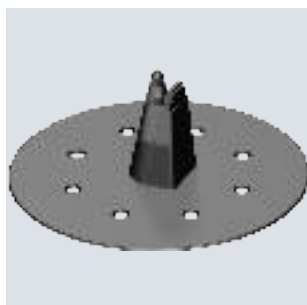
Mushroom-shaped air-termination with connectors



Type	Fit	Dim. D	Pack Piece	Weight kg/100 pc.	Item no.
128 F	Rd 8-10/FL30	80	5	40.000	5405769

- Mushroom-shaped air-termination from aluminium
- With pre-mounted cross-piece and hexagonal bolt M8 x 25, hot-dip galvanised steel
- For round conductor Rd 8-10 and flat conductor FL 30

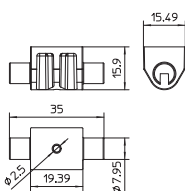
Roof penetration



Type	Fit	Pack Piece	Weight kg/100 pc.	Item no.
330 K	Rd 8-16/FL20 u. FL30	5	14.400	5201101

- For round conductors 8-10, air-termination rods 16 mm
- Flat conductors 20 mm/30 mm
- Colour: Black, UV-resistant
- For penetration and sealing of roofs

Universal flat conductor adapter for roof conductor holder, type 165/MBG



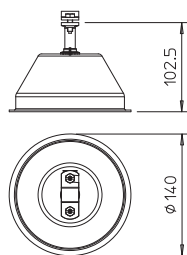
Type	Colour	Fit	Pack Piece	Weight kg/100 pc.	Item no.
165 MBG UH	Black	Rd 8	25	0.254	5218882

- Universal adapter with drill hole Ø 2.5 mm
- E.g. for OBO Golden Sprint screw, type 4758 4 x L (L = depending on application)
- For fastening to 165/MBG

Roof conductor holder for flat roofs, with raised cable bracket

Type	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
165 KRB SO	Rd 8-10	9	144.000	5218977

- Filling weight 1.3 kg (frost-resistant concrete)
- With conductor holder, type 168 DIN-K
- Die-cast zinc conductor holder, electrogalvanised
- Polyethylene sleeve, black

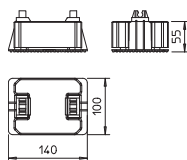


PE

Roof conductor holder for flat roofs

Type	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
165 R-8-10	Rd 8-10	10	106.000	5218997

- For round conductors Rd 8–10
- With polyethylene plastic holder, black
- Block made of frost-resistant concrete
- Weight 1 kg
- Block can be split into plastic and concrete (recyclable)

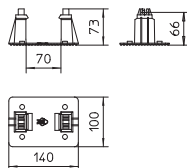


PE

Roof conductor holder, for plastic film roofs

Type	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
165 R-8-10 OBG	Rd 8-10	100	6.760	5218999

- For flat roofs
- For round conductors Rd 8 to 10
- Polyethylene plastic holder, light grey
- For clamping in roof strips
- When installing round conductors, expansion elements are to be used for thermal compensation

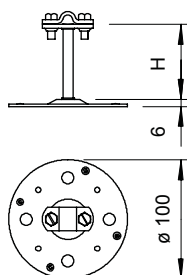


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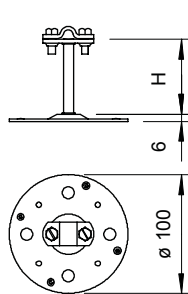
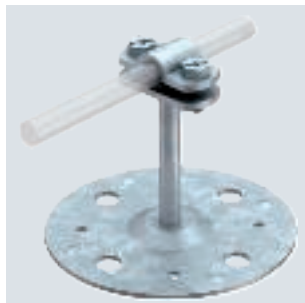
Roof conductor holder, suitable for direct bonding

Type	Fit mm	Installation height mm	Pack Piece	Weight kg/100 pc.	Item no.
165 B 60	Rd 8-10	60	50	26.100	5218810

- With conductor holder and bottom section, hot-dip galvanised steel
- Bottom section Ø 100 mm



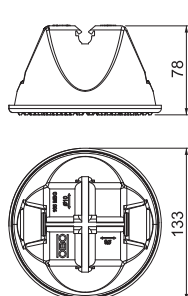
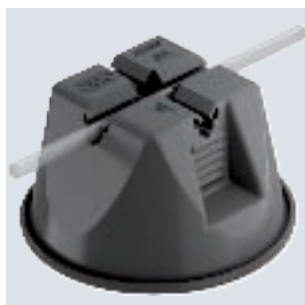
Roof conductor holder, suitable for direct bonding



Type	Fit mm	Installation height mm	Pack Piece	Weight kg/100 pc.	Item no.
165 B 100	Rd 8-10	100	50	27.700	5218829

- With conductor holder and bottom section, hot-dip galvanised steel
- Bottom section Ø 100 mm

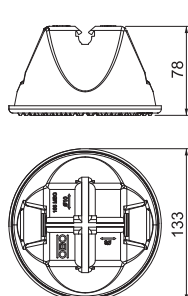
Roof conductor holder for flat roofs, black



Type	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
165 MBG-8-10	Rd 8-10	12	97.220	5218700
165 MBG-8-10 FO	Rd 8-10	12	100.000	5218704

- Closed form with base
- With double conductor holder
- Filling weight 1 kg (frost-resistant concrete)
- Sleeve made of polyethylene, black, bottom polypropylene, black
- Base made of polyamide PA 6, black, UV-stabilised and weather-resistant
- Base can be used on almost all roofing felt systems (bitumen, PVC)
- Types 165 MBG...FO: Packed in foil bag

Roof conductor holder for flat roofs, grey



Type	Fit mm	Colour	Pack Piece	Weight kg/100 pc.	Item no.
165 MBG-8-10 GR	Rd 8-10	Grey	12	100.000	5218708

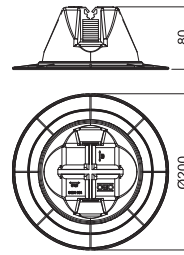
- Closed form with base
- With double conductor holder
- Filling weight 1 kg (frost resistant concrete)
- Case made from polyethylene, light grey, UV-stabilised and weatherproof
- Base made from polyamide PA 6, light grey, UV-stabilised and weatherproof
- Base suitable for nearly all roofing membrane systems (bitumen, PVC)

PA/
PE

Roof conductor holder for flat roofs, with increased base section

Type	Fit mm	Installation height mm	Pack Piece	Weight kg/100 pc.	Item no.
165 MBG-8-10 200	Rd 8-10		12	100.000	5218716

- DIN 48829 Form B 1
- Closed form with bottom
- With double conductor holder
- Filling weight 1 kg (frost-resistant concrete)
- Sleeve from polyethylene, black, bottom polypropylene, black
- With larger bottom section (Ø 200 mm) for improved stability



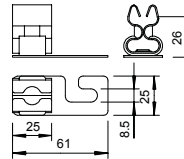
Roof conductor holder for tiled, slated, corrugated roofs

VA

Roof conductor holder for tiled, slated and corrugated roofs, Rd 8

Type	Fit mm	Installation height mm	Pack Piece	Weight kg/100 pc.	Item no.
159 VA-V	Rd 8	21	20	3.900	5217075

- Bottom section and conductor holder stainless steel (V2A)
- Bottom section with Ø 8.5 mm slot

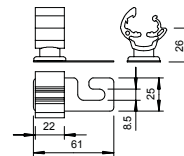


VA

Roof conductor holder for tiled, slated and corrugated roofs, Rd 8-10

Type	Fit mm	Installation height mm	Pack Piece	Weight kg/100 pc.	Item no.
159 K-VA	Rd 8-10	21	20	2.540	5216818

- Bottom section stainless steel (V2A)
- Bottom section with Ø 8.5 mm slot
- Conductor holder of polyamide

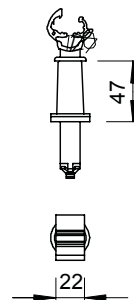


PA

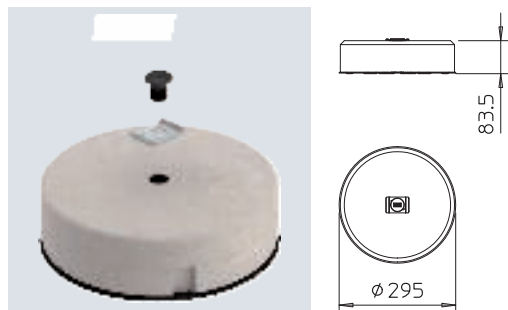
Roof conductor holder for tiled, slated and corrugated roofs, with cable bracket

Type	Fit mm	Installation height mm	Pack Piece	Weight kg/100 pc.	Item no.
133 NB	Rd 8-10	67	20	4.338	5202213

- With weather-proof clamping collar from soft-PVC
- Required drill hole Ø = 16 mm
- Spacer and conductor holder from polyamide, grey



Stand - TrayFix set 10 S



Type	From tray width mm	Pack Piece	Weight kg/100 pc.	Item no.
TrayFix-10-S	100	1	1,000.000	5403102

- Mounting system for the fastening of mesh cable trays with the FangFix stone, e.g. cable routing on a flat roof.
- Matches to OBO mesh cable tray systems with a minimum width of 100 mm.
- Set consisting of TrayFix mounting adapter and concrete block including base for FangFix system 10 kg.

Stand - TrayFix set 10 L



Type	From tray width mm	Pack Piece	Weight kg/100 pc.	Item no.
TrayFix-10-L	100	1	1,100.000	5403101

- Mounting system for the fastening of mesh cable trays with the FangFix stone, e.g. cable routing on a flat roof.
- Matched to OBO cable tray systems MKSM and SKSM.
- Matched to OBO mesh cable systems with a minimum width of 100 mm.
- Set consisting of TrayFix mounting adapter and concrete block including base for FangFix system 10 kg.

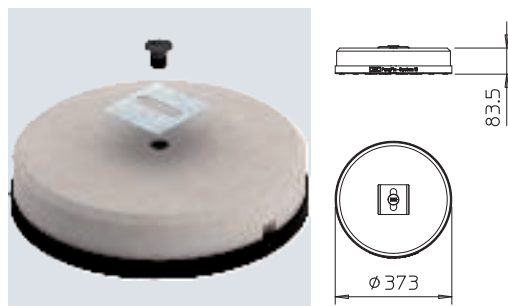
Stand - TrayFix set 16 S



Type	From tray width mm	Pack Piece	Weight kg/100 pc.	Item no.
TrayFix-16-S	100	1	1,700.000	5403099

- Mounting system for the fastening of mesh cable trays with the FangFix base, e.g. for cable routing on a flat roof.
- Matches OBO mesh cable tray systems with a minimum width of 100 mm
- Set consisting of TrayFix mounting adapter and concrete block incl. base for FangFix system 16 kg

Stand - TrayFix set 16 L



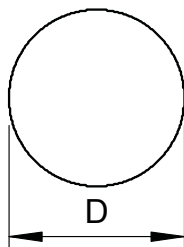
Type	From tray width mm	Pack Piece	Weight kg/100 pc.	Item no.
TrayFix-16-L	100	1	1,700.000	5403098

- Mounting system for the fastening of mesh cable trays with the FangFix stone, e.g. cable routing on a flat roof.
- Matched to OBO cable tray systems MKSM and SKSM.
- Matched to OBO mesh cable systems with a minimum width of 100 mm.
- Set consisting of TrayFix mounting adapter and concrete block including base for FangFix system 16 kg.



Round conductor, galvanised steel

St FT

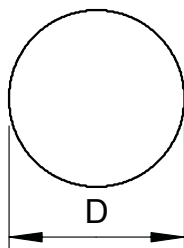


Type	Nominal size Ø mm	Cross-section mm ²	Normal ring ca. m	Normal ring ca. kg	Pack m	Weight kg/100 m	Item no.
RD 8-FT	8	50	125	50	125	40.000	5021081
RD 8-FT 50	8	50	50	20	50	40.000	5021050
RD 10	10	78	80	50	80	63.000	5021103

- According to DIN EN 62561-2 (VDE 0185-561-2)
- Corresponds to the requirements of VDE 0185-305 (IEC 62305)
- RD 10 can also be used in the earth
- Zinc coating: ≥ 350 g/m² (approx. 50 µm in mean value)

Round conductor, stainless steel A2

VA VA

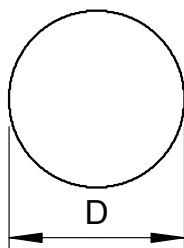


Type	Nominal size Ø mm	Cross-section mm ²	Normal ring ca. m	Normal ring ca. kg	Pack m	Weight kg/100 m	Item no.
RD 8-V2A	8	50	125	50	125	40.000	5021235
RD 10-V2A	10	78	50	32	50	63.000	5021227
RD 10-V2A	10	78	80	50	80	63.000	5021239
RD 8-V4A	8	50	125	50	125	40.000	5021644
RD 10-V4A 20	10	78	20	12	20	63.000	5021640
RD 10-V4A	10	78	50	32	50	63.000	5021642
RD 10-V4A	10	78	80	50	80	63.000	5021647

- According to DIN EN 62561-2 (VDE 0185-561-2)
- Corresponds to the requirements of VDE 0185-305 (IEC 62305)
- RD 10-V4A for applications in the earth
- According to the foundation earth electrode standard DIN 18014, V4A is required in the earth

Round conductor, copper

Cu

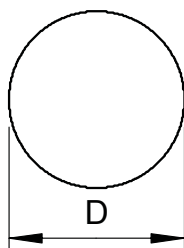


Type	Nominal size Ø mm	Cross-section mm ²	Normal ring ca. m	Normal ring ca. kg	Pack m	Weight kg/100 m	Item no.
RD 8-CU	8	50	100	45	100	45.000	5021480
RD 10-CU	10	78	50	35	50	70.000	5021502

- According to DIN EN 62561-2 (VDE 0185-561-2)
- Corresponds to the requirements of VDE 0185-305 (IEC 62305)

Round conductor, aluminium

Alu



Type	Nominal size Ø mm	Cross-section mm ²	Normal ring ca. m	Normal ring ca. kg	Pack m	Weight kg/100 m	Item no.
RD 8-ALU	8	50	150	20	150	13.500	5021286
RD 8-ALU-T	8	50	150	20	150	13.500	5021294
RD 8-ALU-T 75	8	50	75	10	75	13.500	5021296
RD 10-ALU	10	78	95	20	95	21.000	5021308

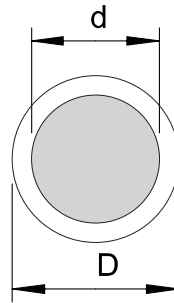
- According to DIN EN 62561-2 (VDE 0185-561-2)
- Corresponds to the requirements of VDE 0185-305 (IEC 62305)
- RD 8 ALU: Semi-hard (E-AlMgSi0.5 corresponds to DIN 48801)
- RD 8 ALU-T: Can be subjected to torsion (E-AlMgSi0.5 corresponds to DIN 48801)
- RD 10 ALU: Pure aluminium (E-Al corresponds to DIN 48801)
- AL and ALMgSi may not be routed directly on, in or under plaster, mortar or concrete, nor routed in the earth

Alu

Round conductor, aluminium, with PVC sheathing

Type	Colour	Dim. d mm	Dim. D mm	Cross-section mm ²	Normal ring ca. m	Normal ring ca. kg	Pack m	Weight kg/100 m	Item no.
RD 8-PVC	Cream	8	11	50	100	20	100	20.000	5021332

- Meets the requirements of VDE 0185-305 (IEC 62305)
- With PVC jacketing (halogen-free)
- Suitable for routing on, in or under plasterwork, mortar or concrete

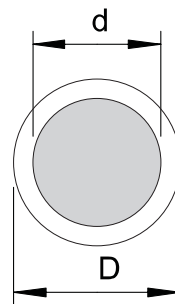


St FT

Round conductor, galvanised steel with PVC jacketing

Type	Colour	Dim. d mm	Dim. D mm	Cross-section mm ²	Normal ring ca. m	Normal ring ca. kg	Pack m	Weight kg/100 m	Item no.
RD 10-PVC	Black	10	13	78	75	50	75	67.000	5021162

- Corresponds to the requirements according to VDE 0185-305 (IEC 62305)
- Zinc coating: $\geq 350 \text{ g/m}^2$ (approx. $50 \mu\text{m}$ in mean value)
- With PVC jacketing

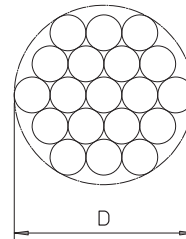


Cu

Copper cable

Type	Dim. D mm	Individual wires	Cross-section mm ²	Normal ring ca. m	Normal ring ca. kg	Pack m	Weight kg/100 m	Item no.
S 11-CU	10.5	19x $\emptyset 2,1$	70	50	30	50	58.600	5021654
S 9-CU	9	19x $\emptyset 1,8$	50	100	45	100	45.000	5021652
S-11-CU SN	10.5	19x $\emptyset 2,1$	70	50	30	50	58.600	5021656

- According to DIN EN 62561-2 (VDE 0185-561-2)
- Corresponds to the requirements of VDE 0185-305 (IEC 62305)

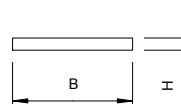


St FT

Galvanised steel flat conductor for earth

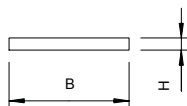
Type	Dim. B mm	Dim. H mm	Cross-section mm ²	Normal ring ca. kg	Pack m	Weight kg/100 m	Item no.
5052 DIN 30X3.5	30	3.5	105	25	30	84.000	5019345
5052 DIN 30X3.5	30	3.5	105	50	60	84.000	5019347
5052 DIN 30X4	30	4	120	50	52	97.000	5019350
5052 DIN 40X4	40	4	160	51	40	128.000	5019355
5052 DIN 40X5	40	5	200	50	30	162.000	5019360

- According to DIN EN 62561-2 (VDE 0185-561-2)
- Meets the requirements of VDE 0185-305 (IEC 62305)
- Zinc coating: $\geq 500 \text{ g/m}^2$ (approx. $70 \mu\text{m}$ in mean value)
- For lightning protection, earthing systems and ring equipotential bonding



Stainless steel flat conductor

VA VA

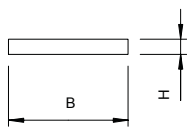


Type	Dim. B mm	Dim. H mm	Cross-section mm ²	Normal ring ca. kg	Pack m	Weight kg/100 m	Item no.
5052 V2A 30X3.5	30	3.5	105	42	50	82.500	5018501
5052 V4A 30X3.5	30	3.5	105	42	50	82.425	5018706
5052 V4A 30X3.5	30	3.5	105	21	25	82.425	5018730

- According to DIN EN 62561-2 (VDE 0185-561-2)
- Corresponds to the requirements of VDE 0185-305 (IEC 62305)
- According to the foundation earth electrode standard DIN 18014, V4A is required in the earth
- For use in areas at risk of corrosion
- For lightning protection, earthing systems and ring equipotential bonding

Flat conductor, copper

Cu

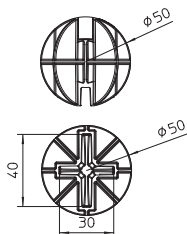


Type	Dimension W x H mm	Cross-section mm ²	Normal ring ca. m	Normal ring ca. kg	Pack m	Weight kg/100 m	Item no.
FL 25-CU	25x3	75	50	33	50	67.000	5021830

- According to DIN EN 62561-2 (VDE 0185-561-2)
- Meets the requirements of VDE 0185-305 (IEC 62305)
- For lightning protection, earthing systems and ring equipotential bonding

Protective cap for connection lugs, reflective

PE

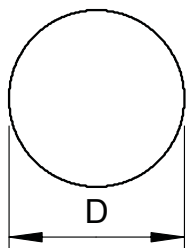


Type	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
ProtectionBall	RD 8-10/ FL 25/ 30/ 40	25	2.050	5018014

- For snapping onto round conductors or flat conductors
- Noticeable, reflective label
- For accident protection during the construction phase

Round conductor, copper sheathed

St Cu



Type	Nominal size Ø mm	Cross-section mm ²	Pack m	Weight kg/100 m	Item no.
RD 8-ST CU	8	50	100	40.000	5021380

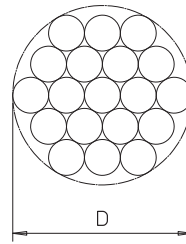
- According to IEC/ EN 62561-2 (VDE 0185-561-2)
- Meets the requirements of VDE 0185-305 (IEC 62305)
- Copper layer thickness: Min. 250 µm

Alu

Aluminium bare stranded conductor 50 mm²

Type	Nominal size Ø mm	Cross-section mm ²	Normal ring ca. m	Normal ring ca. kg	Pack m	Weight kg/100 m	Item no.
S 9-AL	9	50	100	13.3	100	13.300	5021700

Aluminium bare stranded conductor for use as air-termination system or conductor according to DIN EN 62561-2 (VDE 0185-561-2).



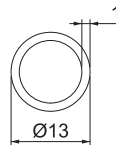
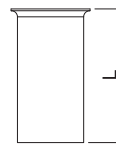
Accessories

Cu

Wire end sleeve for aluminium cables 50 mm²

Type	Fit mm	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
AEH S 9-AL	Seil 9 mm	22	10	0.205	5021740

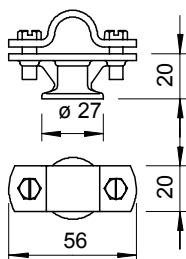
Wire end sleeve for secure fixing of the aluminium cable with a cross-section of 50 mm².



Holder for air-termination and earth entry rods

Rod holder, 16 mm

Zn Cu

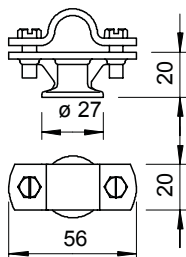


Type	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
113 ZN-16	Rd 16	10	10.100	5412633

- For lightning and ground insertion rods Rd 16
- Installed with over-piece and hex-head screws M6 x 16
- With female thread M8 or through hole Ø 7 mm

Rod holder, 16 mm

Zn



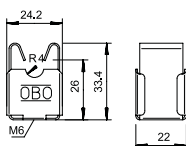
Type	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
113 Z-16	Rd 16	10	6.000	5412609

- For lightning and ground insertion rods Rd 16
- Installed with over-piece and hex-head screws M6 x 16
- With female thread M8 or through hole Ø 7 mm

Screwless cable brackets

Cable bracket for Rd 8 mm, through-way Ø 7 mm

VA



Type	Fit mm	Installation height mm	Pack Piece	Weight kg/100 pc.	Item no.
177 20 VA M8	Rd 8	20	20	1.838	5207347

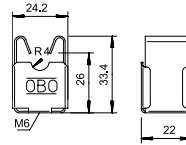
- With female thread M8 or through hole Ø 5 mm
- From stainless steel (V2A)

VA

Cable bracket for Rd 8 mm, through-way Ø 5 mm

Type	Installation		Pack Piece	Weight kg/100 pc.	Item no.
	Fit mm	height mm			
177 20 VA M6	Rd 8	20	20	2.500	5207339

- With female thread M6 or through hole Ø 5 mm
- From stainless steel (V2A)

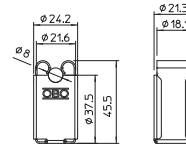


VA

Cable bracket, raised construction type, for Rd 8 mm, through-way Ø 5 mm

Type	Installation		Pack Piece	Weight kg/100 pc.	Item no.
	Fit mm	height mm			
177 35 VA M6	Rd 8	35	20	2.680	5207342

- With female thread M6 or through hole Ø 5 mm
- From stainless steel (V2A)



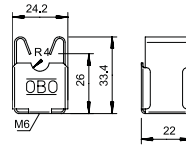
VA

Cu

Cable bracket for Rd 8 mm, through-way Ø 5 mm, copper-plated

Type	Installation		Pack Piece	Weight kg/100 pc.	Item no.
	Fit mm	height mm			
177 20 VA-VK M6	Rd 8	20	20	2.500	5207800

- With female thread M6 or through hole Ø 5 mm
- From stainless steel (V2A)
- VA-VK: copper-plated



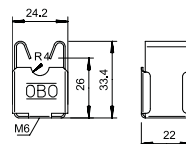
VA

Cu

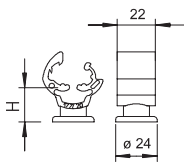
Cable bracket for Rd 8 mm, through-way Ø 7 mm, copper-plated

Type	Installation		Pack Piece	Weight kg/100 pc.	Item no.
	Fit mm	height mm			
177 20 VA-VK M8	Rd 8	20	20	1.900	5207819

- With female thread M8 or through hole Ø 5 mm
- From stainless steel (V2A)
- VA-VK: copper-plated



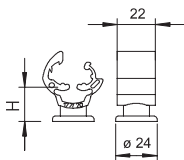
Cable bracket Rd 8–10 mm



Type	Fit mm	Installation height mm	Pack Piece	Weight kg/100 pc.	Item no.
177 20 M8	Rd 8-10	20	20	0.723	5207444
177 30 M8	Rd 8-10	30	20	0.790	5207460
177 55 M8	Rd 8-10	55	20	1.007	5207487

- With female thread M8 or through hole Ø 7 mm
- Weather and temperature-resistant from -35 °C to +90 °C

Cable bracket Rd 8–10 mm, copper-plated

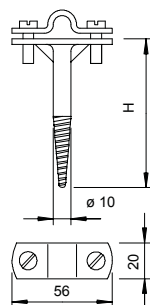


Type	Fit mm	Installation height mm	Pack Piece	Weight kg/100 pc.	Item no.
177 20 CU	Rd 8-10	20	10	0.718	5207746
177 30 CU	Rd 8-10	30	10	0.784	5207754
177 55 CU	Rd 8-10	55	10	1.450	5207762

- With female thread M8 for screwing and through hole for wood screws
- Colour: copper
- Weather and temperature-resistant from -35 °C to +90 °C

Cable bracket with crossbar

Cable bracket Rd 8–10 mm, with wood screw thread



Type	Fit mm	Dim. H mm	Pack Piece	Weight kg/100 pc.	Item no.
176 A 65	Rd 8-10	65	50	9.536	5227070
176 A 80	Rd 8-10	80	50	10.025	5227089
176 A 100	Rd 8-10	100	50	11.500	5227100
176 A 150	Rd 8-10	150	20	13.100	5227151

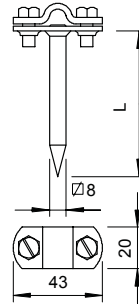
- Also for flat conductor to FL 30
- With wood screw thread
- Bottom section, hot-dip galvanised cast iron
- Over-piece and screws, hot dipped galvanised steel

St FT

Cable bracket Rd 8–10 mm, with square pin

Type	Fit mm	Length mm	Pack Piece	Weight kg/100 pc.	Item no.
163 70 FT	Rd 8-10	70	50	8.476	5223075
163 100 FT	Rd 8-10	100	50	10.056	5223105
163 200 FT	Rd 8-10	200	20	18.880	5223202

- Complete with crossbar and hexagonal bolts
- With square pin for rapid mounting
- With hexagonal bolts made of VA

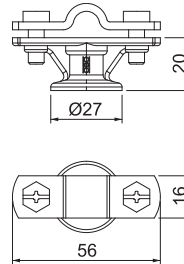


Zn Cu

Cable bracket Rd 8–10 mm

Type	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
113 8-10	Rd 8-10	20	6.247	5230217

