

# Technical data sheet

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

Item number: 5093533



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.

\* Complete = Plug-in arrester and base



### Master data

|                                    |                          |
|------------------------------------|--------------------------|
| Item number                        | 5093533                  |
| Type                               | V50-3+NPE+FS-280         |
| Description 1                      | CombiController V50      |
| Description 2                      | 3-pole with NPE + RS     |
| Manufacturer                       | OBO                      |
| Dimension                          | 280V                     |
| Smallest sales unit                | 1                        |
| Unit of quantity                   | Piece                    |
| Weight                             | 59.3 kg                  |
| Weight unit                        | kg/100 pc.               |
| CO2 Footprint (GWP) Cradle-to-Gate | 2,0845 kg CO2e / 1 Piece |

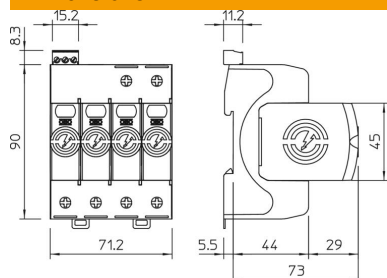
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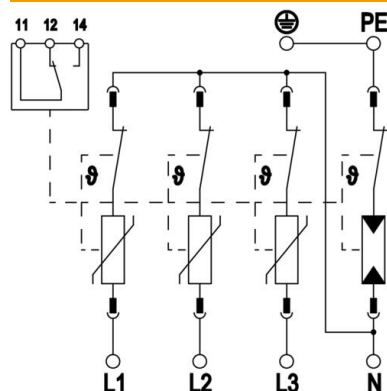
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### Dimensions



### Technical data



|                                                             |                     |
|-------------------------------------------------------------|---------------------|
| Arrester surge current (8/20 $\mu$ s) [total]               | 80 kA               |
| Connection cross-section (min.)                             | 1.5 mm <sup>2</sup> |
| Connection cross-section, FM terminals, max.                | 16 AWG              |
| Connection cross-section, FM terminals, max.                | 1.5 mm <sup>2</sup> |
| Connection cross-section, FM terminals, min.                | 21 AWG              |
| Connection cross-section, FM terminals, min.                | 0.5 mm <sup>2</sup> |
| Response time                                               | <25 ns              |
| Response time [L-N]                                         | 25 ns               |
| Response time [N-PE]                                        | 100 ns              |
| Blow-out                                                    | no                  |
| Pole version                                                | 3+N/PE              |
| Structural width in division units (division unit, 17.5 mm) | 4                   |
| Operating temperature, max.                                 | 80 °C               |
| Operating temperature, min.                                 | -40 °C              |
| Lightning surge current (10/350 $\mu$ s)                    | 12.5 kA             |
| Lightning surge current (10/350 $\mu$ s) [L-N/PE]           | 12.5 kA             |
| Lightning surge current (10/350 $\mu$ s) [N/PE]             | 50 kA               |
| Lightning surge current (10/350)                            | 50 kA               |
| Torque                                                      | 35 Lbs              |
| Torque                                                      | 4 Nm                |
| Torque for FM terminal                                      | 1.7 Lbs             |
| Torque for FM terminal                                      | 0.2 Nm              |
| Installation location                                       | Interior            |
| Remote signalling                                           | yes                 |
| FM contacts                                                 | Changeover          |
| Follow current quenching capacity (eff) [N-PE]              | 0.1 kA              |
| Function/defect display                                     | Visual              |
| Housing material surge protection components                | PA UL 94 V-0        |
| Combined voltage protection level [L-PE]                    | 2.5 kV              |

