

# Technical data sheet

## V20 surge arrester, leakage current-free, 1-pole + NPE + FS

Item number: 5095544



### Surge arrester, type 2

- For surge voltage protection equipotential bonding to VDE 0100-443 (IEC 60364-4-44)
- Discharge capacity to 30 kA (8/20) per pole through a high-performance series connection of varistor and spark gap
- 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.



### Master data

|                                    |                             |
|------------------------------------|-----------------------------|
| Item number                        | 5095544                     |
| Type                               | V20-LCF-1+1+FS-2            |
| Description 1                      | SurgeController V20         |
| Description 2                      | leakage current-free 1+1+RS |
| Manufacturer                       | OBO                         |
| Dimension                          | 280V                        |
| Smallest sales unit                | 1                           |
| Unit of quantity                   | Piece                       |
| Weight                             | 30.6 kg                     |
| Weight unit                        | kg/100 pc.                  |
| CO2 Footprint (GWP) Cradle-to-Gate | 1,2406 kg CO2e / 1 Piece    |

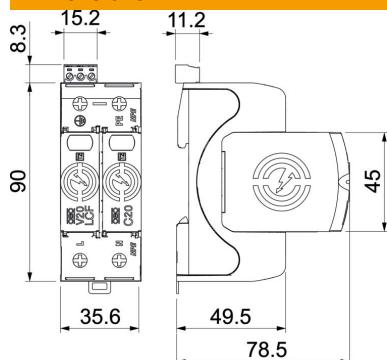
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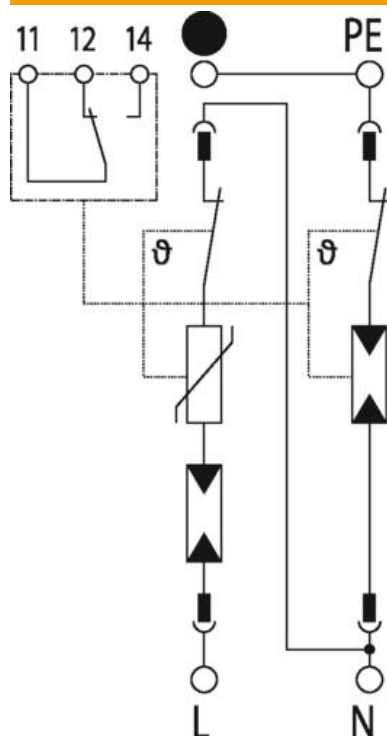
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## Dimensions



## Technical data



|                                                                     |                     |
|---------------------------------------------------------------------|---------------------|
| Arrester surge current (8/20 $\mu$ s) [total]                       | 60 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 [L-N]                                                 | 100 ns              |
| Response time [N-PE]                                                | 100 ns              |
| Blow-out                                                            | no                  |
| Pole version                                                        | 1+N/PE              |
| Operating temperature, max.                                         | 80 °C               |
| Operating temperature, min.                                         | -40 °C              |
| 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          |
| Function/defect display                                             | Visual              |
| Housing material surge protection components                        | PA UL 94 V-0        |
| Maximum continuous voltage (L-N)                                    | 280 V               |
| Maximum continuous voltage AC                                       | 280 V               |
| Integrated back-up fuse                                             | no                  |
| Short-circuit resistant                                             | yes                 |
| 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               |

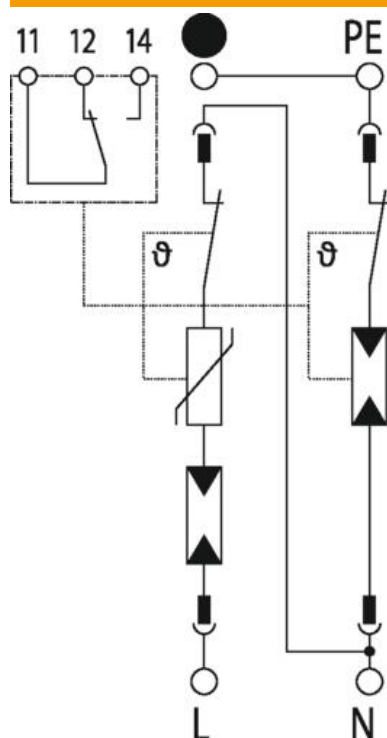
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|                                                              |                            |
|--------------------------------------------------------------|----------------------------|
| Conductor cross-section, flexible (fine-wire), min.          | 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)                          | 30 kA                      |
| Maximum discharge current (8/20 µs) [L-N]                    | 30 kA                      |
| Maximum discharge current (8/20 µs) [N-PE]                   | 60 kA                      |
| Minimum distance                                             | 1.5 mm                     |
| Installation type                                            | DIN rail 35 mm             |
| Nominal discharge current (8/20 µs)                          | 20 kA                      |
| Nominal discharge current (8/20 µs) [L-N]                    | 20 kA                      |
| Nominal discharge current (8/20 µs) [N-PE]                   | 40 kA                      |
| Nominal voltage AC (50/60 Hz)                                | 230 V                      |
| DC network form                                              | no                         |
| IT network form                                              | no                         |
| Other network form                                           | no                         |
| TN network form                                              | yes                        |
| TN-C network form                                            | yes                        |
| TN-C-S network form                                          | yes                        |
| TN-S network form                                            | yes                        |
| TT network form                                              | no                         |
| Ports                                                        | One-Port SPD               |
| Test class, type 2                                           | yes                        |
| Residual voltage [L-N] @ 1 kA                                | 0.8 kV                     |
| Residual voltage [L-N] @ 5 kA                                | 1 kV                       |
| ROHS-conformant                                              | yes                        |
| Switching power AC                                           | 230 V; 0,5 A               |
| Switching power DC                                           | 230 V; 0,1 A / 75 V; 0,5 A |
| Protection rating                                            | IP20                       |
| Protective conductor current                                 | < 500 µA                   |
| Protection level                                             | ≤1,5 kV                    |
| Protection level [L-N]                                       | ≤1,5                       |
| Signalling on device                                         | Visual                     |
| SPD to EN 61643-11                                           | Type 2                     |
| SPD to IEC 61643-11                                          | Class II                   |
| SPD to UL 1449                                               | Type 4                     |

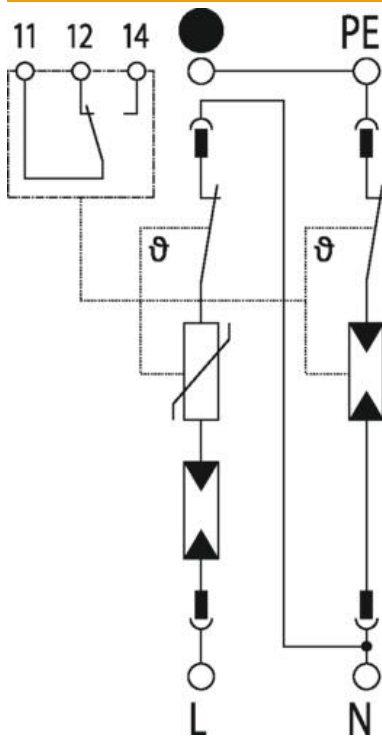
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|-----------------------------------------------|--------|
| Permitted temperature range, max.             | 80 °C  |
| Permitted temperature range, min.             | -40 °C |
| TOV voltage [L-N] – fail safe mode – 120 min. | 440 V  |
| TOV voltage [L-N] – withstand mode – 5 s      | 335 V  |
| TOV voltage [N-PE] – withstand mode – 200 ms  | 1200 V |