- With female thread M8 or through hole Ø 7 mm
- Over-piece installed with 2 hexagonal bolts



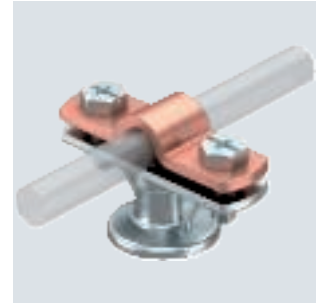
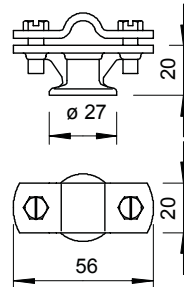
Zn

Cable bracket with Cu crossbar Rd 8–10 mm

Type	Material	Surface	Pack Piece	Weight kg/100 pc.	Item no.
113 B-Z16	Zn	VZ	100	6.000	5412706

113/BZ...: Cable bracket with crossbar

- With female thread M8 or through hole for wood screws
- For flat conductor FL30
- Sliding crossbar for quick mounting

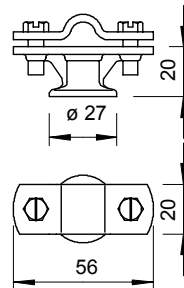


Zn G

Cable bracket with crossbar Rd 8–10 mm

Type	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
113 Z8-10	Rd 8-10	20	5.956	5229960

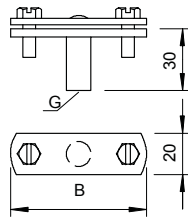
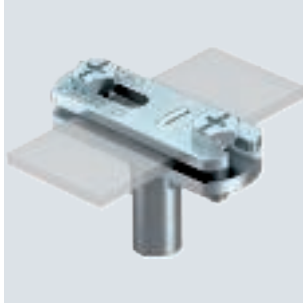
- With female thread M8 or through hole Ø 7 mm
- Over-piece installed with 2 hexagonal bolts
- Version HD with wood screws (5 x 60) and plastic dowels (8 x 40)



Cable bracket with crossbar

Zn G

Cable bracket for flat conductors

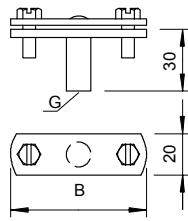
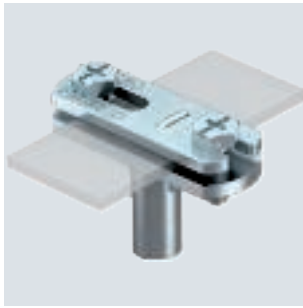


Type	Dim.			Pack Piece	Weight kg/100 pc.	Item no.
	B mm	Fit mm	Thread			
168 FL30-M6	56	FL 30	M6	20	7.640	5229464
168 DIN 30	56	FL 30	M8	20	6.570	5229480

- For flat strip
- With female thread (G)
- Installed height 30 mm

Cable bracket for flat conductors

TG FT



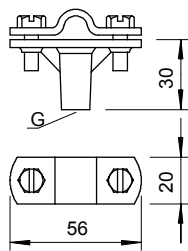
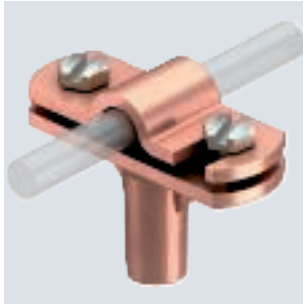
Type	Dim.			Pack Piece	Weight kg/100 pc.	Item no.
	B mm	Fit mm	Thread			
168 FL40-M8	66	FL 40	M8	20	8.200	5229553

- For flat strip
- With female thread (G)
- Installed height 30 mm

Cable bracket with hinged crossbar

Zn Cu

Cable bracket with hinged crossbar



Type	Fit		Thread	Pack Piece	Weight kg/100 pc.	Item no.
	mm					
168 ZN-M6	Rd 8-10	M6		20	8.660	5229367
168 DIN-K-M8	Rd 8-10	M8		20	8.440	5229383

- With female thread (G)
- With over-piece and 2 hexagonal bolts
- Installed height 30 mm

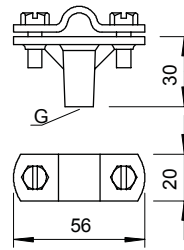


Zn G

Cable bracket Rd 8–10 mm, 30 mm mounting height

Type	Fit mm	Thread	Pack Piece	Weight kg/100 pc.	Item no.
168 8-10 M6	Rd 8-10	M6	20	7.800	5229162
168 DIN-K-M8	Rd 8-10	M8	20	7.780	5229839

- With female thread (G)
- With over-piece and 2 hexagonal bolts
- Installed height 30 mm

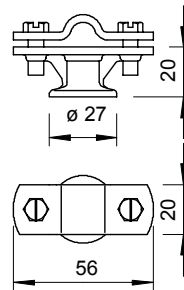


Zn G

Cable bracket with hinged crossbar Rd 8–10 mm

Type	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
113 Z-K 8-10	Rd 8-10	20	6.202	5229961

- With female thread M8 or through hole \varnothing 7 mm
- Hinge crossbar for quick swivel mounting
- Crossbar mounted with 2 hexagonal bolts



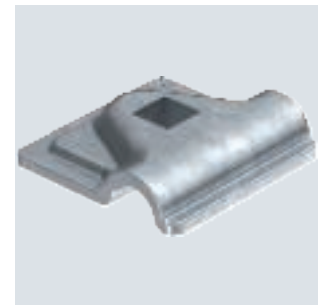
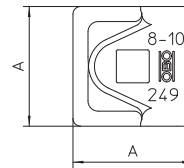
Quick connector, covers

St FT

Quick connector, upper part Rd 8–10 mm

Type	Fit mm	Dim. A mm	Pack Piece	Weight kg/100 pc.	Item no.
249 8-10 ST-OT	Rd 8-10	40	100	3.240	5311503

- For round conductor fastening RD 8-10
- Suitable for M10 bolts



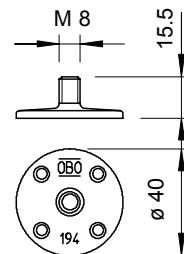
Accessories

PA

Bonding base

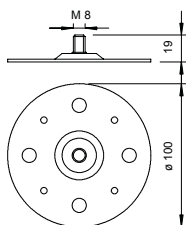
Type	Colour	Thread	Pack Piece	Weight kg/100 pc.	Item no.
194	Grey	M8	100	0.389	5207258

- With threaded stem M8
- For mounting cable supports with M8 female thread
- For bonding to concrete, steel or brickwork
- When installing flat conductors and round conductors, expansion elements are to be used for thermal compensation



Base plate

St FS

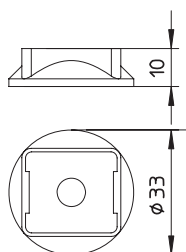


Type	Thread	Pack Piece	Weight kg/100 pc.	Item no.
199 DIN	M8	10	14.200	5208017

- With threaded pin M8
- Suitable for direct bonding
- Threaded pin brass and base plate hot-dip galvanised steel

Washer for cable bracket, type 177

PP



Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
177 U	Light grey	20	0.286	5207371

- For simple wall installation
- UV-resistant

Hard foam plate anchor

PA



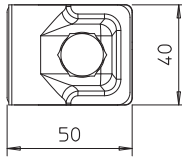
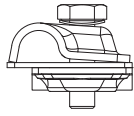
Type	Length mm	Dowel Ø mm	Wood screws Ø mm	Break load kN	Pack Piece	Weight kg/100 pc.	Item no.
177 WDVS 64x25 B	63.5	9	4-5	0.05	50	0.658	5207375

Anchor for universal light-duty fastening in plastered composite heat insulation systems (WDVS). The self-tapping point makes pre-drilling superfluous.



Vario quick connector Rd 8-10x16

VA

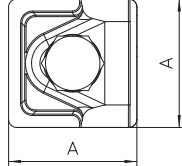
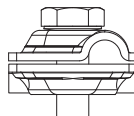
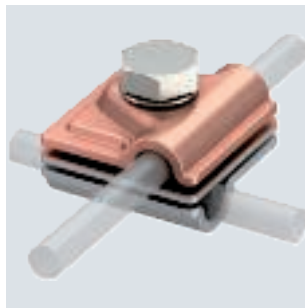


Type	Fit mm	Dim. A mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
249 8-10X16 VA	8-10x16	40	H/100	10	14.958	5311590

- For T, intersection and parallel connections with adapter plates
- Quick mounting using an M10 x 30 bolt, made from rustproof stainless steel
- With sprung washer to DIN 137
- Corresponds to the requirements of VDE 0185-305 (IEC 62305)

Variable bi-metal quick connector

Cu

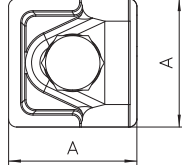
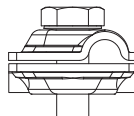
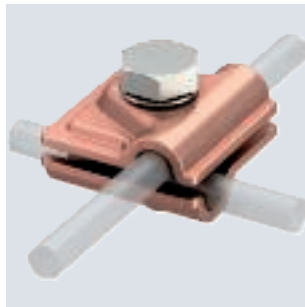


Type	Fit mm	Dim. A mm	Lightning current carrying capacity kA	Material	Pack Piece	Weight kg/100 pc.	Item no.
249 8-10 ZV	Rd 8-10	44	H/100	Cu	10	14.220	5311535

- Intermediate plate, copper/aluminium, top section copper and aluminium
- For T, cross and parallel connectors
- Quick installation using hexagonal bolt M10 x 30, high-grade stainless steel
- With spring washer according to DIN 137
- Conforms to the requirements according to DIN VDE 0185-305 (IEC 62305)

Vario quick connector

Cu

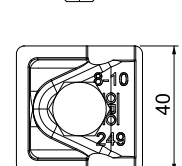
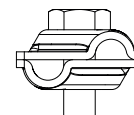


Type	Fit mm	Dim. A mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
249 8-10 CU	Rd 8-10	40	H/100	10	11.900	5311527

- For T, cross and parallel connectors
- Quick installation using hexagonal bolt M10 x 30, high-grade stainless steel
- Conforms to the requirements according to DIN VDE 0185-305 (IEC 62305)

Vario quick connector

VA



Type	Fit mm	Lightning current carrying capacity kA	Short-circuit current (50 Hz) (1 s; ≤300 °C) kA	Pack Piece	Weight kg/100 pc.	Item no.
249 8-10 V4A	Rd 8-10	H/100	1.4	10	9.500	5311404

- For T, intersection and parallel connections
- Complete component made of A4
- Quick mounting using an M10 x 30 bolt, made from rustproof stainless steel
- Meets the requirements of VDE 0185-305 (IEC 62305)



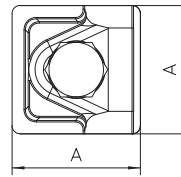
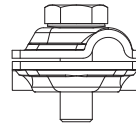
VA



Vario quick connector

Type	Fit mm	Dim. A mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
249 8-10 VA	Rd 8-10	40	H/100	10	9.276	5311551

- For T, cross and parallel connectors
- Quick installation using hexagonal bolt M10 x 30, high-grade stainless steel
- Conforms to the requirements according to DIN VDE 0185-305 (IEC 62305)



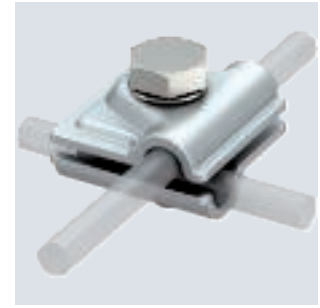
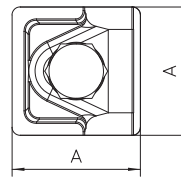
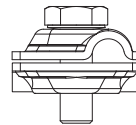
Alu



Vario quick connector

Type	Fit mm	Dim. A mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
249 8-10 ALU	Rd 8-10	44	H/100	30	6.600	5311519

- For T, cross and parallel connectors
- Quick installation using hexagonal bolt M10 x 30, high-grade stainless steel
- Conforms to the requirements according to DIN VDE 0185-305 (IEC 62305)



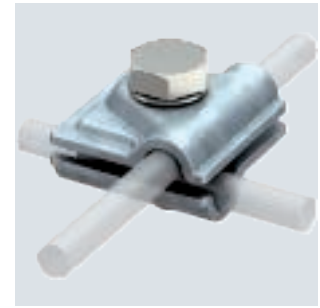
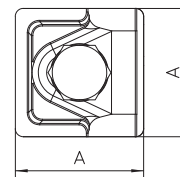
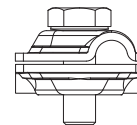
St FT



Vario quick connector

Type	Fit mm	Dim. A mm	Short-circuit current (50 Hz) (1 s; ≤300 °C) kA	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
249 8-10 ST	Rd 8-10	40	5.6	H/100	20	9.306	5311500
249 B ST	Rd 8-10	40	5.6	H/100	100	10.800	5311705

- For T, cross and parallel connectors
- Quick installation using hexagonal bolt M10 x 30, high-grade stainless steel
- Conforms to the requirements according to DIN VDE 0185-305 (IEC 62305)



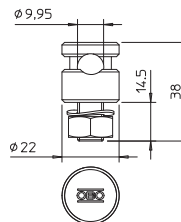
VA



Connector, Rd 8–10 mm with pressure trough

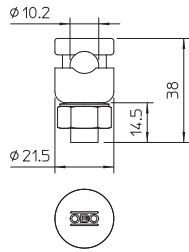
Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
5001 N-VA	Rd 8-10	N/50	10	6.800	5304176

- With 1 fix contact clamping screw, nut and serrated washer
- Including pre-mounted pressure sump, steel
- Conforms to the requirements according to DIN VDE 0185-305 (IEC 62305)



Connector, Rd 8–10 mm with pressure trough

St FT

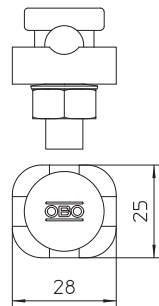


Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
5001 N-FT	Rd 8-10	N/50	20	5.900	5304164

- With 1 fix contact clamping screw, nut and serrated washer
- Including pre-mounted pressure sump, steel
- Conforms to the requirements according to DIN VDE 0185-305 (IEC 62305)

Connector Rd 8–10 mm, single

St FT

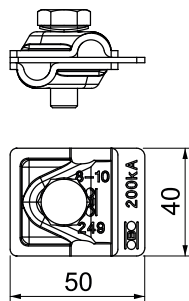


Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
5001 DIN-FT	Rd 8-10	H/100	20	7.450	5304105

- With fix contact clamping screw, nut and serrated washer
- With bore hole 10.2 mm
- With pre-mounted pressure piece, die-cast zinc
- Conforms to the requirements according to DIN VDE 0185-305 (IEC 62305)

Vario quick connector 200 kA

VA



Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
249 8-10 V2A 200	Rd 8-10	H2/200	10	12.374	5311595

- For T, intersection and parallel connections
- Quick mounting using an M10 x 30 bolt, made from rustproof stainless steel
- Meets the requirements of VDE 0185-305 (IEC 62305)
- Tested according to VDE 0185-561-1 (IEC/EN 62561-1) with 200 kA
- For use in lightning protection class I with the isCon® Premium conductor



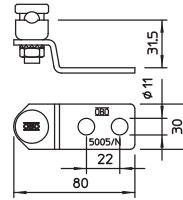
St FT



Connection and end piece with connector and pressure trough

Type	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
5005 N-FT	Rd 8-10	10	11.600	5304660

- With 2 attaching holes \varnothing 11 mm
- Including pre-mounted connector 5001 N
- Conforms to the requirements according to DIN VDE 0185-305 (IEC 62305)



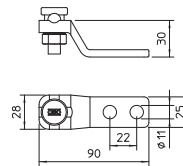
St F



Connection and end piece, DIN version

Type	Fit mm	Material	Pack Piece	Weight kg/100 pc.	Item no.
5005 DIN-FT	Rd 8-10	St	10	15.518	5304601

- With 2 attaching holes and 1 fix contact clamping screw 5000...
- With 2 attaching holes \varnothing 11 mm
- Conforms to the requirements according to DIN VDE 0185-305 (IEC 62305)

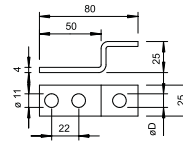


VA

Connection and end piece

Type	Dim. D \varnothing mm	Pack Piece	Weight kg/100 pc.	Item no.
5011 VA M10	11	10	7.064	5334934
5011 VA M12	13	10	7.048	5334942

- For attaching to steel structures or bolting to fixed earthing terminals
- For attachments: Round conductor Rd 8-10 and flat conductor FL 30 x 3.5
- 2 attaching holes \varnothing 11 mm
- 1 attaching holes \varnothing D mm

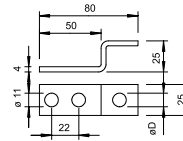


St FT

Connection and end piece

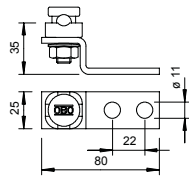
Type	Dim. D \varnothing mm	Pack Piece	Weight kg/100 pc.	Item no.
5011	11	10	7.064	5304997

- For attaching to steel structures or bolting to fixed earthing terminals
- For attachments: Round conductor Rd 8-10 and flat conductor FL 30 x 3.5
- 2 attaching holes \varnothing 11 mm
- 1 attaching holes \varnothing D mm



Connection and end piece with connector

St F



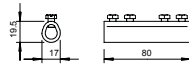
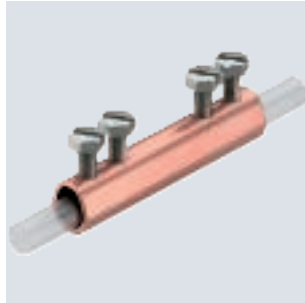
Type	Material	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
5009	St	Rd 8-10	H/100	10	14.500	5304970

- With 2 attaching holes \varnothing 11 mm
- Installed with connector (single-piece) type 5001 DIN-FT
- Conforms to the requirements according to DIN VDE 0185-305 (IEC 62305)

Straight connector

Straight connector Rd 6–10 mm

Cu



Type	Material	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
237 N CU	Cu	Rd 6-10	H/100	10	8.760	5328284

- With 4 hexagonal bolts M6 x 12
- Complies with the requirements of VDE 0185-305-3 (IEC/EN 62305-3)

Straight connector Rd 8–10 mm

St F



Type	Material	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
237 N FT	St	Rd 8-10	H/100	20	8.560	5328209

- With 4 hexagonal bolts M6 x 10
- Complies with the requirements of VDE 0185-305-3 (IEC/EN 62305-3)



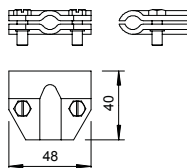
St FT



Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
245 8-10 FT	Rd 8-10	N/50	10	9.401	5311101

- With 2 hexagonal bolts M6 x 16 (VA)
- Complies with the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)

T connector Rd 8–10 mm



Cross-connectors

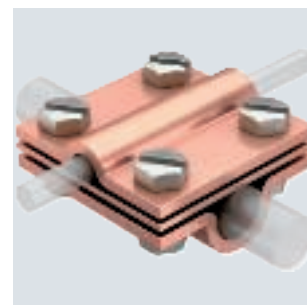
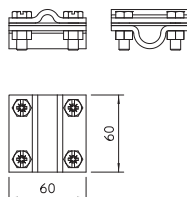
Cu



Cross-connector with intermediate plate for Rd 8–10 x Rd 16

Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
252 8-10x16 CU	Rd 8-10 x 16	H/100	10	43.985	5312442

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Fit: Rd 8–10 x Rd 16 / FL 30
- With adapter plate
- Mounted with 4 hexagonal bolts M8 x 25 and 4 hexagonal nuts M8 made of rust-proof stainless steel (A2)



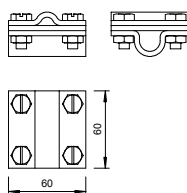
VA



Cross-connector with intermediate plate for Rd 8–10 x Rd 16

Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
252 8-10x16 V4A	Rd 8-10 x 16	H/100	10	39.000	5312346

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Fit: Rd 8-10 x Rd 16 / FL 30
- With adapter plate
- Mounted with 4 hexagonal bolts M8 x 25 and 4 hexagonal nuts M8



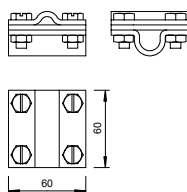
St FT



Cross-connector with intermediate plate for Rd 8–10 x Rd 16

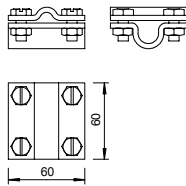
Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
252 8-10x16 FT	Rd 8-10 x 16	H/100	25	38.800	5312345

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Fit: Rd 8-10 x Rd 16 / FL 30
- With adapter plate
- Mounted with 4 hexagonal bolts M8 x 25 and 4 hexagonal nuts M8



Cross-connector for Rd 8–10 x Rd 16

St FT

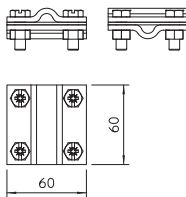
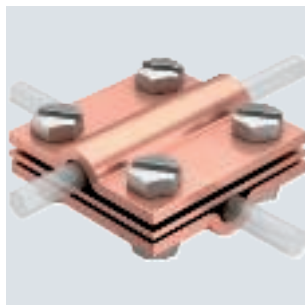


Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
253 10X16	Rd 8-10 x 16	H/100	25	29.800	5312809

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Fit: Rd 8-10 x Rd 16 / FL 30
- Mounted with 4 hexagonal bolts M8 x 25 and 4 hexagonal nuts M8 (F)

Cross-connector with intermediate plate for Rd 8–10

Cu

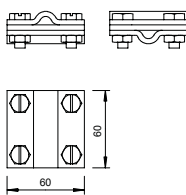


Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
252 8-10 CU	Rd 8-10	H/100	10	38.940	5312418

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Fit: Rd 8–10 x Rd 8–10 / FL 30
- With adapter plate
- Mounted with 4 hexagonal bolts M8 x 25 and 4 hexagonal nuts M8 made of rust-proof stainless steel (A2)

Cross-connector with intermediate plate for Rd 8–10

VA



Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
252 8-10 V4A	Rd 8-10	H/100	10	33.530	5312318

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Fit: Rd 8-10 x Rd 8-10 / FL 30
- With adapter plate
- Mounted with 4 hexagonal bolts M8 x 25 and 4 hexagonal nuts M8



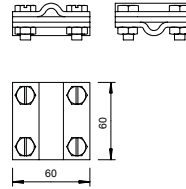
St FT



Cross-connector with intermediate plate for Rd 8–10

Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
252 8-10 FT	Rd 8-10	H/100	25	33.530	5312310

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Fit: Rd 8-10 x Rd 8-10 / FL 30
- With adapter plate
- Mounted with 4 hexagonal bolts M8 x 25 and 4 hexagonal nuts M8 (F)



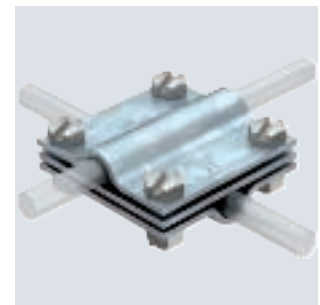
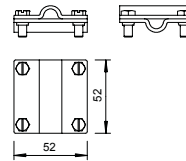
St FT



Cross-connector with intermediate plate for Rd 8–10 mm

Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
254 DIN 8-10 FT	Rd 8-10	H/100	25	16.660	5314038

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- For round conductors, fit: Rd 8-10 x Rd 8-10
- With adapter plate
- Mounted with 4 hexagonal bolts M6 x 20 and 4 hexagonal nuts M6



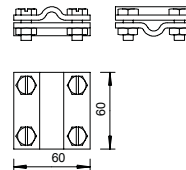
St FT



Cross-connector Rd 8–10

Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
253 8X8	Rd 8-10	H/100	25	30.700	5312604

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Fit: Rd 8–10 x Rd 8–10 / FL 30
- Mounted with 4 hexagonal bolts M8 x 25 and 4 hexagonal nuts M8 (F)



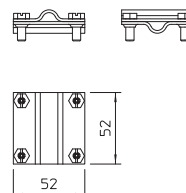
St FT



Cross-connector Rd 8–10 mm

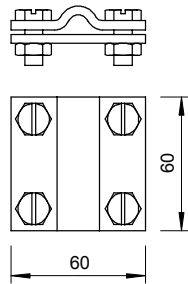
Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
251 8-10	Rd 8-10	H/100	25	11.690	5312035

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- For round conductors, fit: Rd 8-10 x Rd 8-10
- With 4 hexagonal bolts M6 x 16 (VA)



Cross-connector for round conductors and flat conductors

VA



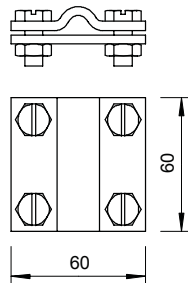
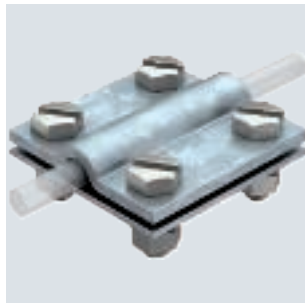
Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
252 8-10xFL30V4A	8-10xFL30	H/100	10	28.500	5312656

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Fit: Rd 8-10 x FL 30
- Mounted with 4 hexagonal bolts M8 x 25 and 4 hexagonal nuts M8

Cross-connector for round and flat conductors

St

FT



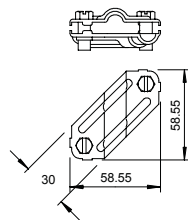
Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
252 8-10xFL30 FT	8-10xFL30	H/100	25	28.500	5312655

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Fit: Rd 8-10 x FL 30
- Mounted with 4 hexagonal bolts M8 x 25 and 4 hexagonal nuts M8

Cross-connector for flat conductors and round conductors

VA

VA



Type	Fit mm	Lightning current carrying capacity kA	Short-circuit current (50 HZ) (1 s; ≤300 °C) kA	Pack Piece	Weight kg/100 pc.	Item no.
250 VA	Rd 8-10/FL30	H/100	1.4	25	10.260	5312922
250 V4A	Rd 8-10/FL30	H/100	1.4	10	10.260	5312925

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Fit: Rd 8-10 x Rd 8-10
- Fit: Rd 8-10 x FL 30
- Fit: FL 30 x FL 30
- Mounted with 2 hexagonal bolts M8 x 20



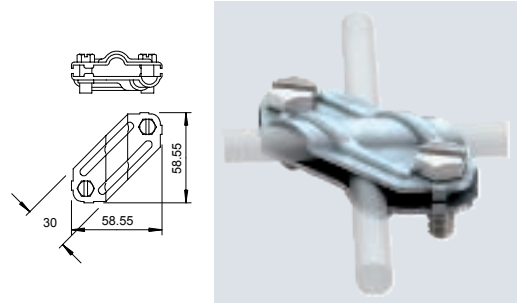
St FT



Cross-connector for flat conductors and round conductors

Type	Fit mm	Lightning current carrying capacity kA	Short-circuit current (50 HZ) (1 s; ≤300 °C) kA	Pack Piece	Weight kg/100 pc.	Item no.
250	Rd 8-10/FL30	N/50	5.6	25	10.260	5312906