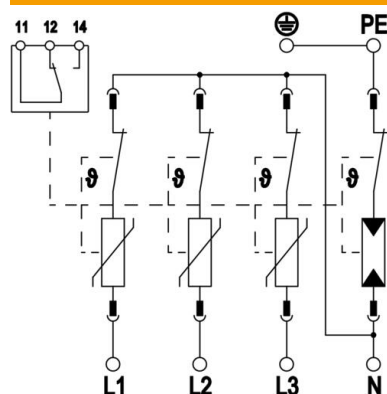
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|                                                                     |                            |
|---------------------------------------------------------------------|----------------------------|
| Maximum continuous voltage (L-N)                                    | 280 V                      |
| Maximum continuous voltage (N-PE)                                   | 255 V                      |
| Maximum continuous voltage AC                                       | 280 V                      |
| Integrated back-up fuse                                             | no                         |
| Short-circuit resistance for max. mains-side overcurrent protection | 50 kA eff                  |
| Conductor cross-section, flexible (fine-wire), max.                 | 35 mm <sup>2</sup>         |
| Conductor cross-section, flexible (fine-wire), max.                 | 2 AWG                      |
| Conductor cross-section, flexible (fine-wire), min.                 | 16 AWG                     |
| Conductor cross-section, flexible (fine-wire), min.                 | 1.5 mm <sup>2</sup>        |
| Conductor cross-section, rigid (single-wire/multiwire), max.        | 2 AWG                      |
| Conductor cross-section, rigid (single-wire/multiwire), max.        | 35 mm <sup>2</sup>         |
| Conductor cross-section, rigid (single-wire/multiwire), min.        | 16 AWG                     |
| Conductor cross-section, rigid (single-wire/multiwire), min.        | 1.5 mm <sup>2</sup>        |
| Humidity, min.                                                      | 5 %                        |
| Humidity, max.                                                      | 95 %                       |
| Max. mains-side overcurrent protection                              | 160 A gL/gG                |
| Maximum back-up fuse                                                | 160 A                      |
| Maximum discharge current (8/20 µs)                                 | 50 kA                      |
| Maximum discharge current (8/20 µs) [L-N]                           | 50 kA                      |
| Minimum distance                                                    | 1.5 mm                     |
| Installation type                                                   | DIN rail 35 mm             |
| Nominal discharge current (8/20 µs)                                 | 30 kA                      |
| Nominal discharge current (8/20 µs) [L-N]                           | 30 kA                      |
| Nominal frequency                                                   | 50 Hz                      |
| Nominal voltage AC (50/60 Hz)                                       | 230 V                      |
| Network form                                                        | Other                      |
| TN network form                                                     | yes                        |
| TN-C-S network form                                                 | yes                        |
| TN-S network form                                                   | yes                        |
| TT network form                                                     | yes                        |
| Pole number                                                         | 4                          |
| Ports                                                               | One-Port SPD               |
| Residual voltage [L-N] @ 1 kA                                       | 0.7 kV                     |
| Residual voltage [L-N] @ 12.5 kA                                    | 1 kV                       |
| Residual voltage [L-N] @ 5 kA                                       | 0.8 kV                     |
| Residual voltage [L-N] @ 7 kA                                       | 0.9 kV                     |
| ROHS-conformant                                                     | Exempt                     |
| Switching power AC                                                  | 230 V; 0,5 A               |
| Switching power DC                                                  | 230 V; 0,1 A / 75 V; 0,5 A |
| Protection rating                                                   | IP20                       |

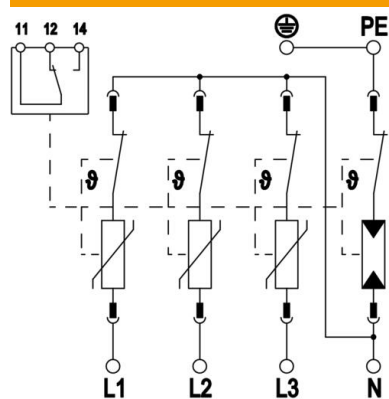
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|                                               |                 |
|-----------------------------------------------|-----------------|
| Protective conductor current                  | < 5 $\mu$ A     |
| Protection level                              | $\leq 1,3$ kV   |
| Protection level [L-N]                        | $\leq 1,3$      |
| Protection level [N-PE]                       | 1.5 kV          |
| Signalling on device                          | Visual          |
| SPD to EN 61643-11                            | Type 1+2        |
| SPD to IEC 61643-11                           | Class I+II      |
| SPD to UL 1449                                | Type 4          |
| Permitted temperature range, max.             | 80 °C           |
| Permitted temperature range, min.             | -40 °C          |
| TOV voltage [L-N] – fail safe mode – 120 min. | 440 V           |
| TOV voltage [L-N] – withstand mode – 5 s      | 335 V           |
| TOV voltage [N-PE] – withstand mode – 200 ms  | 1200 V          |
| Approvals                                     | VDE KEMA UL ÖVE |