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Fit: Rd 8-10 x Rd 8-10
- Fit: Rd 8-10 x FL 30
- Fit: FL 30 x FL 30
- Mounted with 2 hexagonal bolts M8 x 20 (F)

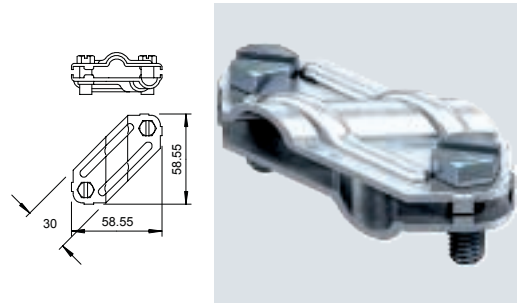


VA

Cross-connector 250 VA

Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
250 VA-FR	Rd 8-10/FL30	H/100	25	8.700	5312930

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Fit: Rd 8-10 x Rd 8-10
- Fit: Rd 8-10 x FL 30
- Fit: FL 30 x FL 30
- Mounted with 2 hexagonal bolts M8 x 20 (F)



Folding clamps

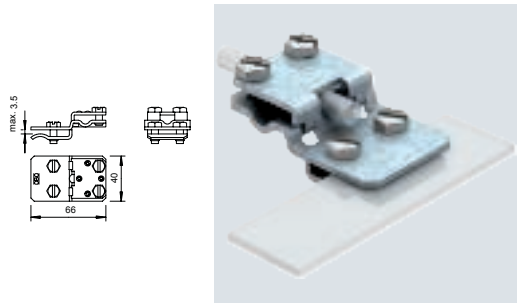
St FT



Folding clamp and connection terminal up to 10 mm plate thickness

Type	Fit mm	Clamping range mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
274 8-10	Rd 8-10	max. 10	N/50	20	10.400	5317428

- Plate thickness to 10 mm
- For conductor routing transverse and longitudinal to plate
- 4 hexagonal bolts M6 x 16
- Conforms to the requirements according to DIN VDE 0185-305 (IEC 62305)



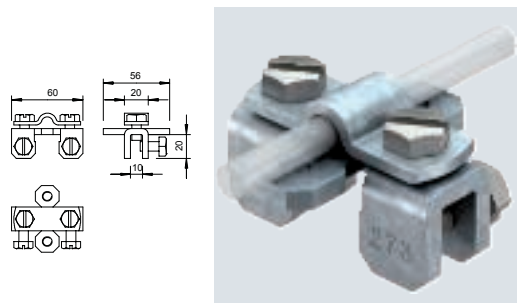
St FT



Folding clamp up to 10 mm plate thickness

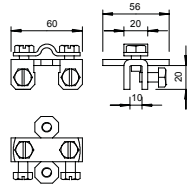
Type	Fit mm	Clamping range mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
273 8-10	Rd 8-10	max. 10	N/50	50	17.200	5317223

- Plate thickness to 10 mm
- Conductor routing transverse and longitudinal to plate with 2 hexagonal bolts M8 x 10 and 2 hexagonal bolts M8 x 16 (F)



Folding clamp up to 10 mm plate thickness

Cu

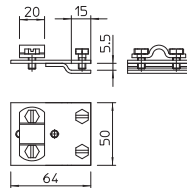


Type	Fit mm	Clamping range mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
273 CU	Rd 8-10	max.10	N/50	10	18.500	5317274

- Plate thickness to 10 mm
- Conductor routing transverse and longitudinal to plate with 2 hexagonal bolts M8 x 10 and 2 hexagonal bolts M8 x 16 (F)
- 273 Cu: with hexagonal bolts, stainless steel (VA)

Folding clamp up to 5 mm plate thickness

VA



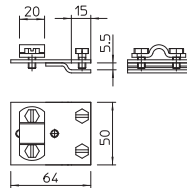
Type	Fit mm	Clamping range mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
271 8-10 VA	Rd 8-10	max.5	N/50	10	15.000	5317481

- Plate thickness to 5 mm
- For conductor routing transverse and longitudinal to plate
- With 4 hexagonal bolts M6 x 12
- Conforms to the requirements according to DIN VDE 0185-305 (IEC 62305)
- 271 Cu: with hexagonal bolts stainless steel (VA)

Folding clamp up to 5 mm plate thickness

St

FT



Type	Fit mm	Clamping range mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
271 8-10	Rd 8-10	max.5	N/50	20	14.060	5317401

- Plate thickness to 5 mm
- For conductor routing transverse and longitudinal to plate
- With 4 hexagonal bolts M6 x 12
- Conforms to the requirements according to DIN VDE 0185-305 (IEC 62305)
- 271 Cu: with hexagonal bolts stainless steel (VA)



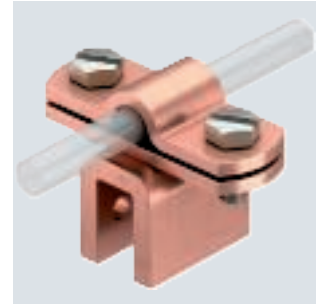
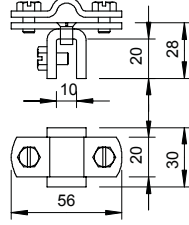
Cu



Folding clamp Rd 8-10 up to 10 mm plate thickness

Type	Fit mm	Clamping range mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
270 8-10 CU	Rd 8-10	max. 10	H/100	10	14.740	5317258

- Metal thickness to 10 mm
- For conductor routing transverse and in parallel to the plate
- Corresponds to the requirements to DIN V VDE V 0185-3 section 4.5



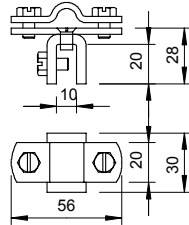
VA



Folding clamp Rd 8-10 up to 10 mm plate thickness

Type	Fit mm	Clamping range mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
270 8-10 VA	Rd 8-10	max. 10	N/50	10	13.800	5317208

- Metal thickness to 10 mm
- For conductor routing transverse and in parallel to the plate
- Corresponds to the requirements to DIN V VDE V 0185-3 section 4.5



St

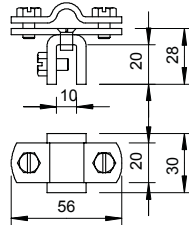
FT



Folding clamp Rd 8-10 up to 10 mm plate thickness

Type	Fit mm	Clamping range mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
270 8-10 FT	Rd 8-10	max. 10	N/50	20	13.810	5317207

- Metal thickness to 10 mm
- For conductor routing transverse and in parallel to the plate
- Corresponds to the requirements to DIN V VDE V 0185-3 section 4.5



Zn

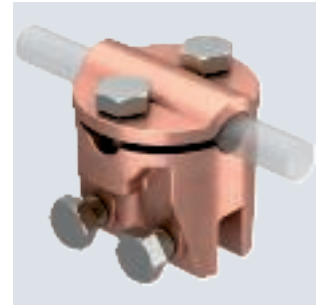
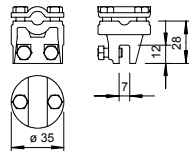
Cu



Folding clamp up to 7 mm plate thickness

Type	Fit mm	Clamping range mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
269 MS	Rd 8-10	max. 7	H/100	10	14.480	5317053

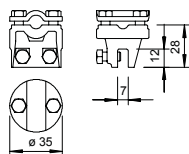
- Plate thickness to 7 mm
- For conductor arrangement transverse and parallel to plate with 4 hexagonal bolts M6 x 16
- Conforms to the requirements according to DIN VDE 0185-305 (IEC 62305)



Folding clamps

Folding clamp up to 7 mm plate thickness

Zn G

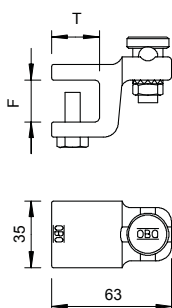


Type	Fit mm	Clamping range mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
269 8-10	Rd 8-10	max. 7	N/50	20	14.460	5317010

- Plate thickness to 7 mm
- For conductor arrangement transverse and parallel to plate with 4 hexagonal bolts M6 x 16
- Conforms to the requirements according to DIN VDE 0185-305 (IEC 62305)

Folding and construction clamp, 10–20 mm

TG FT



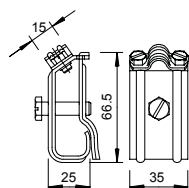
Type	Fit mm	Clamping range mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
5004 DIN-FT 12	Rd 8-10	max. 12	N/50	10	18.730	5304407
5004 DIN-FT 20	Rd 8-10	10-20	N/50	10	30.600	5304504

- Flange thickness to 12 or 10–20 mm
- With pre-mounted Fix-Kontakt clamping screw 5000
- 2 hexagonal bolts M8 x 20, screws made of hot galvanised steel
- Terminal block made of malleable iron, hot galvanised
- Mounting of the round conductors either vertical or transverse to structure
- Corresponds to the requirements of DIN VDE 0185-305-3

Roof gutter clamps

Gutter clamp for all bead thicknesses

St FT



Type	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
267	Rd 8-10	25	13.950	5316308

- Fits all bead thicknesses
- With 1 hexagonal bolt M8 x 30
- 2 hexagonal bolts M6 x 12



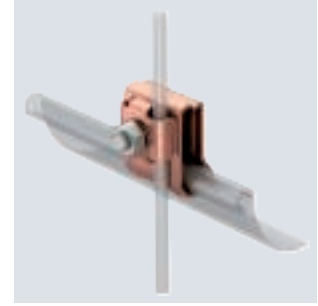
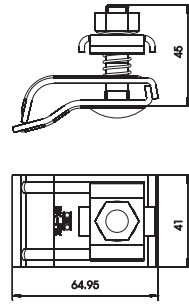
VA Cu



Gutter clamp RK-FIX

Type	Fit mm	Lightning current carrying capacity kA	Material	Pack Piece	Weight kg/100 pc.	Item no.
RK-FIX CU	2xRd 8/ 2xRd 6	H/100	A2	10	21.000	5316468

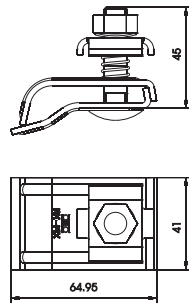
- For up to 2 conductors Rd 6 or Rd 8
- Suitable for all bead thicknesses (15–25 mm)
- With 1 truss-head bolt M10 x 45
- Nut and bolt made of VA stainless steel
- With spring for prefixing on rain gutter
- Tested to VDE 0185-561-1 (IEC/EN 62561-1)



St FT

Type	Fit mm	Lightning current carrying capacity kA	Material	Pack Piece	Weight kg/100 pc.	Item no.
RK-FIX	2xRd 8	H/100	St	25	19.100	5316450

- For up to 2 round conductors Rd 8
- Suitable for all bead thicknesses (15–25 mm)
- With 1 truss-head bolt M10 x 45
- Nut and bolt made of VA stainless steel
- With spring for prefixing on rain gutter
- Tested to VDE 0185-561-1 (IEC/EN 62561-1)



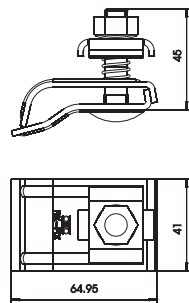
VA



Gutter clamp RK-FIX

Type	Fit mm	Lightning current carrying capacity kA	Material	Pack Piece	Weight kg/100 pc.	Item no.
RK-FIX VA	2xRd 8/ 2xRd 6	H/100	A2	10	19.100	5316459

- For up to 2 round conductors Rd 6 or Rd 8
- Suitable for all bead thicknesses (15–25 mm)
- With 1 truss-head bolt M10 x 45
- Nut and bolt made of VA stainless steel
- With spring for prefixing on rain gutter
- Tested to VDE 0185-561-1 (IEC/EN 62561-1)

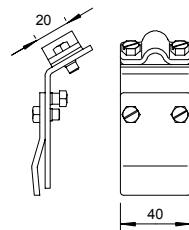


Cu

Roof gutter clamp for all bead thicknesses

Type	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
262 CU	Rd 8-10	10	20.940	5316154

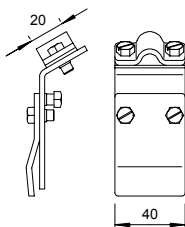
- With 4 hexagonal bolts M6 x 16
- Fits all bead thicknesses



Roof gutter clamps

Roof gutter clamp for all bead thicknesses

St FT



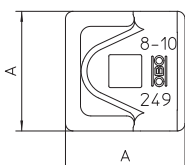
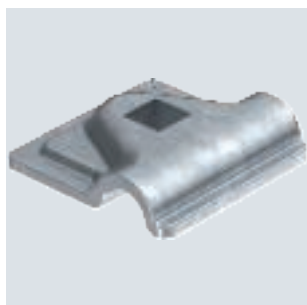
Type	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
262	Rd 8-10	25	20.300	5316014

- With 4 hexagonal bolts M6 x 16
- Fits all bead thicknesses

Connection terminals

Quick connector, upper part Rd 8–10 mm

St FT



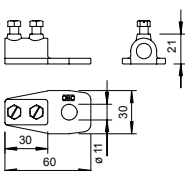
Type	Fit mm	Dim. A mm	Pack Piece	Weight kg/100 pc.	Item no.
249 8-10 ST-OT	Rd 8-10	40	100	3.240	5311503

- For round conductor fastening RD 8-10
- Suitable for M10 bolts

End pieces

End piece

Zn G



Type	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
280 8-10	Rd 8-10	20	6.300	5320011

- With Ø 11 mm attaching hole
- 2 hexagonal bolts M6 x 12, bolts hot-dip galvanised steel or VA
- Clamping element from die-cast zinc or copper-plated die-cast zinc

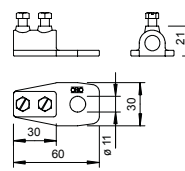


Zn

End piece

Type	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
280 VK	Rd 8-10	20	9.000	5320054

- With Ø 11 mm attaching hole
- 2 hexagonal bolts M6 x 12, bolts hot-dip galvanised steel or VA
- Clamping element from die-cast zinc or copper-plated die-cast zinc



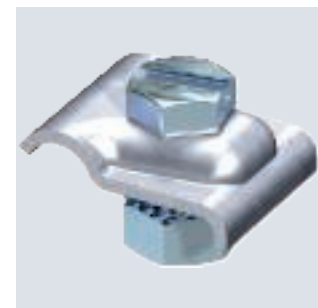
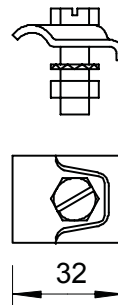
Universal terminal blocks

St FT

Universal clamping block Rd 8–10 mm

Type	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
324 S-FT	Rd 8-10	20	3.400	5326303

- Including hexagonal bolt M8 x 25, washer and nuts



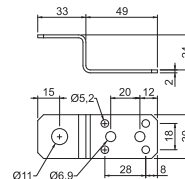
Connection components

Alu

Connection component

Type	Pack Piece	Weight kg/100 pc.	Item no.
287	20	1.600	5320704

- With 1 attaching hole Ø 11 mm
- 4 mounting holes Ø 5.2 mm
- 2 mounting holes Ø 6.9 mm

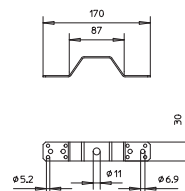


Alu

Connection and bridging component

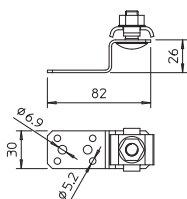
Type	Pack Piece	Weight kg/100 pc.	Item no.
288 DIN	20	2.900	5320712

- With 1 attaching hole Ø 11 mm
- With 2 x 4 mounting hole Ø 5.2 mm
- With 2 x 2 mounting hole Ø 6.9 mm



Connection component with double crossbar

Alu



Type	Lightning current carrying capacity		Pack Piece	Weight kg/100 pc.	Item no.
	Fit mm	kA			
287 DCT	8	N/50	10	6.450	5320707

- Quick mounting thanks to an M10 x 30 bolt made of rustproof stainless steel
- With spring washer
- 4 fastening holes Ø 5.2 mm
- 2 fastening holes Ø 6.9 mm
- Corresponds to the requirements of VDE 0185-305 (IEC 62305)

Downpipe clips

Downpipe clip for routing Rd 8–10 mm behind pipe

St FS

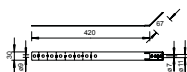


Type	For pipe mm	Pack Piece	Weight kg/100 pc.	Item no.

- With beading
- For round conductor Rd 8-10
- Including hexagonal bolt M6 x 20 and nuts M6

Universal downpipe clip 60–130 mm

St FS



Type	Pack Piece	Weight kg/100 pc.	Item no.

- Adjustable for pipes from 60-130 mm
- With 2x attaching holes Ø 7 mm
- With 1x attaching hole Ø 9 mm
- With 1x attaching hole Ø 11 mm
- Including hexagonal bolt M6 x 20 and nuts M6



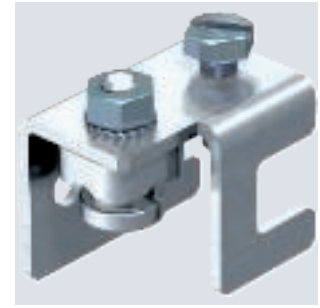
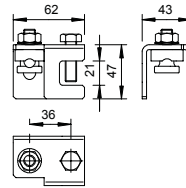
St FT



Construction clamp to 20 mm

Type	Fit mm	Clamping range mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
5010 20 FT	Rd 8-10	4-20	N/50	10	30.600	5304520

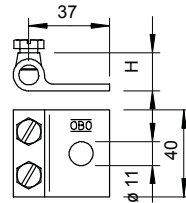
- Mounting of the round conductor possible vertically or transverse to construction
- For fastening to constructions up to a flange thickness of 20 mm
- Fastening to constructions using a hexagonal bolt M10
- Meets the requirements of VDE 0185-305 (IEC 62305)



TG F

Type	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
319 8	Rd 8	25	7.800	5325307
319 10	Rd 10	25	9.650	5325315

- With \varnothing 11 mm attaching hole
- 2 hexagonal bolts M8 x 16
- Bolts hot-dip galvanised steel and clamping element hot dipped galvanised cast steel



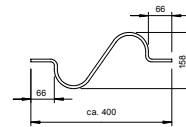
Clamping shoe

Alu



Type	Pack Piece	Weight kg/100 pc.	Item no.
172 AR	10	7.500	5218926

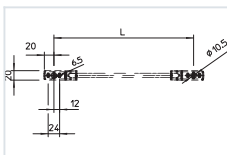
- For equalising temperature-related length changes
- Necessary on conductor lengths over 20 m
- From round conductor Rd 8-Al



Expansion piece



Bridging cable



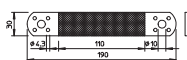
Type	853 300
Dimension L mm	300
Pack Piece	10
Weight kg/100 pc.	7.260
Item no.	5331013

Cu Copper

- With aluminium cable lugs
- From flexible copper cable 16 mm²
- Coating: Black, chlorinated EM5 natural rubber mixture
- With 1 fastening hole Ø 10.5 mm per attachment side
- With 2 fastening holes Ø 6.5 mm per attachment side
- Suitable for applications outside or inside
- Temperature range -25 °C to +80 °C (moved) and -40 °C to +80 °C (not moved)
- UV-stable

Connection and expansion strip

Cu

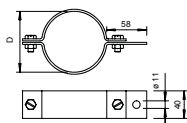


Type	Pack Piece	Weight kg/100 pc.	Item no.
856	10	8.125	5331501

- Copper strip 35 mm², tin-plated
- Highly flexible with rigid ends
- Each end with 1 fastening hole Ø 10 mm and 4 fastening holes Ø 4.3 mm

Pipe clamp

St FT



Type	For pipe mm	For pipe inch	Pack Piece	Weight kg/100 pc.	Item no.
303 DIN-3/8	17.2	3/8	5	22.600	5102057
303 DIN-1/2	21.3	1/2	5	23.280	5102073
303 DIN-3/4	26.9	3/4	5	25.640	5102081
303 DIN-1	33.7	1	5	28.300	5102111
303 DIN-1 1/4	42.4	1 1/4	5	31.300	5102138
303 DIN-1 1/2	48.3	1 1/2	5	33.220	5102154
303 DIN-2	60.3	2	5	36.840	5102197
303 DIN-2 1/2	76.1	2 1/2	10	39.400	5102219
303 DIN-3	88.9	3	10	43.300	5102235
303 DIN-3 1/2	100	3 1/2	10	64.900	5102251
303 DIN-4	114.3	4	10	66.800	5102278

- DIN 48818, Form D
- With Ø 11 mm mounting hole
- 2 hexagonal bolts M8 x 20 (4 inch = M10)
- 2 hex-head nuts M8 (4 inch = M10)



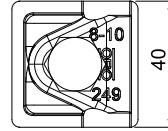
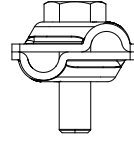
VA



Vario quick connector

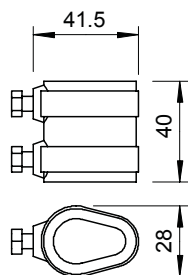
Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
249 S7 V4A	Rd 8-10	H/100	5000	9.500	5311405

- For T, intersection and parallel connections
- Complete component made of A4
- Quick mounting using an M10 x 30 bolt, made from rustproof stainless steel
- Meets the requirements of VDE 0185-305 (IEC 62305)



Separating piece, open

Zn G

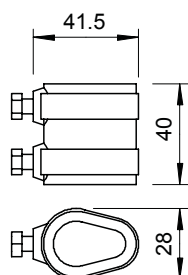


Type	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
223 O DIN ZN	Rd 8-10/16	20	12.500	5335140

- With 2 hexagonal bolts, stainless steel (VA)
- Clamping element, die-cast zinc

Separating piece, open

Zn Cu

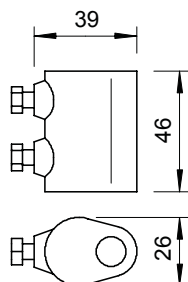


Type	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
223 O DIN MS	Rd 8-10/16	20	14.900	5335167

- With 2 hexagonal bolts, stainless steel (VA)
- Clamping element, copper-plated die-cast zinc

Separating piece, closed

Zn G

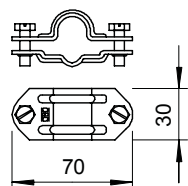


Type	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
223 DIN ZN	Rd 8-10/16	20	12.406	5335205

- For fitting round conductors Rd 8-10 to ground insertion rods Rd 16
- Including 2 hexagonal bolts, high-grade stainless steel (V2A)
- Conforms to the requirements according to DIN VDE 0185-305 (IEC 62305)

Universal separating piece

St FT



Type	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
226 8-10	Rd 8-10/FL30 x 16	20	8.600	5336007

- For fitting round conductors Rd 8-10 to Rd 16 or flat conductors FL30
- Including 2 hexagonal bolts M8 x 20 high-grade stainless steel (V2A)
- Conforms to the requirements according to VDE 0185-305 (IEC 62305)

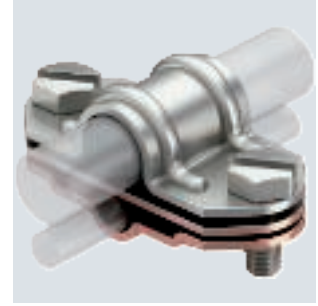
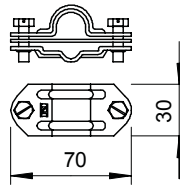


Cu

Universal bi-metal separating piece

Type	Fit mm	Material upper part	Material lower part	Pack Piece	Weight kg/100 pc.	Item no.
226 ZV VA	Rd 8-10/FL30 x 16	VA	Cu	10	11.000	5336074

- Fit: Rd 8-10 x 16, FL 30 x Rd 16
- With 2 hexagonal bolts M8 x 20, stainless steel (VA)
- Intermediate plate, aluminium/copper

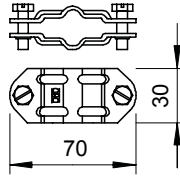


St FT

Separating piece for Rd 8–10 and FL 30 mm

Type	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
233 8	Rd 8-10/FL30 x Rd 8-10/FL30	20	8.200	5336309

- To fit round conductors Rd 8-10 or flat conductors FL 30
- With 2 hexagonal bolts M8 x 20 made of rustproof steel (VA)
- Short-circuit current I_k (50 Hz), time 0.6 s, temp. max. 300 °C: 8.5 kA

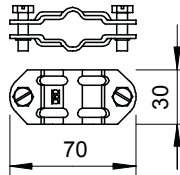


VA

Separating piece for Rd 8–10 and FL 30 mm

Type	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
233 VA	Rd 8-10/FL30 x Rd 8-10/FL30	10	8.300	5336341

- For fitting round conductors Rd 8-10 or flat conductors FL 30
- With 2 hexagonal bolts M8 x 20, stainless steel (VA)

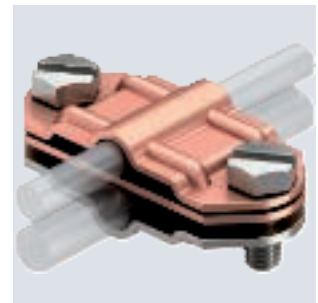
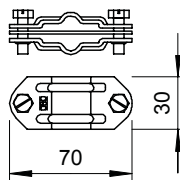


VA

Bi-metal separating piece for Rd 8–10 and FL 30 mm

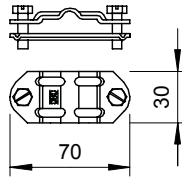
Type	Fit mm	Material upper part	Material lower part	Pack Piece	Weight kg/100 pc.	Item no.
233 ZV	Rd 8-10/FL30 x Rd 8-10/FL30	Cu	VA	10	10.100	5336376

- For fitting round conductors Rd 8-10 to flat conductors FL 30
- With 2 hexagonal bolts M8 x 20, stainless steel (VA)
- Intermediate plate aluminium/copper, top section copper, bottom section stainless steel



VA

Separating piece for Rd 8–10 and FL 30–40 mm

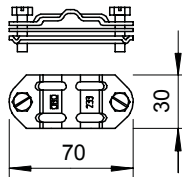
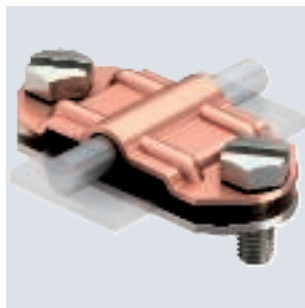


Type	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
233 A VA	8-10xFL30-40	10	7.851	5336457

- Fit: Rd 8-10 x FL 30-40
- With 2 hexagonal bolts M8 x 20 (VA)

Bi-metal separating piece for Rd 8–10 and FL 30–40 mm

Cu

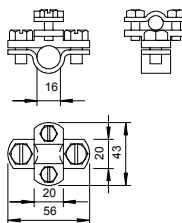


Type	Fit mm	Material upper part	Material lower part	Pack Piece	Weight kg/100 pc.	Item no.
233 A ZV	Rd 8-10xFL30-40	Cu	VA	10	10.400	5336503

- Fit: Rd 8-10 x FL 30-40, FL 30 x FL 30-40
- With 2 hexagonal bolts M8 x 20, stainless steel (VA)
- Intermediate plate, aluminium/copper
- Top section copper, bottom section stainless steel

Rod clamp

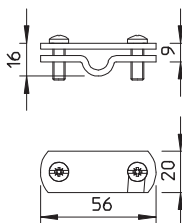
St FT



Type	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
108 B DIN	Rd 8-10/16	10	13.970	5416566

- Rod clamp for connecting round conductors Rd 8–10 to connector rods Rd 16
- Mounted with 2 hexagonal bolts M8 x 16 and M6 x 12
- Adapter from malleable iron
- Crossbar and bolts from hot dip galvanized steel

Number plates



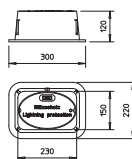
Type	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
311 N-ALU 8-10	RD 8-10/FL30	5	2.500	3049256

- To identify the point of separation to DIN 48821
- Suitable for universal labelling (e.g. stamped numbers)





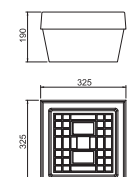
Underfloor test box



Type	Pack Piece	Weight kg/100 pc.	Item no.
5700	1	720.000	5106002

- Without base
- Cast iron, painted black
- Without cut-off unit
- To VDE 0185-561-5 (IEC 62561-5) suitable for heavy loads (up to 40 kN/ 4.0 t)

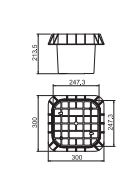
Underfloor test box



Type	Pack Piece	Weight kg/100 pc.	Item no.
5700 CIP	1	3,000.000	5106041

- Made of concrete
- Without separating piece
- According to VDE 0185-561-5 (IEC 62561-5)

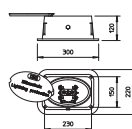
Underfloor test box



Type	Pack Piece	Weight kg/100 pc.	Item no.
5700 PIP	1	180.000	5106045

- Made of plastic
- Without separating piece
- According to VDE 0185-561-5 (IEC 62561-5)

Inspection pit with integrated separation piece

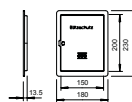


Type	Pack Piece	Weight kg/100 pc.	Item no.
5700 SP	1	770.000	5106003

- Without base
- Cast iron, painted black
- With built-in cut-off unit for round conductors Rd 8-10 and flat conductors to FL 40
- To VDE 0185-561-5 (IEC 62561-5) suitable for heavy loads (up to 40 kN/ 4.0 t)

Inspection door

St FS



Type	Pack Piece	Weight kg/100 pc.	Item no.
5800 VZ	1	46.000	5106133

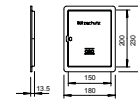
- Lightweight design for flush-mounted separation points
- Claw length approx. 80 mm

VA

Inspection door

Type	Pack Piece	Weight kg/100 pc.	Item no.
5800 VA	1	46.000	5106141

- Lightweight design for flush-mounted separation points
- Claw length approx. 80 mm

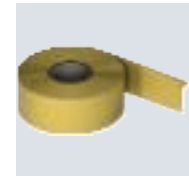
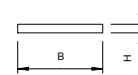


PETR

Corrosion protection strip

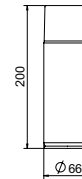
Type	Width mm	Length m	Pack Piece	Weight kg/100 pc.	Item no.
356 50	50	10	1	59.000	2360055
356 100	100	10	1	122.200	2360101

- Approx. 1.1 mm thick
- Width: 50 mm or 100 mm, made of petrolatum-coated chemical fibre fabric
- Can be processed cold



Type	Dimension	Pack Piece	Weight kg/100 pc.	Item no.
ZSF	400ml	1	45.000	2362970

Zinc spray for treatment of unprotected surfaces and cutting edges. Can contents: 400 ml.

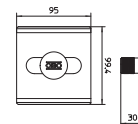


Zinc repairs

TrayFix mounting adapter for mesh cable trays on FangFix system

Type	Dimension	Pack Piece	Weight kg/100 pc.	Item no.
TrayFix	ø20mm	25	9.850	5403100

- Mounting system for the fastening of mesh cable trays and cable trays on FangFix stone e.g. cable routing on a flat roof.
- Adapted to OBO cable tray systems MKSM, SKSM and IKSM
- Adapted to OBO mesh cable tray systems with a minimum width of 100 mm

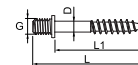


St G

Screw-in anchor with M6 thread

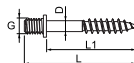
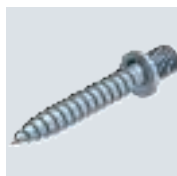
Type	Dim. L mm	Dim. L1 mm	Dim. D mm	Dim. G mm	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
985 M6 25	35	25	4.3	M6	3000	100	0.412	3133028
985 M6 35	45	35	4.3	M6	2000	100	0.533	3133036

With wood screw shank and M6 thread.



Screw-in anchor with M8 thread

St G

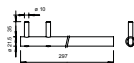


Type	Dim. L mm	Dim. L1 mm	Dim. D mm	Dim. G mm	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
985 M8 35	47	35	5.2	M8	1200	100	0.950	3133230

With wood screw shank and M8 thread.

Directional irons

St FT

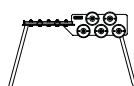


Type	Length mm	Pack Piece	Weight kg/100 pc.	Item no.
364	297	1	35.000	3051013

• Directional iron for bending and aligning conductors

Wire straightening machine

St



Type	Pack Piece	Weight kg/100 pc.	Item no.
5900	1	3,300.000	3059006

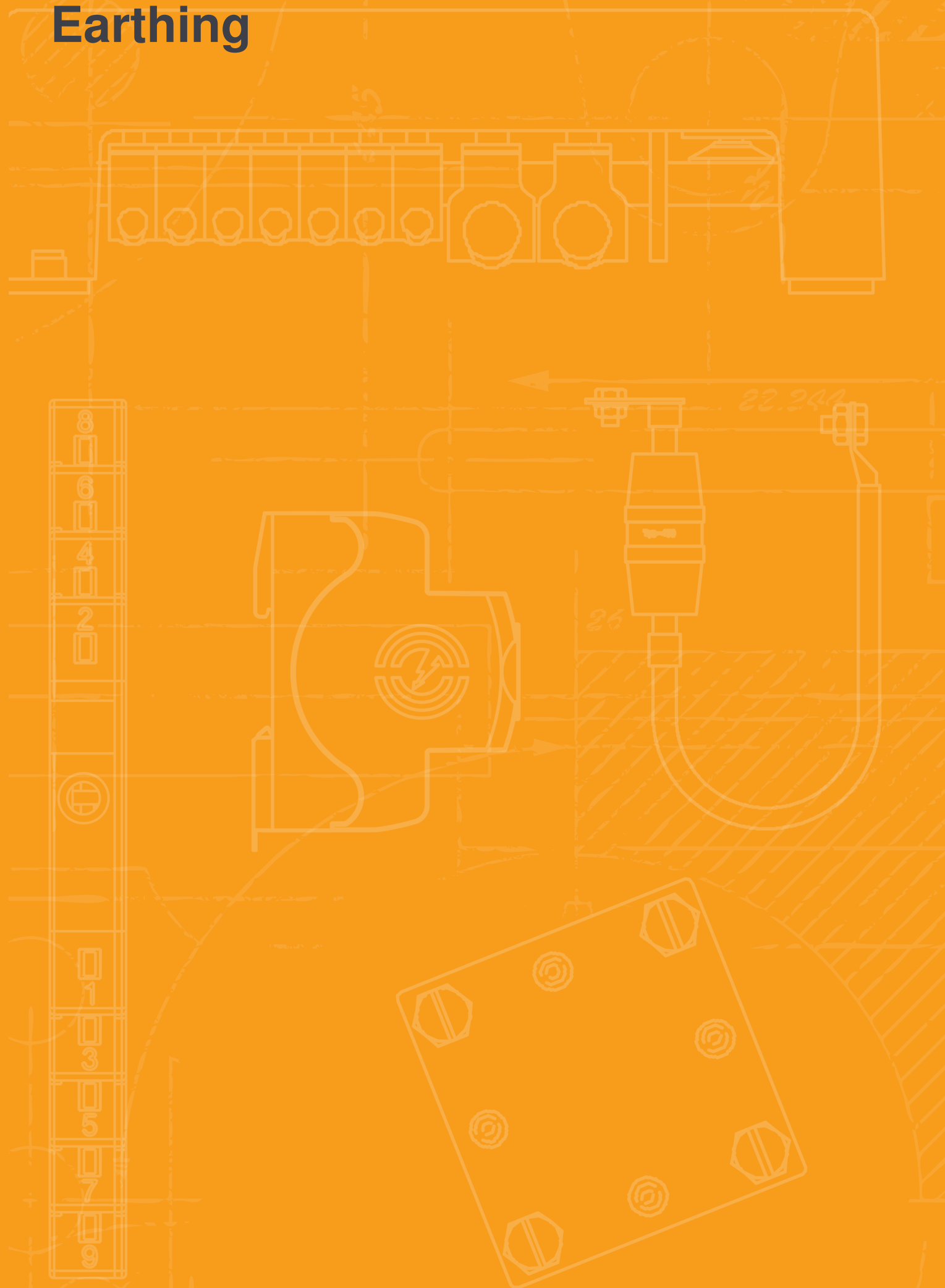
- Factory-set for round conductor Rd 8
- Structure, steel, painted
- Straightening rolls, galvanised cast iron





Earthing

Earthing



Earthing



Earthing material

418



Connection material

430

Foundation earth electrode: Better safe than sorry

Protective cap for connection straps - ProtectionBall

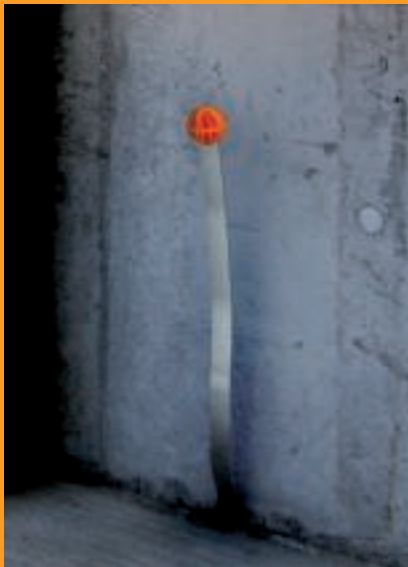
The ProtectionBall is the only protective cap which fulfils the prescribed requirements of DIN 18014, even on real construction sites. Thanks to a reflective film, the ProtectionBall is always visible, even at dusk and in poor light conditions, e.g. in cellar areas.

Striking, reflective marking

To prevent accidents during the construction phase

Required in accordance with DIN 18014

For mounting on round and flat conductors

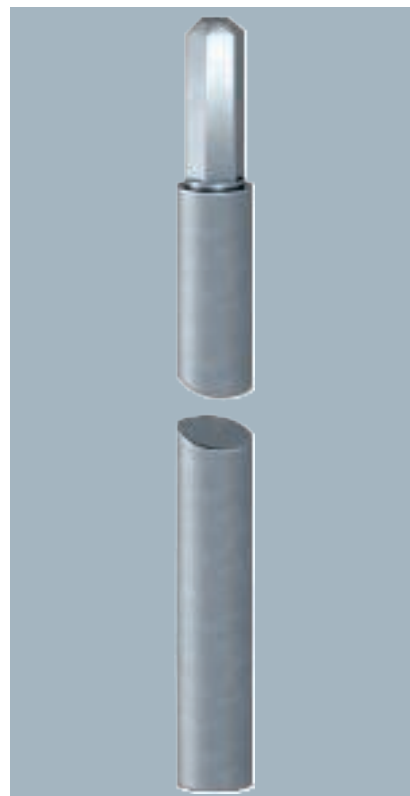
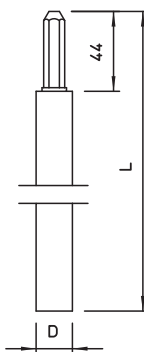


St FT

Earth rod OMEX

Type	Length mm	Outer Ø mm	Short-circuit current (50 Hz) (1 s; ≤300 °C) kA	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
219 25 OMEX FT	1500	25	12.3	H/100	5	577.200	5000025

- OMEX system
- With peg and bore for linking together
- With hardened hexagonal pins
- Min. zinc coating 60 µm
- Very good contacting properties with soft metal inlay in the bore hole
- Conforms to the requirements according to VDE 0185-305 (IEC 62305) and DIN EN 62561-2



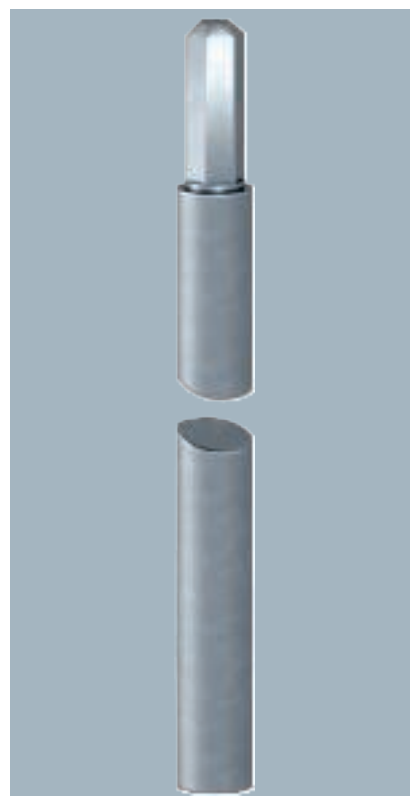
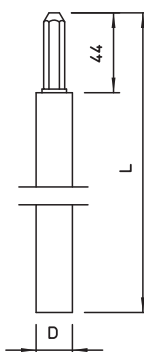
Earthing

St FT

Earth rod OMEX

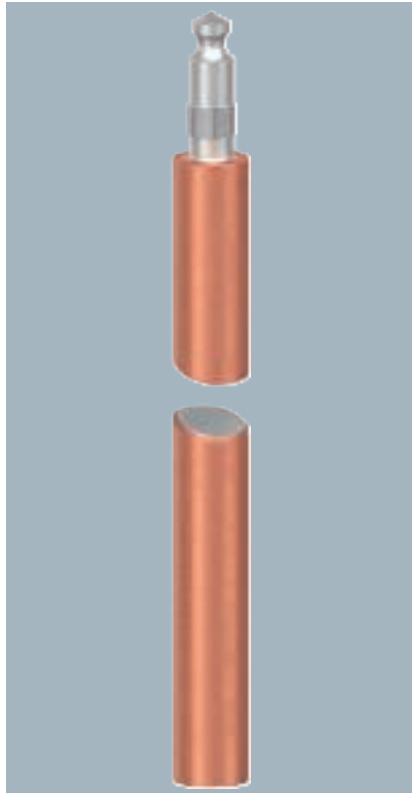
Type	Length mm	Outer Ø mm	Short-circuit current (50 Hz) (1 s; ≤300 °C) kA	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
219 20 OMEX FT	1500	20	7.9	H/100	5	365.400	5000017
219 20 OMEX FT	2000	20	7.9	H/100	5	491.400	5000203

- OMEX system
- With peg and bore for linking together
- With hardened hexagonal pins
- Min. zinc coating 60 µm
- Very good contacting properties with soft metal inlay in the bore hole
- Conforms to the requirements according to VDE 0185-305 (IEC 62305) and DIN EN 62561-2



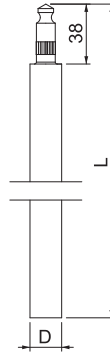
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Earth rod BP with copper sheath

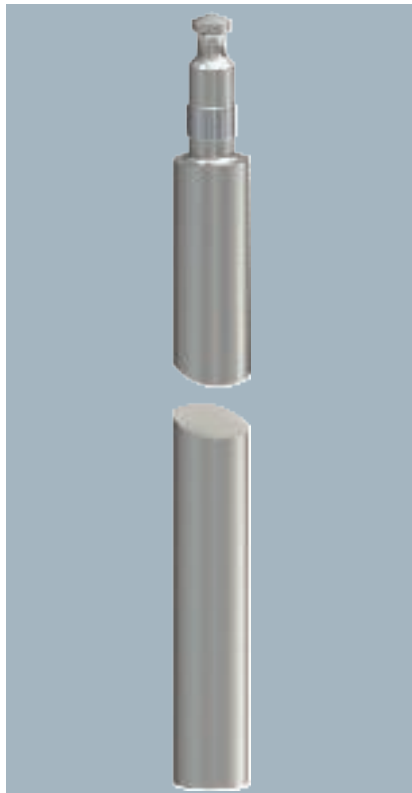


Type	Length mm	Outer Ø mm	Short-circuit current (50 Hz) (1 s; ≤300 °C) kA	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
219 20 BP CU	1500	20	7.9	H/100	5	365.400	5000500

- "BP" system (Bundespost)
- Made of steel with a copper jacket of min. 0.25 mm
- Very good contacting properties with soft metal inlay in the bore hole
- With peg and bore for linking together
- Tensile strength min. 600 N/mm²
- Conforms to the requirements according to VDE 0185-305 (IEC 62305)

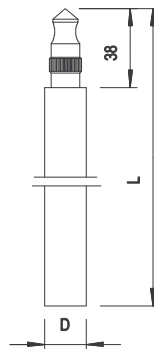


Earth rod BP



Type	Length mm	Outer Ø mm	Short-circuit current (50 Hz) (1 s; ≤300 °C) kA	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
219 20 BP V4A	1000	20	4.2	H1/150	5	250.000	5000858
219 20 BP V4A	1500	20	4.2	H1/150	5	365.000	5000866

- "BP" system (Bundespost)
- Very good contacting properties with soft metal inlay in the bore hole
- With peg and bore for linking together
- Conforms to the requirements according to VDE 0185-305 (IEC 62305)
- Short circuit current I_k (50 Hz), time 1 s, max. temp. 300 °C: 4.5 kA (219 20 BP V4A)

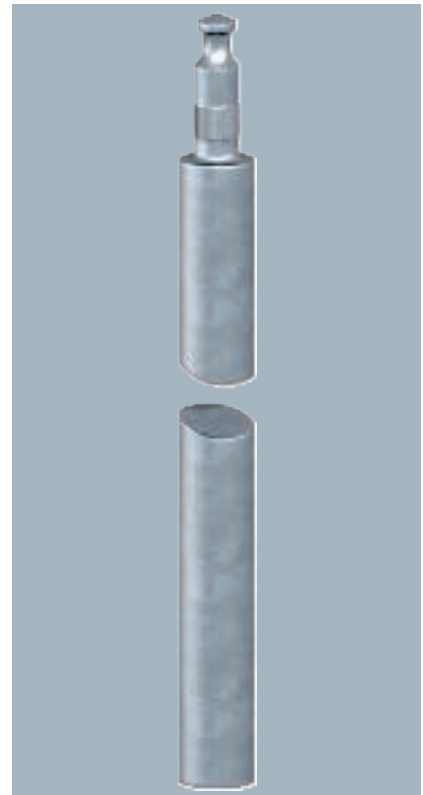
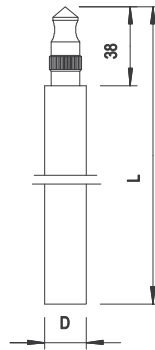


St FT

Earth rod BP

Type	Length mm	Outer Ø mm	Short-circuit current (50 Hz) (1 s; ≤300 °C) kA	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
219 20 BP FT	1500	20	7.9	H/100	5	360.000	5000947
219 25 BP FT	1500	25	12.3	H/100	5	573.000	5000955

- "BP" system (Bundespost)
- Very good contacting properties with soft metal inlay in the bore hole
- With peg and bore for linking together
- FT version with zinc coating approx. 130 µm
- Conforms to the requirements according to VDE 0185-305 (IEC 62305)

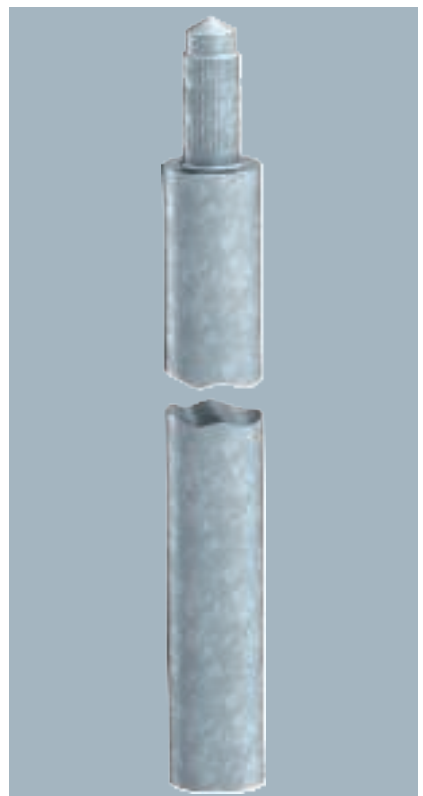
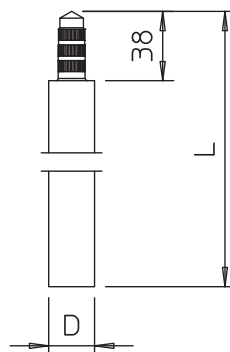


St FT

Earth rod for standard applications

Type	Length mm	Outer Ø mm	Short-circuit current (50 Hz) (1 s; ≤300 °C) kA	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
219 25 ST FT	1500	25	12.3	H/100	5	573.000	5000769

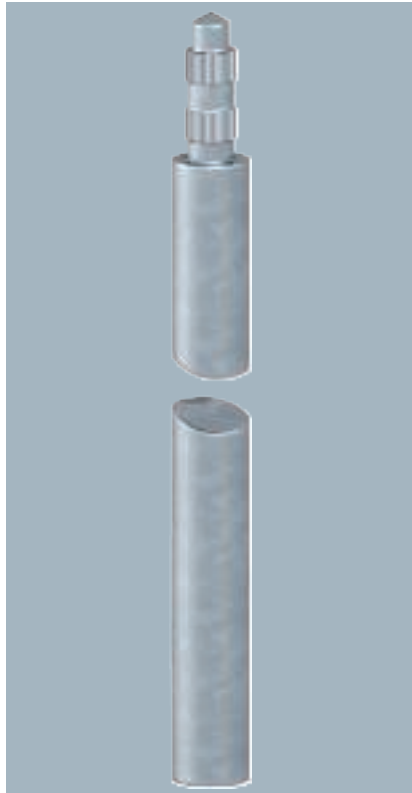
- High corrosion resistance
- Zinc support approx. 130 µm
- With peg and bore for linking together
- Round pegs with three knurls
- Conforms to the requirements according to VDE 0185-305 (IEC 62305)
- Short-circuit current I_k (50 Hz), time 1 s, temp. max. 300 °C: 12.3 kA



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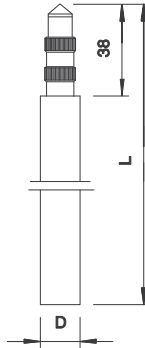
Earth rod for standard applications

St FT



Type	Length mm	Outer Ø mm	Short-circuit current (50 Hz) (1 s; ≤300 °C) kA	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
219 20 ST FT	1500	20	7.9	H/100	5	360.000	5000750

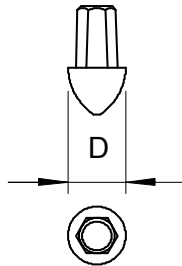
- High corrosion resistance
- Zinc support 130 µm
- With peg and bore for linking together
- Round pegs with two knurls
- Conforms to the requirements according to VDE 0185-305 (IEC 62305)
- Short-circuit current I_k (50 Hz), time 1 s, max. temp 300 °C: 7.9 kA (219/20 ST)



Driving spikes

Driving spike for OMEX earth rod

TG FT

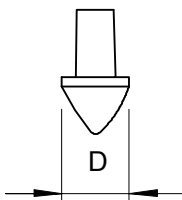


Type	For earth rods Ø mm	Dim. D mm	Pack Piece	Weight kg/100 pc.	Item no.
1819 20	20	20	5	3.378	3041204
1819 25	25	25	5	4.718	3041255

- Suitable for OMEX system
- DIN 48852, Form SP

Driving spike for ST and BP earth rod

TG FT



Type	For earth rods Ø mm	Dim. D mm	Pack Piece	Weight kg/100 pc.	Item no.
1819 20BP	20	20	5	3.768	3041212
1819 25BP	25	25	5	6.700	3041956

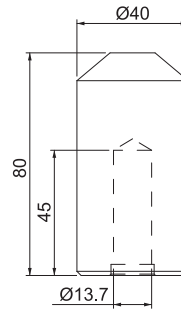
- Suitable for ST and BP system

St

Driving head for ST, BP and OMEX earth rods

Type	Material	For earth rods Ø mm	Pack Piece	Weight kg/100 pc.	Item no.
1820 20	St	20	1	62.600	3042200

- Suitable for ST, BP and OMEX systems
- Hardened
- DIN 48852, Form SP



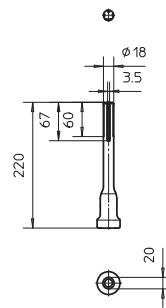
Hammer inserts

St

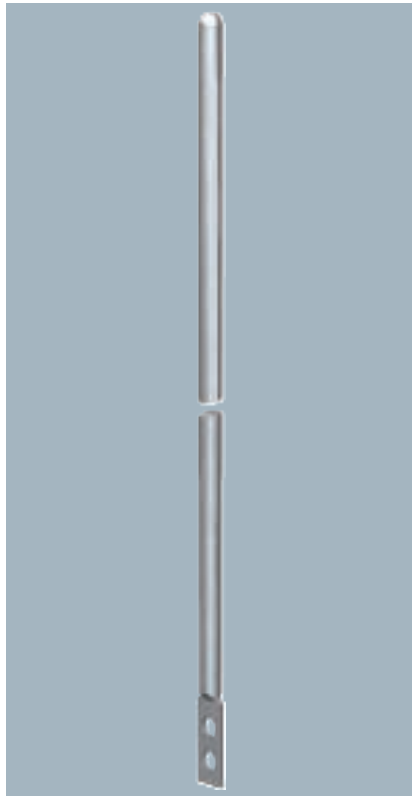
Hammer insert, type 2536, for earth rod

Type	For earth rods Ø mm	Pack Piece	Weight kg/100 pc.	Item no.
2536 20	20	1	55.000	3044904

- Fits earth rod system ST, BP and OMEX
- For vibration hammers with SDS- Max/TEY- mounting
- Hardened

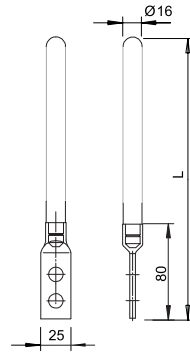


Air-termination/earth entry rod with connection tabs

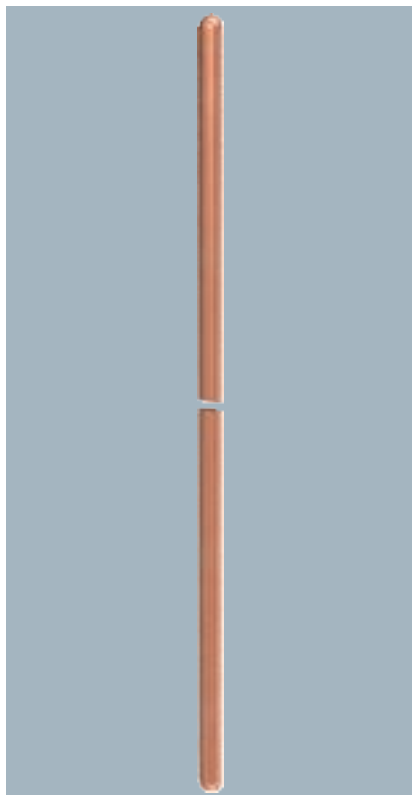


Type	Length mm	Nominal size Ø mm	Pack Piece	Weight kg/100 pc.	Item no.
101 F2000	2000	16	10	320.000	5424208

- With 2 attaching holes Ø 12 mm
- One end rounded



Air-termination/earth entry rod, rounded-off on both ends



Type	Length mm	Nominal size Ø mm	Pack Piece	Weight kg/100 pc.	Item no.

- Full material Ø 16 mm
- Both ends rounded

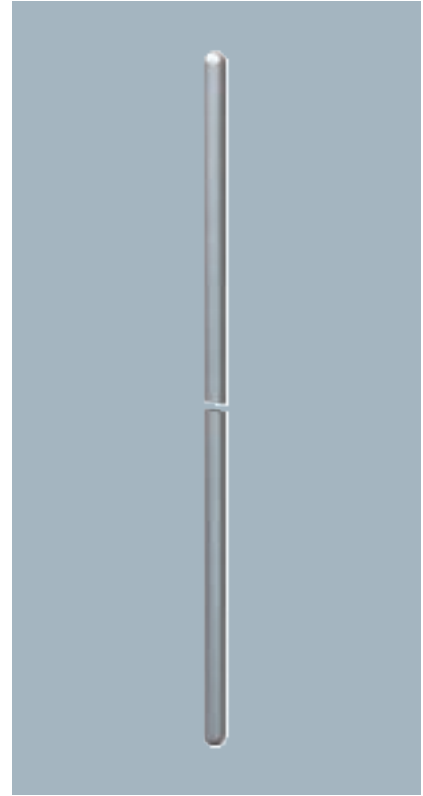


St FT

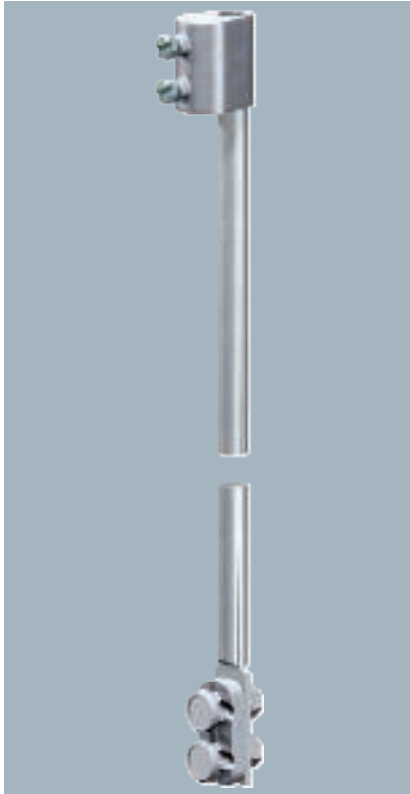
Air-termination/earth entry rod, rounded-off on both ends

Type	Length mm	Nominal size Ø mm	Pack Piece	Weight kg/100 pc.	Item no.
101 A-1500	1500	16	10	240.000	5400155

- Full material Ø 16 mm
- Rounded on both ends
- Suitable for FangFix stand system

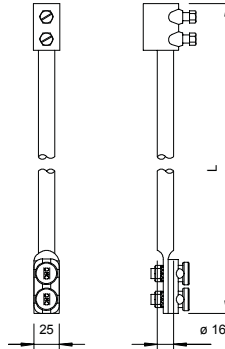


Earth entry rod with separating piece and connector



Type	Fit mm	Dim.	Pack Piece	Weight kg/100 pc.	Item no.
		L mm			
204 KL-1500	Rd 8-10	1500	10	260.700	5430151

• With separating piece type 223 DIN and connector type 5002 DIN



Earth entry rod, tapered and partially insulated



Type	Length mm	Nominal	Pack Piece	Weight kg/100 pc.	Item no.
		size Ø mm			
204 KS-2000	2000	16/10	1	230.000	5430011
204 KS-2500	2500	16/10	1	310.000	5430062

• 16 mm earth entry with 10 mm connection
• With mounted heat-shrinkable sleeve (corrosion protection)

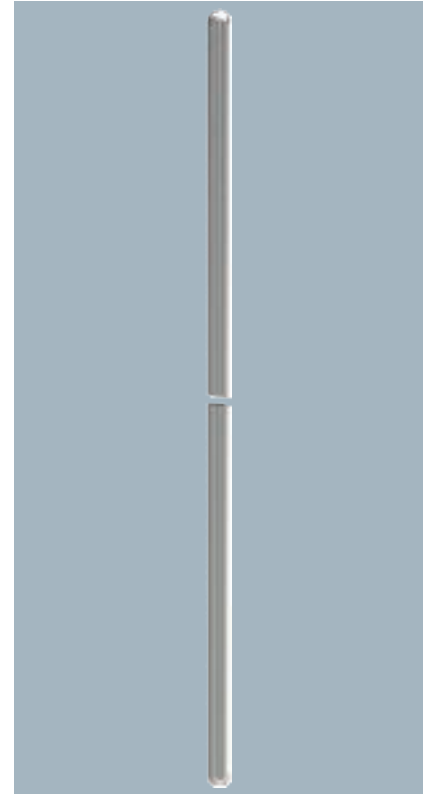
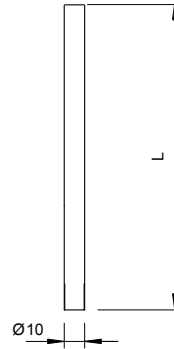


VA

Connection lug/earth entry rod made of stainless steel

Type	Nominal size Ø mm	Cross-section mm ²	Dim. L mm	Pack Piece	Weight kg/100 pc.	Item no.
AF RD 10 V4A	10	75	2000	5	123.600	5430720

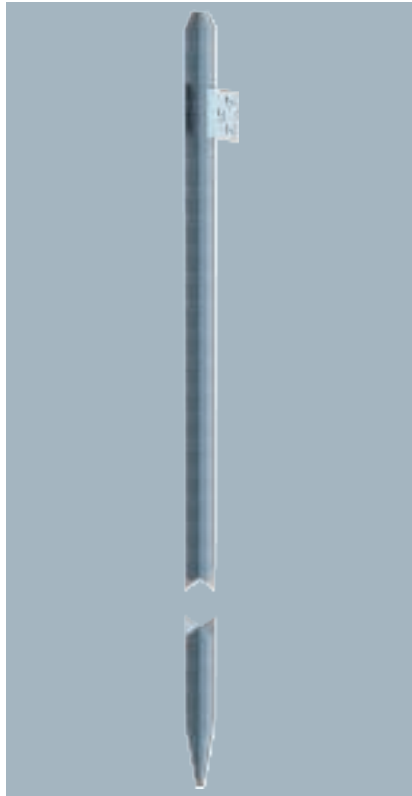
- According to DIN EN 62561-2 (VDE 0185-561-2)
- Corresponds to the requirements of VDE 0185-305 (IEC 62305)
- RD 10-V4A for applications in the earth
- According to the foundation earth electrode standard DIN 18014, V4A is required in the earth



Profile earth rods

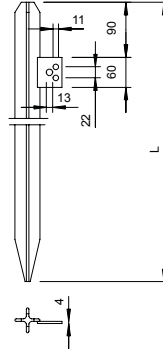
Profile earth rod with connecting lug

St FT



Type	Length mm	Pack	Weight	Item no.
		Piece	kg/100 pc.	
213 1500 DIN	1500	5	364.500	5003016

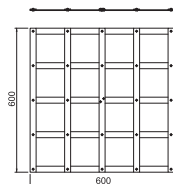
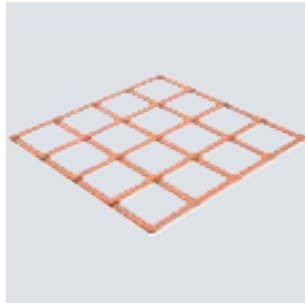
- Cross-profile 50 x 50 x 3 mm
- With connecting strap
- 1 through hole Ø 13 mm
- 2 through holes Ø 11 mm
- Round conductor fastening e.g. with type 5001 DIN-FT possible
- For the construction of earthing systems e.g. antenna or earthing of building site distribution boards



Earth plates

Earth mats

Cu



Type	Length mm	Width mm	Height mm	Pack	Weight	Item no.
				Piece	kg/100 pc.	
1816 CU 6	600	600	3	1	403.000	5009250
1816 CU 9	900	900	3	1	605.000	5009256

- To reduce the step and contact voltage
- In accordance with IEC 62561-2 and IEC 62305-3

Earthing enhancing compound

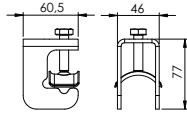
Type	Dimension	Pack Piece	Weight kg/100 pc.	Item no.
OEC 25	25kg	1	2,500.000	5009200

- To improve and maintain a constant earth electrode resistance
- Highly swellable and powdery special clay
- Tested according to IEC 62561-7 (VDE 0185-561-7)



VARIO earthing terminal for large reinforced steels

St FT

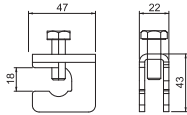
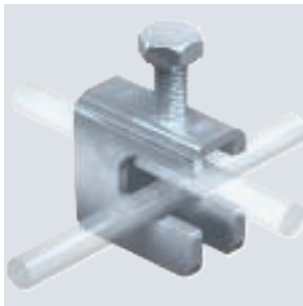


Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
1814 ST D37	FL30x3-4mm/ Rd 10 x Rd 16-37	H/100	25	30.000	5014477
1814 FT D37	FL30x3-4mm/ Rd 10 x Rd 16-37	H/100	25	30.000	5014469

- For armoured steel with 16-37 mm diameter and round conductors and flat conductors
- Rapid installation using open slot and only one M10 screw
- Rotatable metal pressure trough for simple, safe mounting

VARIO earthing terminal for reinforced steels

St FT

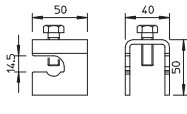


Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
1814 FT D14	FL30x3-4mm /Rd 8-10 x Rd 6-14	N/50	25	15.340	5014471

- For reinforced steel with 6–14 mm diameter and round and flat conductors
- Rapid installation using elongated open slot and only one M10 screw

VARIO earthing terminal for reinforced steels

St FT



Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
1814 ST	FL30x5 x Rd8-14	N/50	25	20.000	5014476
1814 FT	FL30x5 x Rd8-14	N/50	25	20.000	5014468

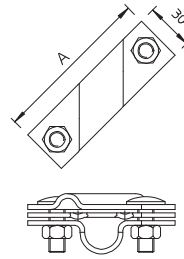
- For reinforced steels with diameters 8-14 mm and FL 30 x 5
- Simple mounting through open slot
- Side suspension possible

St FT

Connection clamp for earth rod, universal

Type	Dim. A mm	For earth rods Ø mm	Fit mm	Short-circuit current (50 Hz) (1 s; ≤300 °C) kA	Pack Piece	Weight kg/100 pc.	Item no.
2760 20 FT	101	20	Rd 8-10/FL40	7.9	5	28.335	5001641
2760 25 FT	110	25	Rd 8-10/FL40	8.5	5	38.400	5001668

- Suitable for attaching round conductors Rd 8-10 or flat conductors to FL 40
- With separator plate
- Installed with 2 hexagonal bolts M10 x 30 and 2 hexagonal nuts M10

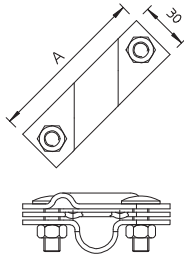


VA VA

Connection clamp for earth rod, universal

Type	Dim. A mm	For earth rods Ø mm	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
2760 20 VA	101	20	Rd 8-10/FL40	5	28.286	5001617
2760 B-20 VA	101	20	Rd 8-10/FL40	20	32.400	5001625
2760 20 V4A	101	20	Rd 8-10/FL40	5	32.400	5001633
2760 25 V4A	110	25	Rd 8-10/FL40	5	32.400	5001672

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Suitable for connecting round conductors Rd 8-10 or flat conductors to FL 40
- With adapter plate
- Mounted with 2 hexagonal bolts M10 x 30 and 2 hexagonal bolts M10



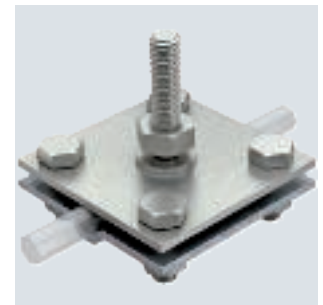
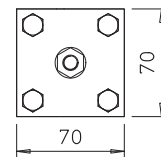
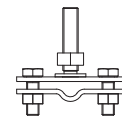
Cross-connectors

VA

Cross-connector for flat conductors and round conductors with threaded bolt M10x45

Type	Fit mm	Lightning current carrying capacity kA	Short-circuit current (50 Hz) (1 s; ≤300 °C) kA	Pack Piece	Weight kg/100 pc.	Item no.
252 GB 10x45	8-10 x FL30	H/100	4.2	10	34.800	5312657

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Fit: Rd 8-10 x FL 30
- Mounted with 4 hexagonal bolts M8 x 25 and 4 hexagonal nuts M8

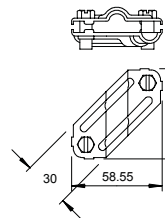


VA VA

Cross-connector for flat conductors and round conductors

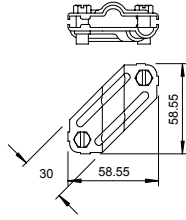
Type	Fit mm	Lightning current carrying capacity kA	Short-circuit current (50 Hz) (1 s; ≤300 °C) kA	Pack Piece	Weight kg/100 pc.	Item no.
250 VA	Rd 8-10/FL30	H/100	1.4	25	10.260	5312922
250 V4A	Rd 8-10/FL30	H/100	1.4	10	10.260	5312925

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Fit: Rd 8-10 x Rd 8-10
- Fit: Rd 8-10 x FL 30
- Fit: FL 30 x FL 30
- Mounted with 2 hexagonal bolts M8 x 20



Cross-connector for flat conductors and round conductors

St FT

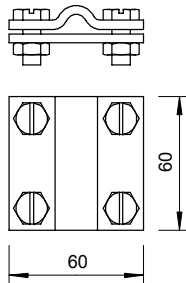


Type	Fit mm	Lightning current carrying capacity kA	Short-circuit current (50 Hz) (1 s; ≤300 °C) kA	Pack Piece	Weight kg/100 pc.	Item no.
250	Rd 8-10/FL30	N/50	5.6	25	10.260	5312906

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Fit: Rd 8-10 x Rd 8-10
- Fit: Rd 8-10 x FL 30
- Fit: FL 30 x FL 30
- Mounted with 2 hexagonal bolts M8 x 20 (F)

Cross-connector for round conductors and flat conductors

VA

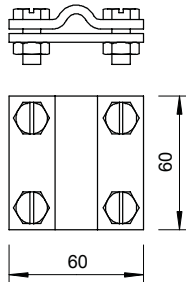
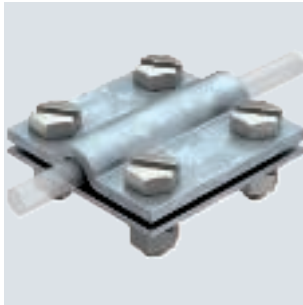


Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
252 8-10xFL30V4A	8-10xFL30	H/100	10	28.500	5312656

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Fit: Rd 8-10 x FL 30
- Mounted with 4 hexagonal bolts M8 x 25 and 4 hexagonal nuts M8

Cross-connector for round and flat conductors

St FT



Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
252 8-10xFL30 FT	8-10xFL30	H/100	25	28.500	5312655

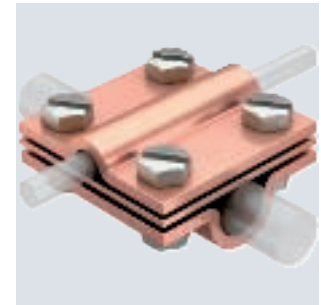
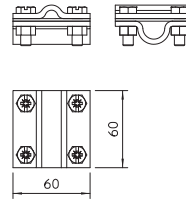
- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Fit: Rd 8-10 x FL 30
- Mounted with 4 hexagonal bolts M8 x 25 and 4 hexagonal nuts M8

Cu

Cross-connector with intermediate plate for Rd 8–10 x Rd 16

Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
252 8-10x16 CU	Rd 8-10 x 16	H/100	10	43.985	5312442

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Fit: Rd 8–10 x Rd 16 / FL 30
- With adapter plate
- Mounted with 4 hexagonal bolts M8 x 25 and 4 hexagonal nuts M8 made of rust-proof stainless steel (A2)

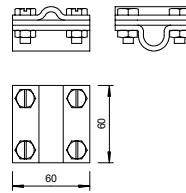


VA

Cross-connector with intermediate plate for Rd 8–10 x Rd 16

Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
252 8-10x16 V4A	Rd 8-10 x 16	H/100	10	39.000	5312346

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Fit: Rd 8-10 x Rd 16 / FL 30
- With adapter plate
- Mounted with 4 hexagonal bolts M8 x 25 and 4 hexagonal nuts M8

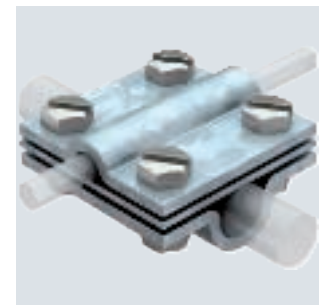
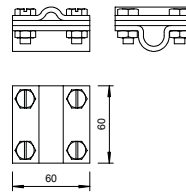


St FT

Cross-connector with intermediate plate for Rd 8–10 x Rd 16

Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
252 8-10x16 FT	Rd 8-10 x 16	H/100	25	38.800	5312345

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Fit: Rd 8-10 x Rd 16 / FL 30
- With adapter plate
- Mounted with 4 hexagonal bolts M8 x 25 and 4 hexagonal nuts M8

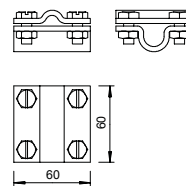


St FT

Cross-connector for Rd 8–10 x Rd 16

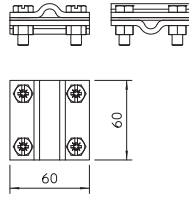
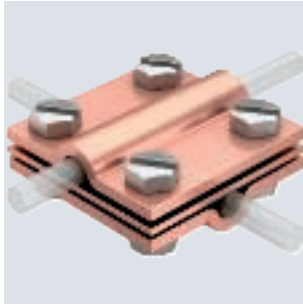
Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
253 10x16	Rd 8-10 x 16	H/100	25	29.800	5312809

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Fit: Rd 8-10 x Rd 16 / FL 30
- Mounted with 4 hexagonal bolts M8 x 25 and 4 hexagonal nuts M8 (F)



Cross-connector with intermediate plate for Rd 8-10

Cu

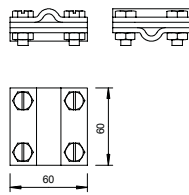


Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
252 8-10 CU	Rd 8-10	H/100	10	38.940	5312418

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Fit: Rd 8-10 x Rd 8-10 / FL 30
- With adapter plate
- Mounted with 4 hexagonal bolts M8 x 25 and 4 hexagonal nuts M8 made of rust-proof stainless steel (A2)

Cross-connector with intermediate plate for Rd 8-10

VA

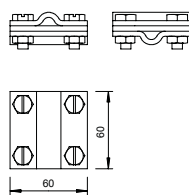


Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
252 8-10 V4A	Rd 8-10	H/100	10	33.530	5312318

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Fit: Rd 8-10 x Rd 8-10 / FL 30
- With adapter plate
- Mounted with 4 hexagonal bolts M8 x 25 and 4 hexagonal nuts M8

Cross-connector with intermediate plate for Rd 8-10

St FT



Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
252 8-10 FT	Rd 8-10	H/100	25	33.530	5312310

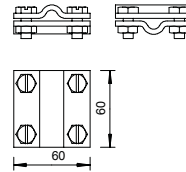
- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Fit: Rd 8-10 x Rd 8-10 / FL 30
- With adapter plate
- Mounted with 4 hexagonal bolts M8 x 25 and 4 hexagonal nuts M8 (F)

VA

Cross-connector round/round without intermediate plate

Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
253 8-10 V4A	Rd 8-10	H/100	25	23.650	5312582

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Fit: Rd 8-10 x Rd 8-10 / FL 30
- Mounted with 4 hexagonal bolts M8 x 25 and 4 hexagonal nuts M8 (F)

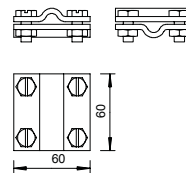


St FT

Cross-connector Rd 8-10

Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
253 8X8	Rd 8-10	H/100	25	30.700	5312604

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Fit: Rd 8-10 x Rd 8-10 / FL 30
- Mounted with 4 hexagonal bolts M8 x 25 and 4 hexagonal nuts M8 (F)

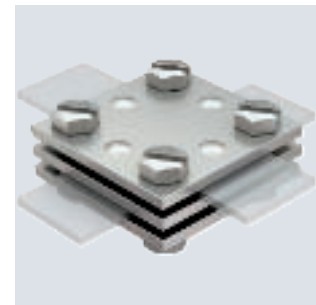
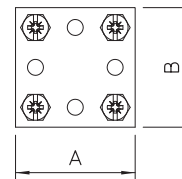
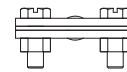


VA

DIN cross-connector for flat conductor, with intermediate plate

Type	Fit mm	Dim. A mm	Dim. B mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
256 DIN 30 V4A	max. FL30	60	60	H/100	10	29.100	5314616

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Fit: Max. FL 30 x FL 30
- With adapter plate
- Mounted with 4 hexagonal bolts M8 x 25 and 4 hexagonal nuts M8

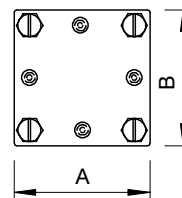
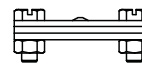


St FT

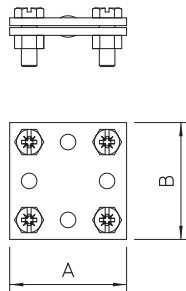
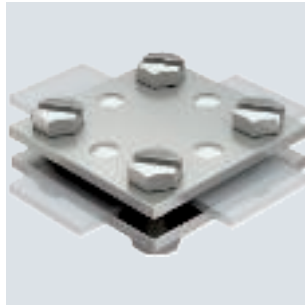
DIN cross-connector for flat conductor, with intermediate plate

Type	Fit mm	Dim. A mm	Dim. B mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
256 DIN 30 FT	max. FL30	60	60	H/100	10	35.860	5314615
256 DIN 40 FT	max. FL40	80	80	H/100	10	54.650	5314623

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Fit: Max. FL 30 x FL 30 or max. FL 40 x FL 40
- With adapter plate
- Mounted with 4 hexagonal bolts M8 x 25 and 4 hexagonal nuts M8



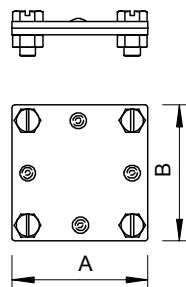
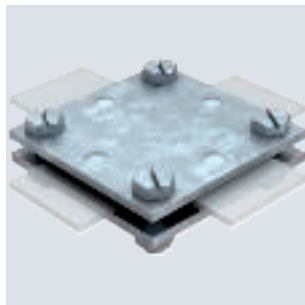
DIN cross-connector for flat conductor



Type	Fit mm	Dim. A mm	Dim. B mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
256 A-DIN 30 VA	max. FL30	60	60	H/100	10	27.800	5314720
256 A-DIN 30 V4A	max. FL30	60	60	H/100	10	26.400	5314659

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Fit: Max. FL 30 x FL 30
- Without adapter plate
- Mounted with 4 hexagonal bolts M8 x 25 and 4 hexagonal nuts M8

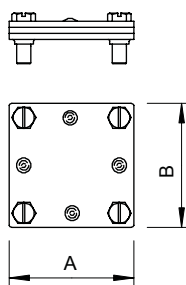
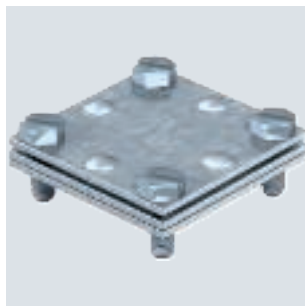
DIN cross-connector for flat conductor



Type	Fit mm	Dim. A mm	Dim. B mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
256 A-DIN 30 FT	max. FL30	60	60	H/100	10	27.800	5314658
256 A-DIN 40 FT	max. FL40	80	80	H/100	10	35.436	5314666

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Fit: Max. FL 30 x FL 30 or max. FL 40 x FL 40
- Without adapter plate
- Mounted with 4 hexagonal bolts M8 x 25 and 4 hexagonal nuts M8 (F)

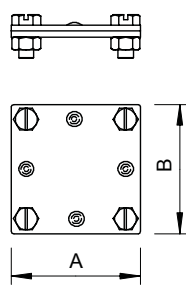
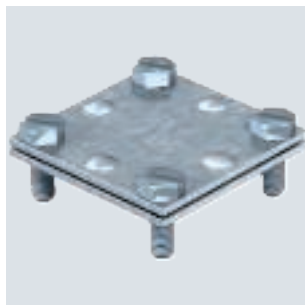
Cross-connector for flat conductor, with intermediate plate



Type	Fit mm	Dim. A mm	Dim. B mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
255 30	max. FL30	52	52	H/100	20	16.650	5314518

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Fit: Max FL 30 x FL 30
- With adapter plate
- Mounted with 4 hexagonal bolts M6 x 20 (F)

Cross-connector for flat conductor



Type	Fit mm	Dim. A mm	Dim. B mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
255 A-FL30 FT	max. FL30	52	52	H/100	20	11.500	5314534

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- Fit: Max FL 30 x FL 30
- Without adapter plate
- Mounted with 4 hexagonal bolts M6 x 20 (F)

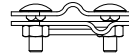
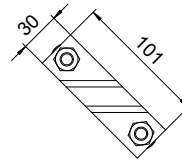


VA

Diagonal connector with intermediate plate, for round conductor

Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
2760 8	Rd 8-10	H/100	5	27.120	5001612

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- To connect round conductors 8–10 mm
- Mounted with 2 truss-head bolts M10 x 30 and 2 hexagonal bolts M10

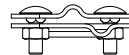
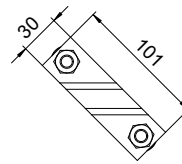


VA

Diagonal connector for round conductor

Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
2760 8-10 V4A	Rd 8-10	H/100	25	21.364	5313013

- Meets the requirements of VDE 0185-305-3 (IEC/ EN 62305-3)
- To connect round conductors 8–10 mm
- Mounted with 2 truss-head bolts M10 x 30 and 2 hexagonal bolts M10

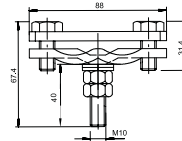


St F

Diagonal clamp with bolt

Type	Dim. L mm	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
250 A-BO	25	Rd 6-22/max. FL50	H/100	25	30.994	5313066

- For reinforced steels Ø 6-22 mm and flat conductor 50 x 4
- Installed with screws M10 x 25
- Simple installation with open slot
- With flange-welded bolts M10 x 40, inc. 2 washers and 2 nuts

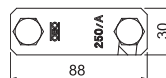
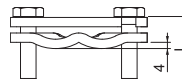


VA

Diagonal clamp for flat conductors and round conductors

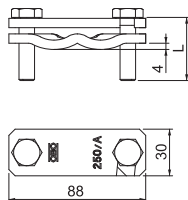
Type	Dim. L mm	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
250 A-VA	40	Rd 6-22/max. FL50	H/100	10	28.800	5313023

- For reinforced steels Ø 6-22 mm and flat conductor 50 x 4
- Installed with screws M10 x 40
- AS version with screws M10 x 20
- Simple installation with open slot



Diagonal clamp for flat conductors and round conductors

St FT



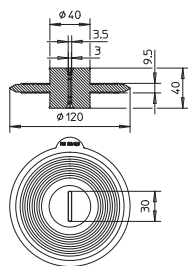
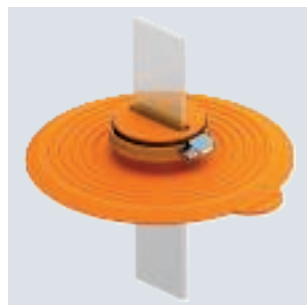
Type	Dim. L mm	Fit mm	Short-circuit current (50 Hz) (1 s; ≤300 °C) kA	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
250 A-FT	40	Rd 6-22/max. FL50	7.3	H/100	25	28.800	5313015
250 AS-FT	20	Rd 6-22/max. FL50	7.3	H/100	25	26.000	5313031
250 A	40	Rd 6-22/max. FL50	7.3	H/100	25	28.800	5313058

- For reinforced steels Ø 6-22 mm and flat conductor 50 x 4
- Installed with screws M10 x 40
- AS version with screws M10 x 20
- Simple installation with open slot

Sealing sleeves

Sealing sleeve for flat conductors

TPE

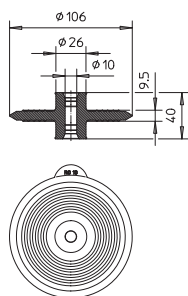


Type	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
DW FL30x3,5	FL 30x3,5	1	18.000	2360043

- Sealing sleeve for penetrations of waterproof foundation plates/walls (e.g. white trough)
- For mounting on connection lugs with stainless steel tightening straps
- With pressurised water testing to 5 bar
- According to DIN EN 62561-5 (VDE 0185-561-5)

Sealing sleeve for round conductors

TPE



Type	Fit mm	Pack Piece	Weight kg/100 pc.	Item no.
DW RD10	RD 10	1	13.000	2360041

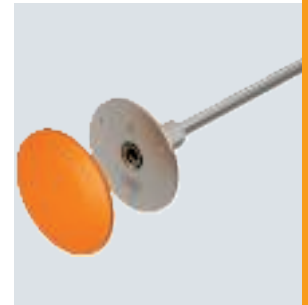
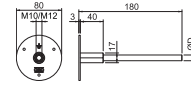
- Sealing sleeve for penetrations of waterproof foundation plates/walls (e.g. white trough)
- For mounting on connection lugs with stainless steel tightening straps
- With pressurised water testing to 5 bar
- According to DIN EN 62561-5 (VDE 0185-561-5)

St VA FT

Fixed earthing terminal with axis and double thread

Type	Thread	Short-circuit current (50 Hz) (1 s; ≤300 °C) kA	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
205 DG L180 V4A	M10/M12	3.3	H/100	10	23.900	5420022
205 DG L180 FT	M10/M12	4.9	H/100	10	23.900	5420024

- For connection to earthing systems, arresters and reinforcements
- Contact plate: Ø 80 mm made of stainless steel, rustproof (V4A)
- Clamping screw Ø 10 mm
- Incl. plastic cover for simple installation

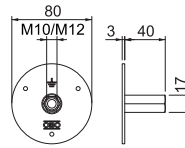


VA

Fixed earthing terminal with double thread

Type	Thread	Short-circuit current (50 Hz) (1 s; ≤300 °C) kA	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
205 DG V4A	M10/M12	6.2	H/100	10	14.800	5420020

- For connection to earthing systems, arresters and reinforcements
- Contact plate: Ø 80 mm made of stainless steel, rustproof (V4A)
- Double thread M10/M12
- Incl. plastic cover for simple installation



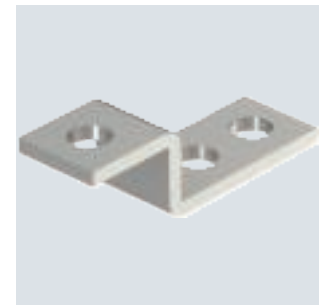
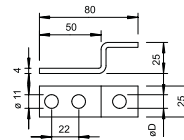
Connection material

VA

Connection and end piece

Type	Dim. D Ø mm	Pack Piece	Weight kg/100 pc.	Item no.
5011 VA M10	11	10	7.064	5334934
5011 VA M12	13	10	7.048	5334942

- For attaching to steel structures or bolting to fixed earthing terminals
- For attachments: Round conductor Rd 8-10 and flat conductor FL 30 x 3.5
- 2 attaching holes Ø 11 mm
- 1 attaching holes Ø D mm

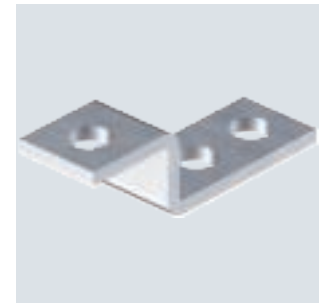
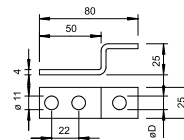


St FT

Connection and end piece

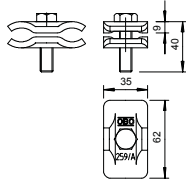
Type	Dim. D Ø mm	Pack Piece	Weight kg/100 pc.	Item no.
5011	11	10	7.064	5304997

- For attaching to steel structures or bolting to fixed earthing terminals
- For attachments: Round conductor Rd 8-10 and flat conductor FL 30 x 3.5
- 2 attaching holes Ø 11 mm
- 1 attaching holes Ø D mm



Parallel clamp for the connecting of reinforcing steels

St VA FT

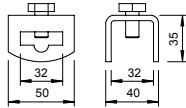


Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
259 A FT	Ø 10-20	H/100	25	18.800	5315514
259 A VA	Ø 10-20	H/100	10	15.880	5315522

- For connecting reinforced steels Ø 10–20 mm
- Mounted with M10 x 40 bolts

Variable earthing terminal

St FT

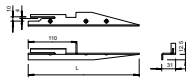


Type	Fit mm	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
1813 KL	FL30 x Rd 8-10	H/100	50	18.000	5014425

- Suitable for connection for Rd 10 x FL 30, FL 30 x FL 30
- Quick mounting using a hexagonal bolt M10 x 20 (F)

Spacer

St FT

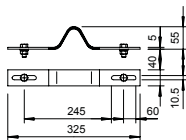


Type	Fit mm	Length mm	Pack Piece	Weight kg/100 pc.	Item no.
1811	10/FL30 x 3,5	250	25	19.000	5014018

- For professional laying of round conductors and flat conductors according to DIN VDE 0185-305 (IEC 62305)
- DIN 48833
- Suitable for mounting round conductors Rd 10 or flat conductors FL 30 x 3.5

Expansion piece

Alu



Type	Pack Piece	Weight kg/100 pc.	Item no.
1807	1	27.000	5016142

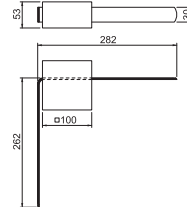
- For expansion joints, for a connection of the foundation earth electrode outside the concrete
- To VDE 0185-561-2 (IEC 62561-2)
- 2 hexagonal nuts M10 x 30, 2 steel washers, hot galvanised and 2 serrated washers made of rustproof steel

VA

Expansion strip for foundation earth electrode systems

Type	Dimension W x H mm		Pack Piece	Weight kg/100 pc.	Item no.
	mm	mm			
1807 DB	30x3,5		1	40.000	5016160

- Expansion strip according to VDE 0185-561-2 (IEC 62561-2)
- To pass the foundation earth electrode through movement joints



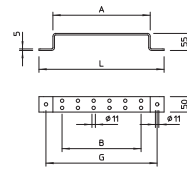
VA

Earthing connection bar

Type	Dim.	Dim.	Dim.	Dim.	Pack Piece	Weight kg/100 pc.	Item no.
	L	A	B	G			
1805 2 VA	200	110	51	155	1	54.800	5016096
1805 4 VA	302	212	153	257	1	77.000	5016118
1805 6 VA	404	314	255	359	1	97.100	5016126

1805/...: For connecting different earthing systems

- With 2 mounting holes $\varnothing 11$ mm
- 1805/2: With 4 attaching holes
- 1805/4: With 8 attaching holes
- 1805/6: With 12 attaching holes



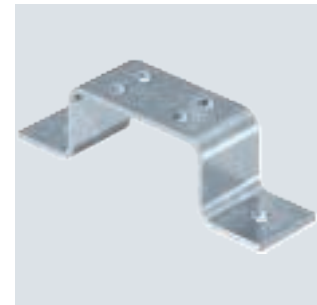
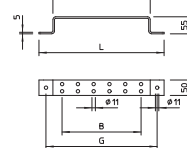
St FT

Earthing connection bar

Type	Dim.	Dim.	Dim.	Dim.	Pack Piece	Weight kg/100 pc.	Item no.
	L	A	B	G			
1805 2 FT	200	110	51	155	1	54.800	5016029
1805 4 FT	302	212	153	257	1	77.000	5016037
1805 6 FT	404	314	255	359	1	97.100	5016045

1805/...: For connecting different earthing systems

- With 2 mounting holes $\varnothing 11$ mm
- 1805/2: With 4 attaching holes
- 1805/4: With 8 attaching holes
- 1805/6: With 12 attaching holes

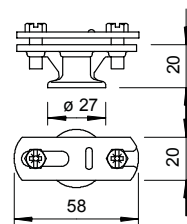


Zn G

Cable bracket for flat conductor

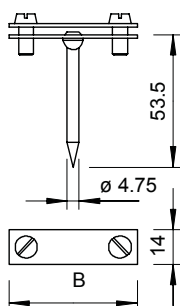
Type	Pack Piece	Weight kg/100 pc.	Item no.
113 BZ-FL	100	6.280	5230446

- With female thread M8 or through hole for wood screws
- For flat conductor FL 30
- Sliding over-piece for quick installation



Spacer clip for flat conductor, with square pin

St G

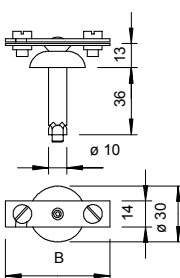


Type	Fit mm	Dim. B mm	Pack Piece	Weight kg/100 pc.	Item no.

- Fit: FL 30 and FL 40
- With 2 cylinder bolts M5 x 12 (G) and over-piece
- With square pin

Spacer clip for flat conductor, with steel spreading anchor $\varnothing 10$

St G

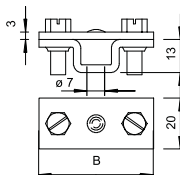


Type	Fit mm	Dim. B mm	Pack Piece	Weight kg/100 pc.	Item no.
710 40	max. FL40	62	25	5.360	5028043

- Fit: FL 30 and FL 40
- With steel straddling dowel $\varnothing 10$ mm, spacer and 2 cylinder bolts M5 x 14 (G)

Spacer clip for flat conductor, with fastening hole $\varnothing 7$

St FT



Type	Fit mm	Dim. B mm	Pack Piece	Weight kg/100 pc.	Item no.
832 40	max. FL40	65	25	7.612	5032547

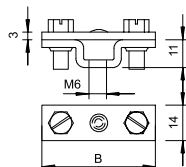
- Fit: FL 30 and FL 40
- With mounting hole $\varnothing 7$ mm and 2 hexagonal bolts M6 x 16

St FT

Spacer clip for flat conductor, with threaded connection M6

Type	Fit mm	Dim. B mm	Pack Piece	Weight kg/100 pc.	Item no.
831 30 M6	max. FL30	54	25	3.712	5032237
831 40 M6	max. FL40	65	25	3.880	5032245

- Fit: FL 30 and FL 40
- With attaching thread M6 and 2 hexagonal bolts M6 x 16 (F)

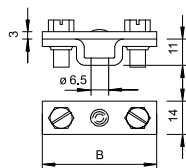


St FT





Spacer clip for flat conductor with fastening hole Ø 6.5

Type	Fit mm	Dim. B mm	Pack Piece	Weight kg/100 pc.	Item no.
831 30	max. FL30	54	25	3.580	5032032
831 40	max. 40 mm flach	65	25	3.894	5032040

- Fit: FL 30 and FL 40
- With mounting hole Ø 6.5 mm and 2 hexagonal bolts M6 x 16 (F)

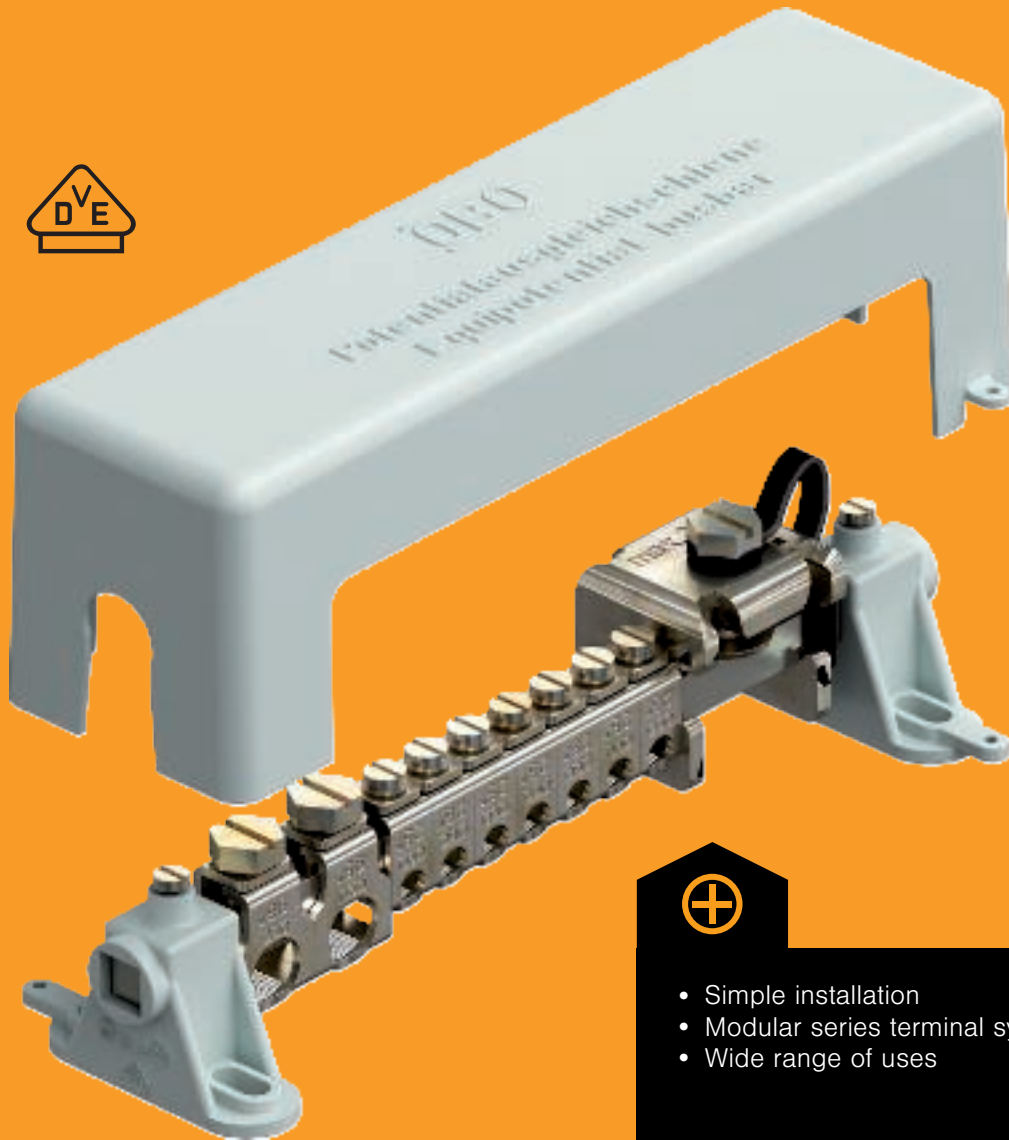


Equipotential bonding

	Equipotential busbars	446
	Clips	460
	Terminals	464
	Accessories	466



Equipotential busbars for indoor use

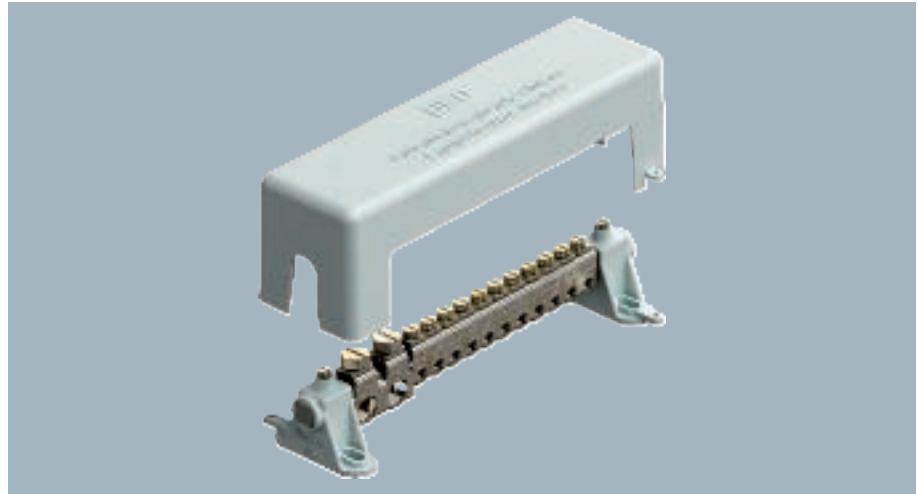
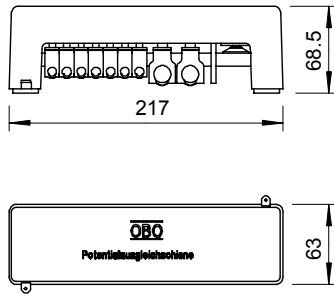


- Simple installation
- Modular series terminal system
- Wide range of uses

The equipotential busbars for interior areas are available as a modular, VDE-tested series terminal system 1801 or as a ready-for-installation equipotential busbar 1809 with plastic or metal footplate. The OBO Green 1809 is a solution made from renewable resources. The simple versions of the 1809 and 1804 are available as both surface-

mounted and concealed versions. The equipotential busbars are used for the installation of protection and functional equipotential bonding according to DIN VDE 0100-410/540 and the lightning protection equipotential bonding according to VDE 0185-305 (IEC 62305).

Equipotential busbar for indoors



Equipotential busbar for equipotential bonding to DIN VDE 0100-410/-540 as well as lightning protection equipotential bonding to DIN VDE 0185-305

- According to VDE 0618, Part 1
- With 10 x 10 mm clamping rail made of nickel-plated brass
- With contact-secure series terminals made of electrogalvanised steel
- Cover and rail stands made of grey polystyrene
- Sealable/labellable cover
- Lightning current carrying capacity 100 kA (10/350)
- Tension clamp with screw lock against self-loosening (e.g. required in industry)

Connection options:

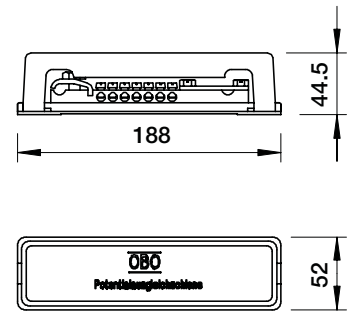
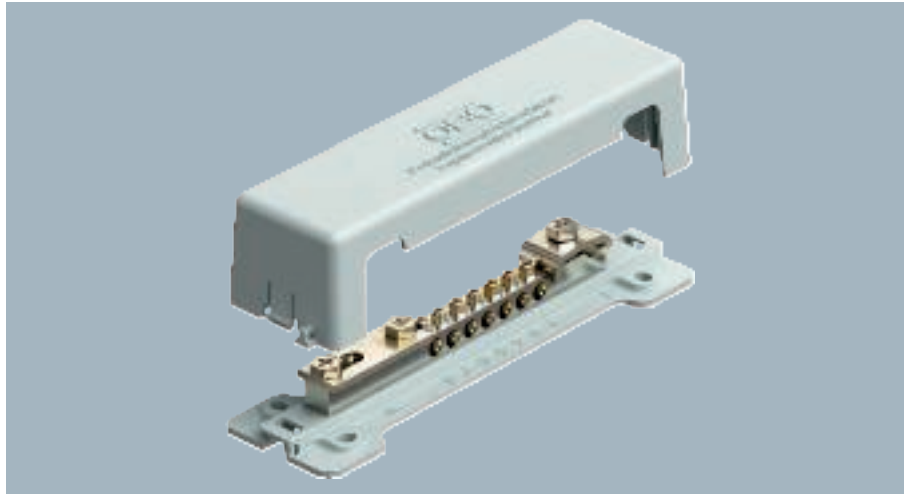
- 7 single or multi-wire cables 2.5–25 mm² or fine-wire cables to 16 mm² (max. Ø 7 mm)
- 2 single or multi-wire cable 25–95 mm² or fine-wire cables to 70 mm² (max. Ø 13.5 mm)
- 1 flat conductor 30 x 3.5 mm

Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.



Equipotential busbar with plastic base plate

CuZn
37



Type	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
1809	H/100	1	23.000	5015073

Equipotential busbar for equipotential bonding according to DIN VDE 0100-410/-540 and lightning protection equipotential bonding according to DIN VDE 0185-305

- Base plate and cover hood made of polystyrene, grey
- Sealable / labellable cover
- Contact strip made of nickel-plated brass
- Screws and crossbar made of electrogalvanised steel
- Capable of carrying lightning current of 100 kA (10/350)

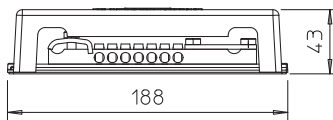
Connection options:

- 7x single or multi-core cables to 25 mm² or fine-core cables to 16 mm²
- 1 round conductor Rd 8–10
- 1 flat strip to FL30 or round conductor Rd 8–10

Equipotential busbar with metal base plate

CuZn

37



Equipotential busbar with metal foot for equipotential bonding according to DIN VDE 0100-410/-540 and lightning protection equipotential bonding according to DIN VDE 0185-305

- Cover hood from polystyrene, grey
- Sealable/labellable cover
- Base plate made of strip-galvanised steel
- Contact strip made of nickel-plated brass
- Screws and crossbar made of electrogalvanised steel
- Capable of carrying lightning current 100 kA (10/350)

Connection options:

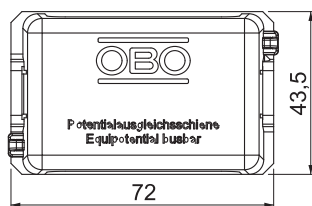
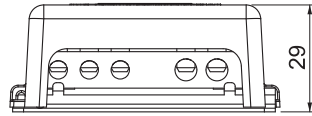
- 7x single or multi-core cables to 25 mm² or fine-core cables to 16 mm²
- 1x round conductor Rd 8–10
- 1x flat strip to FL30 or round conductor Rd 8–10

Lightning current carrying capacity

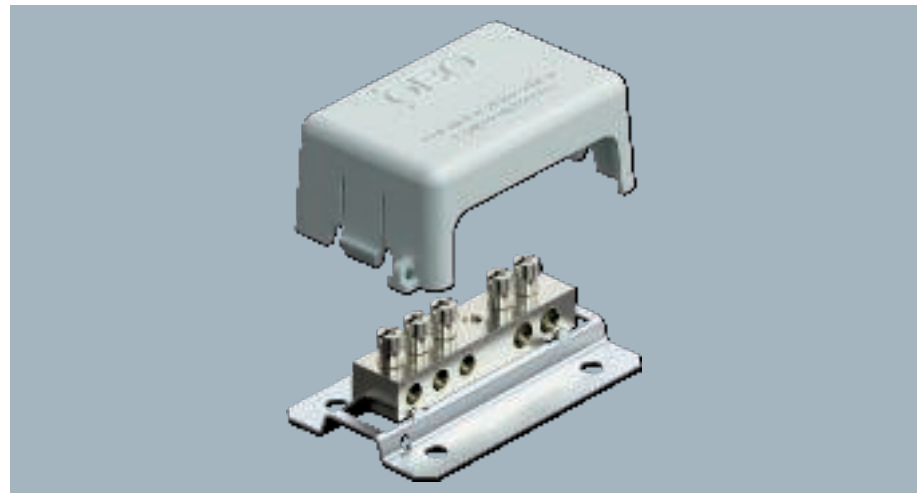
Type	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
1809 M	H/100	1	28.100	5015081

CuZn

37



Equipotential busbar for small systems



- Cover made of polystyrene, grey
- Sealable/labelable
- Base plate made of strip galvanised steel
- Contact strip and screws made of nickel-plated brass

Connection options:

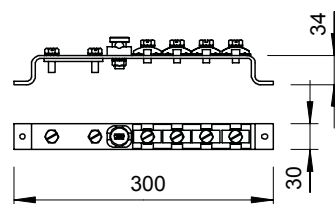
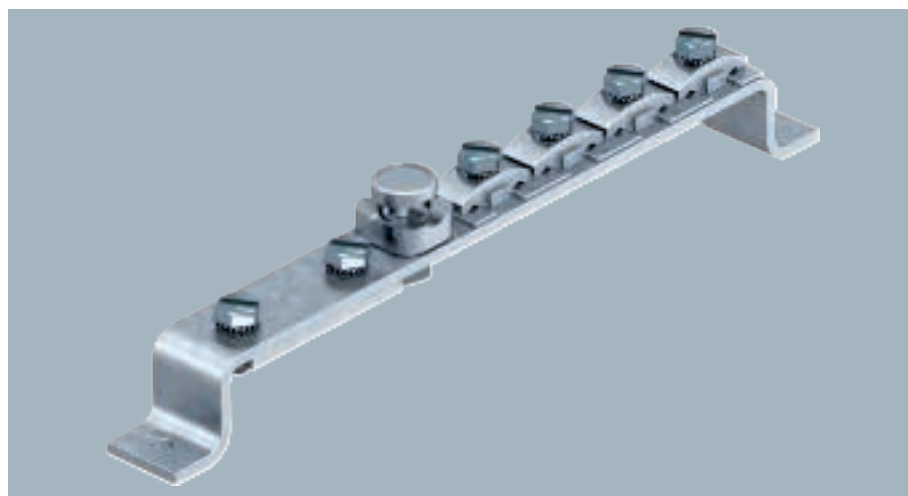
- 3 x multi-core cables to 6 mm²
- 2 x multi-core cables to 16 mm²

Type	Colour	Length mm	Width mm	Height mm	Pack Piece	Weight kg/100 pc.	Item no.
1809 BG	Grey	72	43.5	29	1	9.000	5015502



Equipotential busbar, simple version

CuZn
37



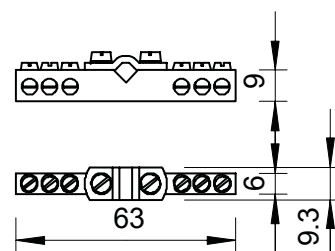
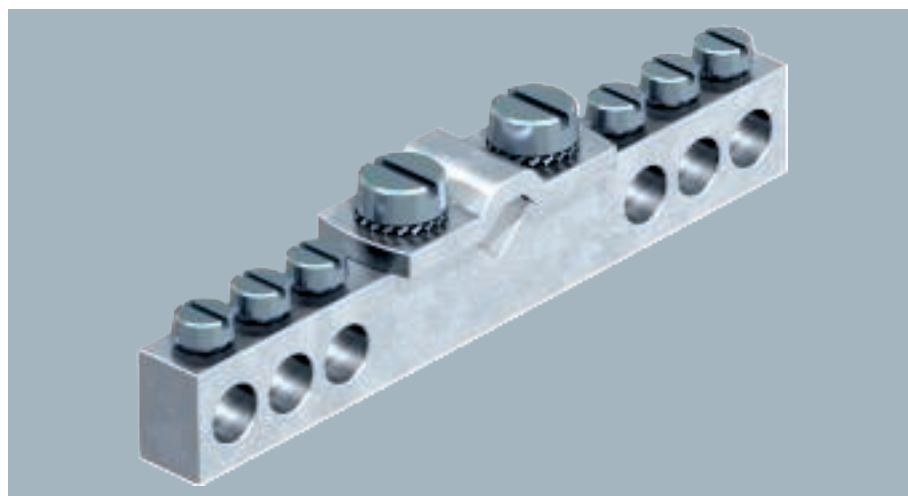
Type	Pack	Weight	Item no.
1808	1	67.000	5015014

- Clamp and crossbar, electrogalvanised steel
- Clamping element and contact strip, brass, screws, hot dipped galvanised steel

- Connection options:
- 8 x cables to 25 mm²
 - 1 x round conductor Rd 8-10
 - 1 x flat conductor to FL 40

Equipotential busbar for bathrooms

CuZn
37



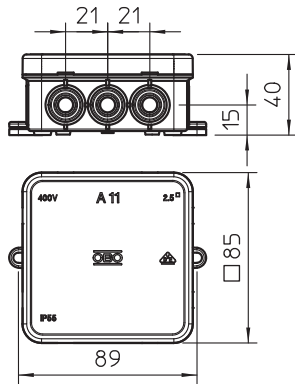
Type	Pack	Weight	Item no.
1804	5	2.963	5015553

- Nickel-plated brass contact strip
- Screws and clamp made of electrogalvanised steel

- Connection options:
- 6 cables 1.5-10 mm²
 - 1 cable 6-16 mm²

PE

Equipotential busbar 1804 for surface mounting



- Mounted equipotential busbar 1804 in junction box
- Pre-marked junction box for inserting required cables and covers

- Connection options:
- 6x cables 1.5–10 mm²
 - 1x cable 6–16 mm²

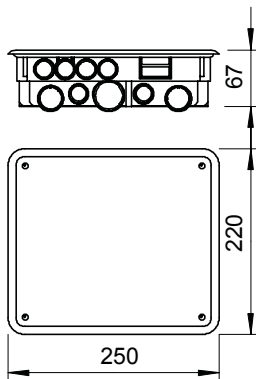
Type	Pack Piece	Weight kg/100 pc.	Item no.
1804 AP	10	8.077	5015557

CuZn

37



Equipotential busbar 1809 for concealed mounting



- Mounted equipotential busbar 1809 (without cover hood) in concealed housing
- Pre-marked concealed housing for inserting required cables and cover

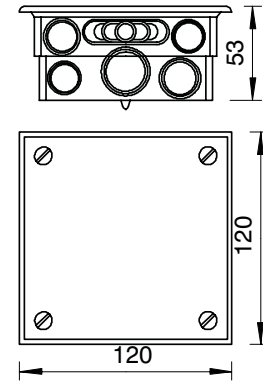
- Connection options:
- 7x cables up to 25 mm²
 - 1 round conductor Rd 8–10
 - 1 flat conductor up to FL 30 or round conductor Rd 8–10

Type	Pack Piece	Weight kg/100 pc.	Item no.
1809 UP	1	74.500	5015065



Equipotential busbars for interior areas

Equipotential busbar 1804 for concealed mounting



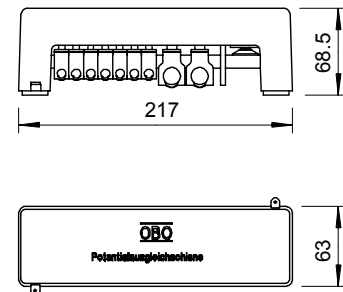
Type	Pack Piece	Weight kg/100 pc.	Item no.
1804 UP	5	20.700	5015545

- Mounted equipotential busbar 1804 in concealed housing
- Pre-marked concealed housing for inserting required cables and covers

Connection options:

- 6x cables 1.5–10 mm²
- 1x cable 6–16 mm²

Equipotential busbar for indoors, VDE-tested



Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
1801 VDE	Grey	1	55.000	5015650

Equipotential busbar for equipotential bonding to DIN VDE 0100-410/-540 as well as lightning protection equipotential bonding to DIN VDE 0185-305

- According to VDE 0618, Part 1
- With 10 x 10 mm clamping rail made of nickel-plated brass
- With contact-secure series terminals made of electrogalvanised steel
- Cover and rail stands made of grey polystyrene
- Sealable/labellable cover
- Lightning current carrying capacity 100 kA (10/350)
- Tension clamp with screw lock against self-loosening (e.g. required in industry)

Connection options:

- 7 single or multi-wire cables 2.5–25 mm² or fine-wire cables to 16 mm² (max. Ø 7 mm)
- 2 single or multi-wire cable 25–95 mm² or fine-wire cables to 70 mm² (max. Ø 13.5 mm)
- 1 flat conductor 30 x 3.5 mm

Equipotential busbars for outdoor areas

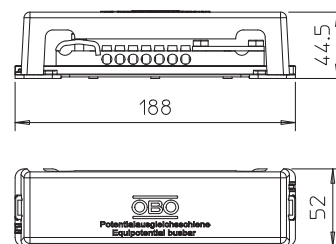


- UV-stabilised
- Corrosion-resistant
- Simple installation
- Sealable
- Labelling in the lid

The equipotential busbar for outdoor areas, 1809 A, is used for installation of the protection and functional equipotential bonding according to DIN VDE 0100-410/540 (IEC 60364-4-41,-5-54) and the lightning protection equipotential bonding accord-

ing to VDE 0185-305 (IEC 62305). Thanks to corrosion-resistant and UV-stabilised materials, the equipotential busbar is suitable for both outdoor areas and systems in aggressive environments.

Equipotential busbar for outside installation



Type	Colour	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
1809 A	Black	N/50	1	23.000	5015111

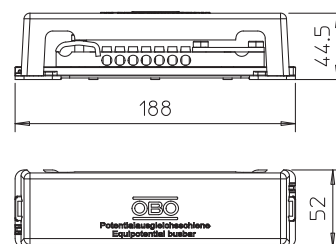
Equipotential busbar for equipotential bonding according to DIN VDE 0100-410/-540 and lightning protection equipotential bonding according to DIN VDE 0185-305

- Cover hood and base plate made of polystyrene
- Colour: Black, UV-resistant
- Screws and crossbar made of VA
- Capable of carrying lightning current 50 kA (10/350)

Connection options:

- 7 x single or multi-core cables to 25 mm² or fine-core cables to 16 mm²
- 1 x round conductor Rd 8-10
- 1 x flat strip to FL30 or round conductor Rd 8-10

Equipotential busbar for outside installation, metal base plate



Type	Colour	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
1809 AM	Black	H/100	1	23.000	5015105

Equipotential busbar for equipotential bonding according to DIN VDE 0100-410/-540 and lightning protection equipotential bonding according to DIN VDE 0185-305

- Cover hood and base plate made of polystyrene
- Colour: Black, UV-resistant
- Screws and crossbar made of VA
- Capable of carrying lightning current 50 kA (10/350)

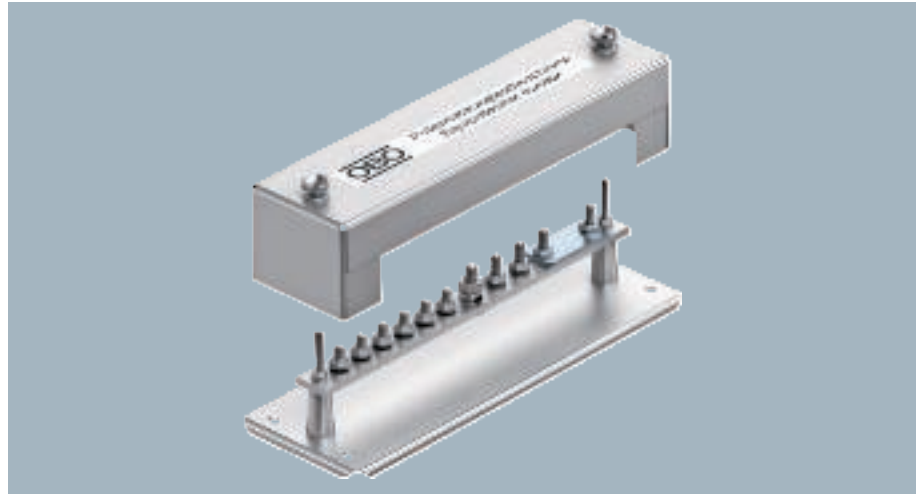
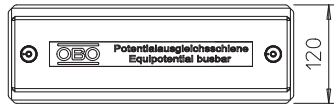
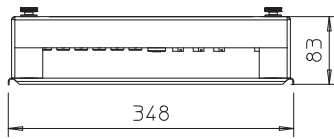
Connection options:

- 7 x single or multi-core cables to 25 mm² or fine-core cables to 16 mm²
- 1 x round conductor Rd 8-10
- 1 x flat strip to FL30 or round conductor Rd 8-10

St F



Equipotential busbar, solid version



- Base plate and screw-on cover made of strip-galvanised steel
- Sealable / labellable cover
- Contact strip made of strip-galvanised steel
- Screws and crossbar made of steel, hot-dip galvanised or electrogalvanised

Connection options:

- 6 cables 6-16 mm²
- 1 round conductor Rd 8-10
- 1 flat conductor to FL 40
- 2 cable shoe M8

Type

1810

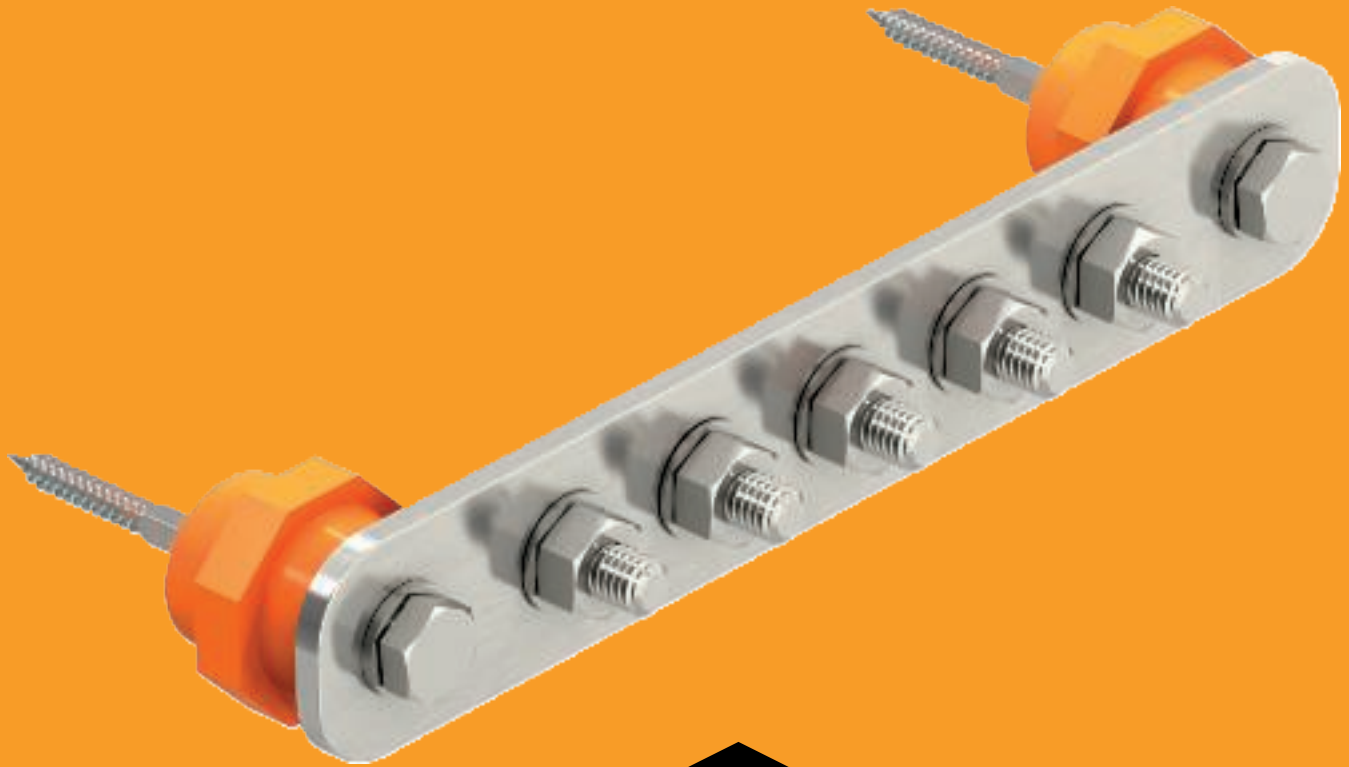
Pack Weight

Piece kg/100 pc. Item no.

1 170.000 5015057



Equipotential busbars for industrial use



- Corrosion-resistant
- UV-stabilised
- Quick and easy mounting

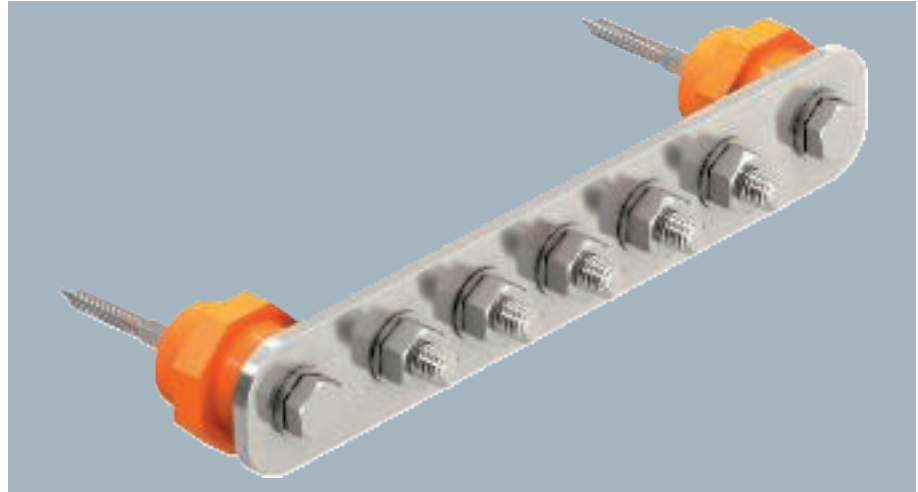
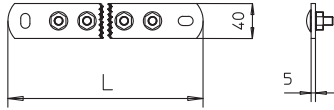
The equipotential busbars for industry, BigBar (1802) and 1805, are used for the installation of protection and functional equipotential bonding according to DIN VDE 0100-410/540 (IEC 60364-4-41,-5-54) and the lightning protection equipotential bonding according to VDE 0185-305 (IEC 62305). Due to the combination of corrosion resis-

tant materials and their simple installation, the equipotential busbars are especially suitable for use in the industrial sector. The stainless steel (V4A, 1.4571, 316 Ti) variants of the 1805 can be used in a wide range of applications thanks to the fastening holes with their 11 mm diameter.

VA



Equipotential busbar BigBar for industrial application



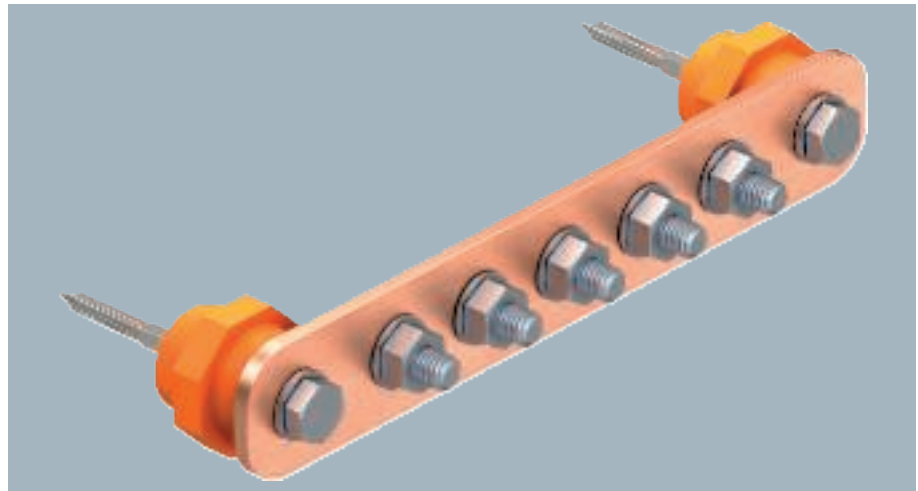
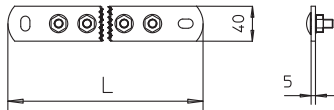
- Main potential equalisation to VDE 0100 Part 410 and Part 540, and also lightning protection potential equalisation to VDE 0185-305 (IEC 62305)
- Insulation feet
- Quick, simple assembly of connection conductors to the contact rail using lock bolts M10
- The high-grade stainless steel versions (V2A) are suitable for outdoor use
- Complete with anchors and bolts for wall mounting
- With lock washer (DIN 137) for bolt locking against loosening (e.g. required in industry and explosion-protected areas)

Type	Number of connections	Width mm	Length mm	Height mm	Pack Piece	Weight kg/100 pc.	Item no.
1802 5 VA	5	40	246	5	1	90.000	5015854
1802 10 VA	10	40	408.5	5	1	138.210	5015866

Cu



Equipotential busbar BigBar for industrial applications



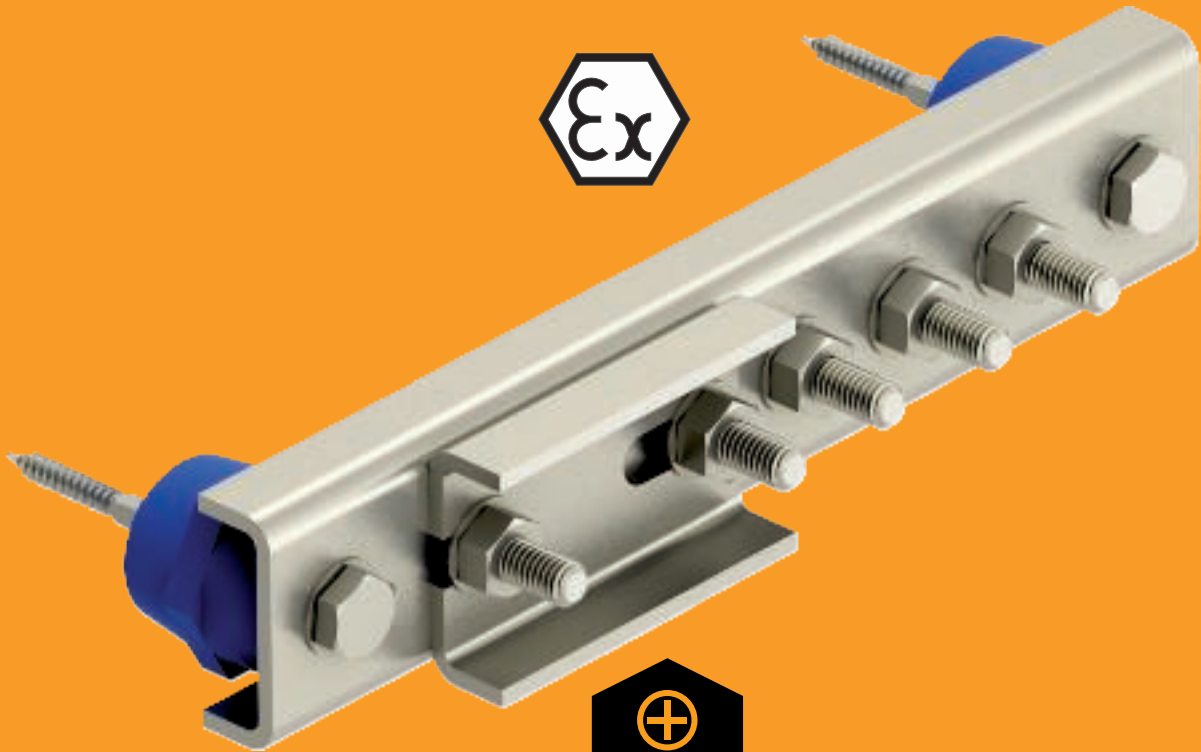
Main equipotential busbar to VDE 0100 Part 410 and Part 540, and also lightning protection equipotential bonding to VDE 0185-305 (IEC 62305)

- Insulation feet
- Quick, simple mounting of connection cables using lock bolts M10
- Complete with anchors and bolts for wall mounting
- With lock washer (DIN 137) for bolt locking against loosening (e.g. required in industry and explosion-protected areas)

Type	Number of connections	Width mm	Length mm	Height mm	Pack Piece	Weight kg/100 pc.	Item no.
1802 5 CU	5	40	246	5	1	80.000	5015830
1802 6 CU	6	40	278.5	5	1	98.400	5015832
1802 8 CU	8	40	343.5	5	1	116.550	5015836
1802 10 CU	10	40	408.5	5	1	180.000	5015842
1802 12 CU	12	40	473.5	5	1	152.850	5015844
1802 14 CU	14	40	538.5	5	1	171.000	5015847
1802 20 CU	20	40	733.5	5	1	225.450	5015849



Equipotential busbars for Ex areas



- Manufacturer declaration for use in potentially explosive areas
- Protected against self-loosening
- UV-stabilised and halogen-free insulation feet
- For single, multi and fine-wire connection cables and flat conductors
- Suitable for FT, VA, CU and AL material
- Corrosion-resistant

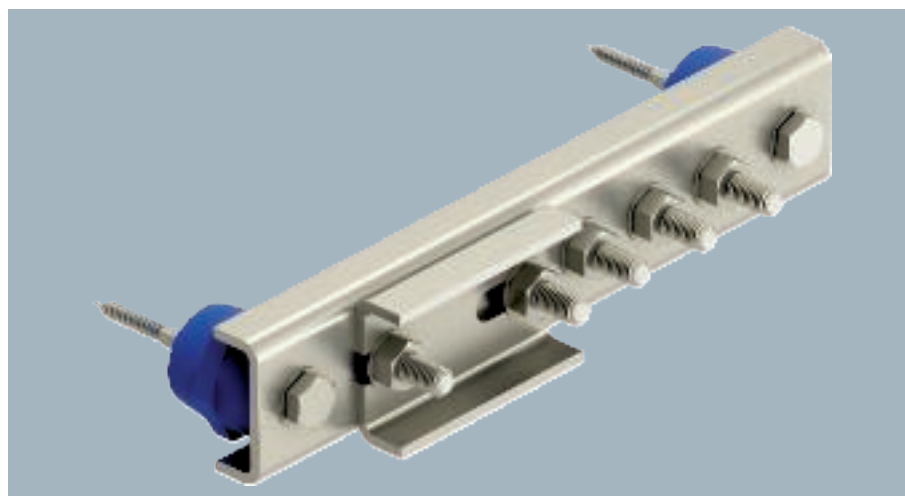
The lightning protection components for equipotential bonding in Ex areas can be used as part of the erection according to VDE 0165 Part 1 (IEC 60079-14) and VDE 0185-305-3 (IEC 62305-3). They are secured against self-loosening in accordance with VDE 0185-305-3 Supplementary Sheet 2 (DIN EN 62305-3 Supplementary Sheet 2). The equipotential busbars are used for lightning protection equipotential bonding according to VDE 0185-305-3 (IEC 62305-3) and protective/functional equipotential bonding according to DIN VDE 0100 Part 410/540 (IEC 60364-4-41,-5-54). The Vario quick connectors and the connectors with pressure

trough are connected with lightning current carrying capacity according to VDE 0185-305-3 (IEC 62305-3) and VDE 0185-561-1 (IEC 62561-1). The components are suitable for use in potentially explosive areas of Zone 2 (gases, vapours, mist) as well as Zone 22 (dusts). They do not possess their own potential source of ignition and thus cannot be evaluated according to the European Directive 2014/34/EU. This means that an approval according to the European Directive 2014/34/EU is not legally possible and also not required in the context of explosion protection.

VA



Equipotential busbar for EX zone 1/21, 2/22



For ignition spark-free protection/functional equipotential bonding to DIN VDE 0100-410/-540 as well as ignition spark-free lightning protection equipotential bonding to VDE 0185-305 (IEC 62305) in systems to VDE 0165-1 (IEC/ EN 60079-14)

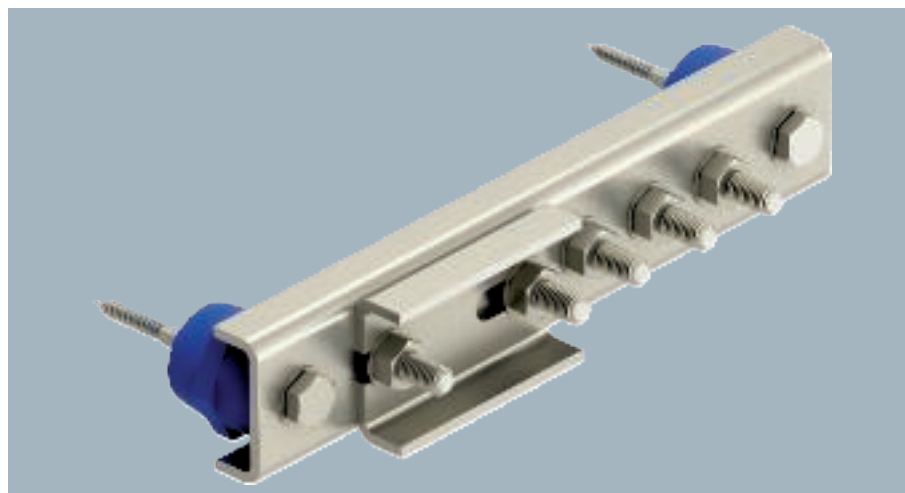
- Use in potentially explosive areas, Ex zone 1 and 2/21 and 22
- Tested according to explosion group IIC
- Lightning current carrying capacity class H (100 kA) to VDE 0185-561-1 (IEC/EN 62561-1)
- UV-stabilised and halogen-free insulation feet
- With spring washer for locking screws against self-loosening to VDE 0185-305-3 Supplementary sheet 2
- Suitable for indoor and outdoor applications

Type	Number of connections	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
EX PAS 5	5	H/100	1	152.000	5015265

VA



Equipotential busbar for EX zone 1/21, 2/22



For ignition spark-free protection/functional equipotential bonding to DIN VDE 0100-410/-540 as well as ignition spark-free lightning protection equipotential bonding to VDE 0185-305 (IEC 62305) in systems to VDE 0165-1 (IEC/ EN 60079-14)

- Use in potentially explosive areas, Ex zone 1 and 2/21 and 22
- Tested according to explosion group IIC
- Lightning current carrying capacity class H (100 kA) to VDE 0185-561-1 (IEC/EN 62561-1)
- UV-stabilised and halogen-free insulation feet
- With spring washer for locking screws against self-loosening to VDE 0185-305-3 Supplementary sheet 2
- Suitable for indoor and outdoor applications

Type	Number of connections	Lightning current carrying capacity kA	Pack Piece	Weight kg/100 pc.	Item no.
EX PAS 10	10	H/100	1	214.000	5015270



Earthing pipe clamps



- Varied connection options
- Adjustable mounting strip
- Suitable for many pipe diameters

Each system has different environmental and normative requirements relating to equipotential bonding. To implement equipotential bonding correctly, it is therefore necessary to select the right components to use. Equipotential busbars and earthing pipe clamps are key components of this kind of installation. In the context of lightning protection equipotential bonding, these must fulfil the requirements and undergo tests as defined in VDE

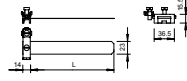
0185-561-1 (IEC 62561-1). When connecting metallic pipes to the equipotential bonding, earthing pipe clamps such as OBO type 927 are generally used. These offer a wide range of advantages over pipe clamps during assembly. With their rust-proof stainless steel tightening strap, they are suitable for a wide range of pipe diameters and materials.

VA



Type	For pipe	Dim.	For pipe	Pack Piece	Weight kg/100 pc.	Item no.
	Ø	L	Ø			
927 1	3/8-11/2	200	17.2-48	10	7.780	5057515
927 2	3/8-4	395	17.2-114	10	8.550	5057523
927 4	3/8-6	555	17.2-165	10	8.022	5057558

- For pipes of Ø 3/8 - 6"
- Connection options: Max. 2 cables 2.5-25 mm²
- Round conductor Rd 8
- Clamp element, bolts and tightening strap made of rustproof stainless steel (VA)



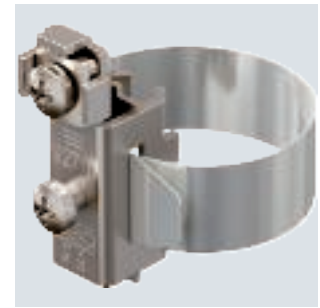
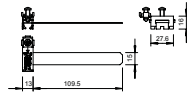
CuZn 37 N



Earthing pipe clamp, nickel-plated

Type	For pipe	Dim.	Pack Piece	Weight kg/100 pc.	Item no.
	Ø	L			
927 0	8-22	109.5	10	5.000	5057507

- For pipe Ø 8-22 mm
- Connection options: max. 2 conductors 2.5-10 mm²
- Clamp elements and screws from nickel-plated brass
- Tightening strap from high-grade stainless steel (V2A)



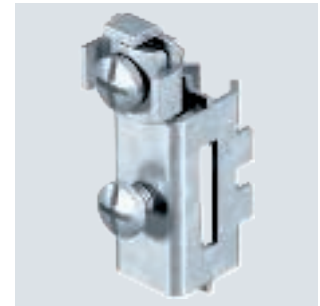
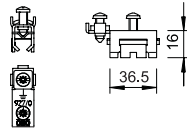
VA



Clamp lock for earthing pipe clamp

Type	Pack Piece	Weight kg/100 pc.	Item no.
927 SCH-K-VA	20	4.700	5057930

- Connection option: max. 2 conductors 2.5-25 mm²
- Possible to connect round conductor Rd 8



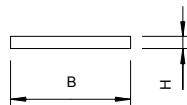
VA



Installation strip for earthing pipe clamp

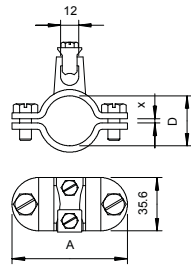
Type	Dim. B	Dim. H	Pack m	Weight kg/100 m	Item no.
	mm	mm			
927 BAND-VA	23	0.3	40	6.000	5057922

- 40 m roll
- Ready for transport and installation in unroll pack



Earthing clamp, type 952

St FT



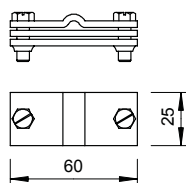
Type	Dim. A mm	Clamping range D mm	Dim. X mm	Dim. pipe Ø inch	Shipping box Piece	Pack Piece	Weight kg/100 pc.	Item no.
952 Z 1 1/4	87	39.5-42.5	3	1 1/4	50	5	32.200	5052130

- For pipes 1/2-2" or Ø 11.5-60 mm
- Connection options: conductors 16-70 mm² and/or round conductors to Rd 10 with captive pressure strip from stainless steel
- With 2 hexagonal bolts M6 x 16 and 2 hexagonal bolts M6 x 20 from hot-dip galvanised steel
- Top section of clamp with cast contact point from die-cast zinc, bottom section of clamp from hot-dip galvanised steel



Earth connection terminal for round conductor and flat conductor

St FT

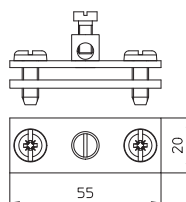
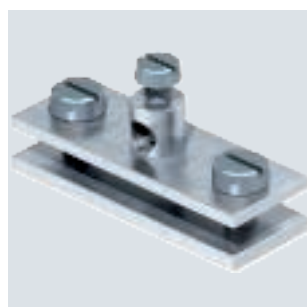


Type	Shipping box		Pack Piece	Weight kg/100 pc.	Item no.
	Piece				
937 50	100		10	11.750	5043018

- For round and flat conductors
- Fit: cable 50 mm² x max. FL 40
- Rd 8 x max. FL 40
- With 2 hexagonal bolts M6 x 20 (F)

Earthing terminal for cables and flat conductors

St G

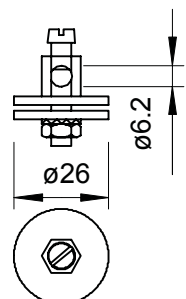


Type	Shipping box		Pack Piece	Weight kg/100 pc.	Item no.
	Piece				
939	150		25	5.932	5043107

- For cables to 16 mm² and flat conductors
- Fit: cable to 16 mm² x max. FL 30
- With riveted brass connection terminal and one cylinder bolt, M5 x 12, with two cylinder bolts, M6 x 16

Earthing terminal for fastening on earthing strap

CuZn 37 N



Type	Shipping box		Pack Piece	Weight kg/100 pc.	Item no.
	Piece				
928	240		10	5.700	5040507

- For use in bathtubs or shower tubs etc.
- Connection option: conductors to 16 mm²
- Clamping element with threaded connection M6, 1 hexagonal nut M6, 1 serrated dimension washer and 1 cylinder screw M5 x 8
- Clamping element, nut and screws from copper-plated brass
- Serrated washer from stainless steel; 2 washers from galvanised steel

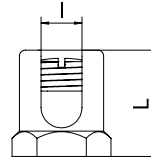
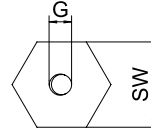
CuZn
37



Earthing terminal with fastening thread

Type	Dim.	Dim.	Cross-section	Thread	Pack Piece	Weight kg/100 pc.	Item no.
	L mm	l mm					
EKL 25 M6	22	8	50	M6	50	3.100	6404006
EKL 35 M6	26	10	70	M6	50	4.800	6404014

Earthing terminal for fastening the equipotential bonding wire to the cable support system. Suitable for conductor cross sections of 4–50 mm².



Branch terminals

CuZn
37

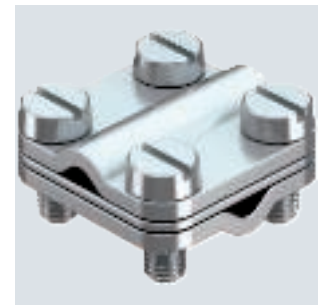
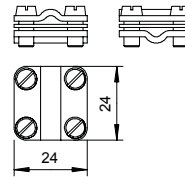
N



Clip branch terminal

Type	Pack Piece	Weight kg/100 pc.	Item no.
470 4-16	50	2.856	5064015

- Seat: 4 - 16 mm² x 4 - 16 mm²
- With 4 cylinder bolts M4 x 16



CuZn
37

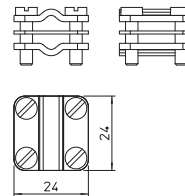
N



Clip branch terminal, parallel

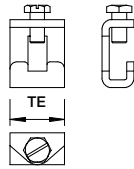
Type	Pack Piece	Weight kg/100 pc.	Item no.
471 4-16 P	50	2.900	5064017

- Seat: 4–16 mm² x 4–16 mm²
- With 4 cylinder bolts M4 x 16



Flat conductor terminal from FL 30 for 1801 VDE

St G

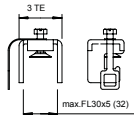


Type	Connection option	Pack Piece	Weight kg/100 pc.	Item no.
1801 RK40	FL 40x5	10	7.300	5015774

- For flat conductors from FL 30
- 2 terminals always required for each flat conductor connection
- Lightning current carrying capacity 100 kA (10/350)
- Electrogalvanised steel

Flat conductor terminal to FL 30 for 1801 VDE

St G

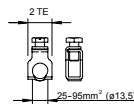


Type	Connection option	Pack Piece	Weight kg/100 pc.	Item no.
1801 RK30	FL 30x5	10	10.643	5015731

- For flat conductors to FL 30 and thickness to 5 mm
- Captive design with plastic safety strap
- 3 division units
- Lightning current carrying capacity 100 kA (10/350)
- Electrogalvanised steel

Round conductor terminal from 25 mm² for 1801 VDE

St G

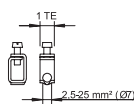


Type	Connection option	Pack Piece	Weight kg/100 pc.	Item no.
1801 RK95	25-95 mm ²	10	4.700	5015766

- For single or multi-wire cables 25-95 mm²
- For fine-wire cables to 70 mm² (max. Ø 13.5 mm)
- 2 division units
- Lightning current carrying capacity 100 kA (10/350)
- Electrogalvanised steel
- Tension clamp with screw lock against self-loosening (e.g. required in industry and in explosion-protected areas)

Round conductor terminal to 25 mm² for 1801 VDE

St G



Type	Connection option	Pack Piece	Weight kg/100 pc.	Item no.
1801 RK25	2.5-25 mm ²	10	1.323	5015758

- For single or multi-wire cables 2.5-25 mm²
- For fine-wire cables to 16 mm² (max. Ø 7 mm)
- 1 division unit
- Lightning current carrying capacity 100 kA (10/350)
- Electrogalvanised steel
- Tension clamp with screw lock against self-loosening (e.g. required in industry and in explosion-protected areas)

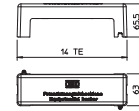
PS



Cover hood for 1801 VDE

Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
1801 AH	Grey	1	6.450	5015707

- 1 covering hood required per 14 division units
- Fastening to rail stands 1801/Sch
- Sealable

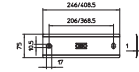


VA

Cover for BigBar equipotential busbar

Type	Number of connections	Pack Piece	Weight kg/100 pc.	Item no.
1802 AH 5	5	1	25.800	5015880
1802 AH 10	10	1	34.299	5015884

- Complete with all mounting components
- Labellable



Contact strips

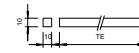
CuZn 37



Contact strip for 1801 VDE

Type	Length mm	Pack Piece	Weight kg/100 pc.	Item no.
1801 KL1	212	1	18.000	5015723
1801 KL2	430	1	36.000	5015804
1801 KL3	645	1	54.000	5015812

- 10 x 10 mm made of nickel-plated brass
- 1801 KL1: 14 subunits
- 1801 KL2: 28 subunits
- 1801 KL3: 42 subunits



Rail stands

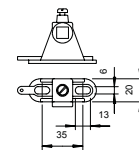
PS



Busbar stands for 1801 VDE

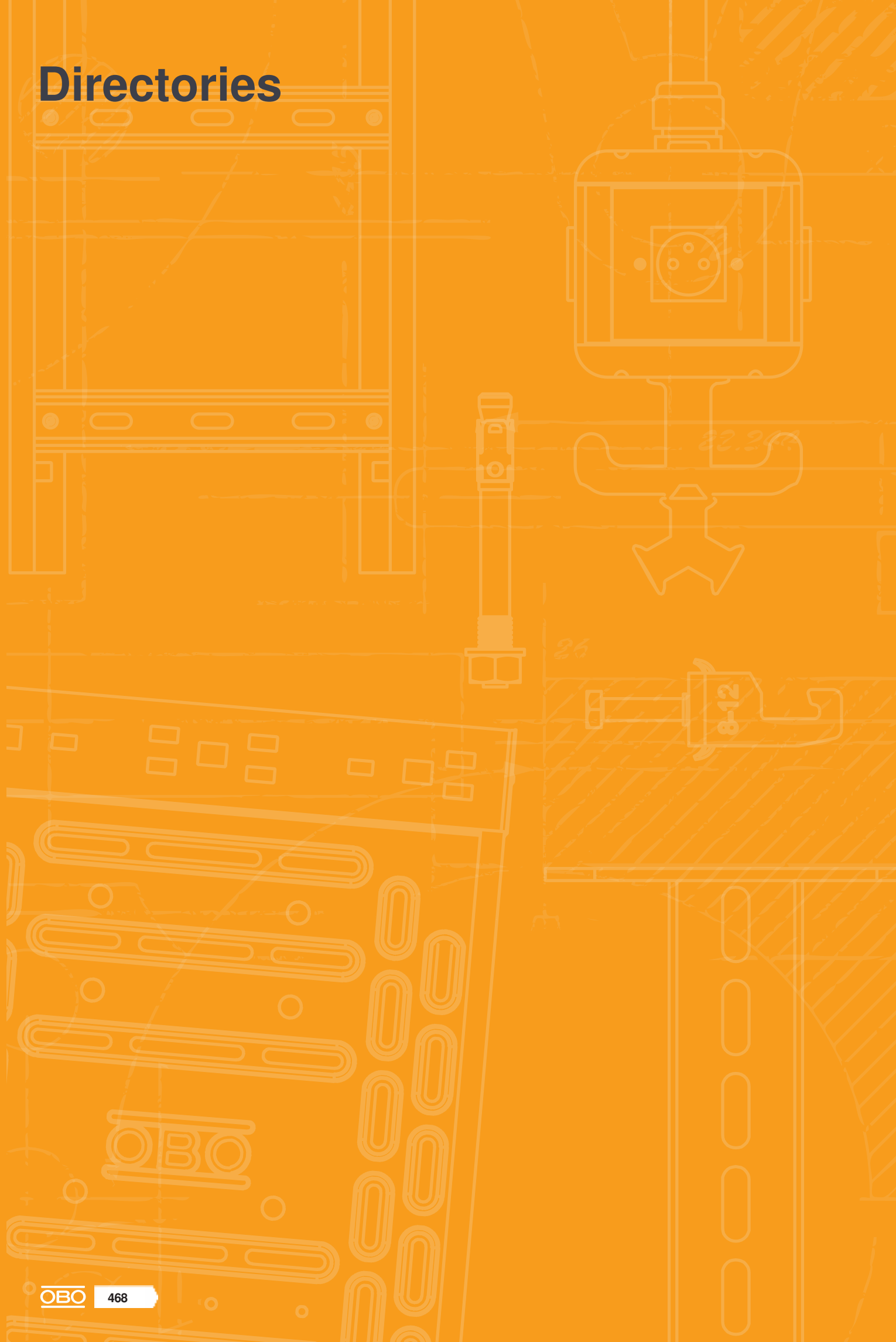
Type	Colour	Pack Piece	Weight kg/100 pc.	Item no.
1801 SCH	Grey	10	1.500	5015715

- 2 rail stands required per 14 units
- With 6 x 13 mm slot








Directories

































Directories

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	Pictogram explanation	472
	Numeric directory	476


























Test marks

	American Bureau of Shipping, USA		Underwriters Laboratories Inc., USA + CSA, Canada
	AENOR, Producto Certificado, Spain		Österreichischer Verband für Elektrotechnik, Austria
	STOWARZYSZENIE ELEKTRYKÓW POLSKICH, Poland		ISTITUTO ITALIANO DEL MARCHO DI QUALITÀ, Italy
	Lightning current-tested		RINA 1861, Ship Classification, Certification and Services
	Lightning current-tested, Class H (100 kA)		Underwriters Laboratories Inc., USA
	CEBEC, Belgium		SEMKO An Inchcape Testing Services Company, Sweden
	Canadian Standards Association, Canada		Eidgenössisches Starkstrominspektorat, Switzerland
	DEMKO, Danmarks Elektriske Materielkontrol, Denmark		South African Bureau of Standards
	Deutsches Institut für Bautechnik Berlin, Germany		Shock-tested, Bundesamt für Zivilschutz, Germany
	Det Norske Veritas		Sähkötarkastuskeskus Elinspektionscentralen Electrical Inspectorate, Finland
	ENEC Austria		Underwriters Laboratories Inc., USA
	ATEX certificate for explosive areas		Underwriters Laboratories Inc., USA
	ELEKTROTECHNICKÝ ZKUŠEBNÍ ÚSTAV, Czech Republic		Verband der Elektrotechnik, Elektronik, Informationstechnik e.V., Germany
	FIMKO, Finland		German Association of Electricians, tested safety
	Forschungs- und Materialprüfungsanstalt, Germany		5-year warranty
	Russia, GOST The State Committee for Standards		
	Test marks for technical resources, VDE Prüf- und Zertifizierungsinstitut Offenbach, Germany		
	Halogen-free; without chlorine, fluorine and bromine		
	INMETRO, Brazil		
	KEMA-KEUR, Netherlands		
	Indication of metric products		
	MAGYAR ELEKTROTECHNIKAI ELLENŐRZŐ INTÉZET Budapest, Hungary		
	NEMKO, Norway		
	AFNOR Quality symbol of the French standardisation institute		





Pictogram explanation






Surfaces

	Strip galvanised
	Strip galvanised/plastic-coated
	Strip galvanised zinc/aluminium, double dip
	Bright
	Bright, reworked
	Anodised
	Hot-dip galvanised
	Electrogalvanised
	Electrogalvanised/plastic-coated
	Electrogalvanised, yellow-chromated
	Electrogalvanised, yellow passivated
	Electrogalvanised, transparently passivated
	Primed
	Painted
	Welding primed
	Hot-dip galvanised
	Hot-dip galvanised 85 µm
	Copper-plated
	Nickel-plated
	Galvanised, Deltatone 500
	Galvanised, MAGNI 565
	Zinc-aluminium coated, Galfan
	Zinc scale






Conformity symbol

	Communautés Européennes, EC declaration of conformity according to EC directives
	RoHS-conformant



















Quality marks

	Halogen-free; without chlorine, fluorine and bromine
	Flame resistant 650 °C
	Flame resistant 750 °C
	Flame resistant 960 °C
	UV-resistant




Specific product symbols

	Diameter 60 mm
	Diameter 68 mm
	Protection device to DIN EN 61643-11 or IEC 61643-11
	Transition from LPZ 2 to LPZ 3
	Acoustic signalling

Applications



	Remote signalling
	Acoustic signalling
	Integrated Service Digital Network, ISDN applications
	Digital Subscriber Line, DSL applications
	Analogue telecommunication
	Category 5 TwisterPair
	Channel Performance to American EIA/TIA standard
	Measuring, controlling and regulating systems
	TV applications
	SAT-TV applications
	MultiBase base
	LifeControl
	Intrinsically safe protection device for potentially explosive areas
	Channel Performance to ISO/IEC 11801
	Power over Ethernet
	230/400 V system
	Protection rating IP 54
	Protection rating IP 65

Lightning protection classes







	Protection device to DIN EN 61643-11 or IEC 61643-11
	Combination protection device made of type 1 and type 2
	Protection device to DIN EN 61643-11 or IEC 61643-11








Lightning protection classes

	Protection device to DIN EN 61643-11 or IEC 61643-11
	Protection device to DIN EN 61643-11 or IEC 61643-11



Lightning protection zone

	Transition from LPZ 0 to LPZ 1
	Transition from LPZ 0 to LPZ 2
	Transition from LPZ 0 to LPZ 3
	Transition from LPZ 1 to LPZ 2
	Transition from LPZ 1 to LPZ 3
	Transition from LPZ 2 to LPZ 3



BSS maintenance of electrical function installation

	Fire-tested systems
	Escape route ceiling mounting with pressure clip
	OBO Grip, wall routing type
	OBO Grip, ceiling routing type
	Pressure clip for maintenance of electrical function, ceiling mounting




BSS anchor

	Fire protection anchor
	Fire protection bolt tie

BSS test marks/material class

	Maintenance of electrical function class E30
	Maintenance of electrical function class E90














Clamp clip base shapes

	Clamp clip for C profile rail, slot width 11–12 mm
	Clamp clip for C profile rail, slot width 16–17 mm
	Clamp clip for C profile rail, slot width 18–22 mm



Diameter

	Diameter 60 mm
	Diameter 68 mm
	Diameter 70 mm
	Diameter 74 mm





Entries

	4 cable entries
	6 cable entries
	7 cable entries
	8 cable entries
	9 cable entries
	10 cable entries
	12 cable entries
	10 cable entries ECO
	12 cable entries ECO
	14 cable entries ECO
	16 cable entries
	18 cable entries ECO
	24 cable entries






Gland thread

	Thread metric
	Thread Pg





Entry size

	M20 entry
	M25 entry
	M32 entry
	M40 entry

KTS side heights

	Cable tray, side height 35 mm
	Cable tray, side height 60 mm
	Cable tray, side height 85 mm
	Mesh cable tray, side height 35 mm
	Mesh cable tray, side height 55 mm










Materials

	Flat steel
	Angular steel
	U steel
	Round material






Pictogram explanation







Nominal cross-section

	Nominal cross-section 1.5 mm ²
	Nominal cross-section 1.5–2.5 mm ²
	Nominal cross-section 2.5 mm ²
	Nominal cross-section 2.5–4 mm ²
	Nominal cross-section 4 mm ²
	Nominal cross-section 4–6 mm ²
	Nominal cross-section 6 mm ²
	Nominal cross-section 10 mm ²
	Nominal cross-section 16 mm ²






Nominal voltage

	Nominal voltage 400 V
	Nominal voltage 500 V
	Nominal voltage 660 V





Polarity

	3-pole
	5-pole
	7-pole
	8-pole
	10-pole
	12-pole



Slot widths

	Slot width 7.5 mm
	Slot width 11 mm
	Slot width 11–12 mm
	Slot width 12 mm
	Slot width 15 mm
	Slot width 16 mm
	Slot width 16.5 mm
	Slot width 16–17 mm
	Slot width 17 mm
	Slot width 18 mm
	Slot width 22 mm
	Slot width 35 mm




Screw heads

	Philips screw
	Torx screw
	Phillips screw
	Pozidriv





Firing devices

	Bolt-firing tool
	Nail device





Protection rating

	Protection rating IP 20
	Protection rating IP 30
	Protection rating IP 31
	Protection rating IP 44
	Protection rating IP 54
	Protection rating IP 55
	Protection rating IP 65
	Protection rating IP 66
	Protection rating IP 67
	Protection rating IP 68
















Metals

	Aluminium
	Aluminium/steel
	Stainless steel, rustproof
	Stainless steel, rustproof
	Stainless steel, rustproof
	Copper
	Brass
	Steel
	Malleable iron
	Die-cast zinc

Plastics

	Acrylonitrile butadiene styrene
	Duroplast, Aminoplast, type 131.5
	Duroplast, melamine resin, type 150
	Ethylene vinyl acetate

Plastics

 FA	Fibre-proof material DIN 28091
 GFK	Fibreglass-reinforced plastic
 NBR SBR	Rubber mixture
 NBR	Nitrile rubber
 PETR	Petrolatum
 PA	Polyamide
 PA/ GF	Polyamide, fibre-glass reinforced
 PBPT	Polybutylene terephthalate
 PC	Polycarbonate
 PE	Polyethylene
 PP	Polypropylene
 PP/ GF	Polypropylene, fibre-glass reinforced
 PS	Polystyrene
 PVC	Polyvinylchloride
 ZELL PE	Cellular polyethylene



Numeric directory

GTIN	Item no.	Page	GTIN	Item no.	Page	GTIN	Item no.	Page	GTIN	Item no.	Page	GTIN	Item no.	Page
	/100 pc.			/pc.			/100 pc.			/pc.			/pc.	
5595717	2146207	349	6427628	5015265	325	5383833	5032032	443	5390732	5093023	251	5239734	5094423	80
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			5378372	5015502	449	5383956	5032237	443	5390978	5093236	254	5239758	5094437	84
5741671	2153734	349	5378433	5015545	452	5384014	5032245	443	5391036	5093252	253	5374886	5094444	76
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6421046	2360041	438	5313021	5015680	447	5385936	5040507	464	5022732	5093275	261	5239932	5094493	82
6421053	2360043	438	5378617	5015707	467				5867050	5093277	263	5239949	5094510	79
			5378679	5015715	467	5385998	5043018	464	5246268	5093378	165	5648482	5094574	279
5230533	2360055	413	5378730	5015723	467	5386056	5043107	464	5076551	5093380	166	5709084	5094576	281
5230595	2360101	413	5378792	5015731	466				6098583	5093382	168	5708872	5094605	280
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5518419	2362970	413	5378914	5015766	466				5299448	5093391	167	5478669	5094617	278
			5455837	5015774	466	5388517	5057507	461	5158103	5093400	290	5406594	5094618	138
5242710	3041204	422	5378976	5015804	467	5388579	5057515	461	5012832	5093404	290	5382867	5094621	141
5242772	3041212	422	5379034	5015812	467	5388630	5057523	461	5004660	5093406	291	5240020	5094624	146
5242833	3041255	422	5002253	5015830	457	5388692	5057558	461	5406778	5093415	300	5240037	5094627	148
5242956	3041956	422	5699330	5015832	457	5699651	5057599	337	5382799	5093418	100	5374923	5094632	143
			5699347	5015836	457				6398638	5093440	33	5382966	5094639	134
5243137	3042200	423	5002260	5015842	457	5805458	5057922	461	6398652	5093442	37	5240051	5094644	136
			5699354	5015844	457				6398645	5093446	34	5382973	5094650	89
5643036	3044904	423	5699361	5015847	457	5805519	5057930	461	6398669	5093448	38	5240068	5094653	142
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			5033615	5015880	467				6398706	5093462	40	5406617	5094677	133
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5067535	5096667	301	5578383	5098611	197				6656141	5311595	390	5423614	5335205	408
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