

# Technical data sheet

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

Item number: 5095251



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.



### Master data

|                                    |                          |
|------------------------------------|--------------------------|
| Item number                        | 5095251                  |
| Type                               | V20-1+NPE-280            |
| Description 1                      | SurgeController V20      |
| Description 2                      | 1-pole with NPE          |
| Manufacturer                       | OBO                      |
| Dimension                          | 280V                     |
| Smallest sales unit                | 1                        |
| Unit of quantity                   | Piece                    |
| Weight                             | 24.3 kg                  |
| Weight unit                        | kg/100 pc.               |
| CO2 Footprint (GWP) Cradle-to-Gate | 1,0823 kg CO2e / 1 Piece |

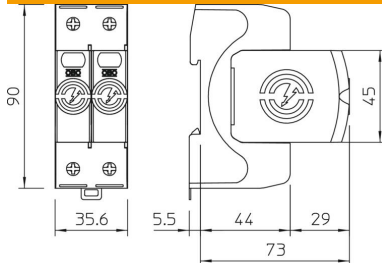
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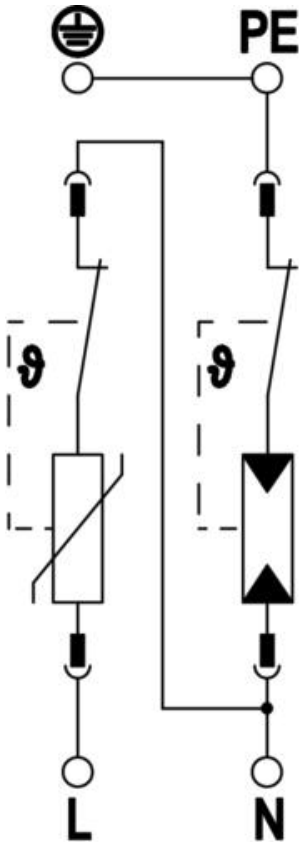
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## Dimensions



## Technical data



|   |                     |
|---|---------------------|
| Arrester surge current (8/20 $\mu$ s) [total]                       | 60 kA               |
| Connection cross-section (min.)                                     | 1.5 mm <sup>2</sup> |
| Response time   | <25 ns              |
| Response time [L-N]   | 25 ns               |
| Response time [N-PE]  | 100 ns              |
| Blow-out  | no                  |
| Pole version  | 1+N/PE              |
| Structural width in division units (division unit, 17.5 mm)         | 2                   |
| Operating temperature, max.   | 80 °C               |
| Operating temperature, min.   | -40 °C              |
| Torque  | 35 Lbs              |
| Torque  | 4 Nm                |
| Installation location   | Interior            |
| Remote signalling   | no                  |
| 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]                            | 1.5 kV              |
| 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 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               |
| 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               |

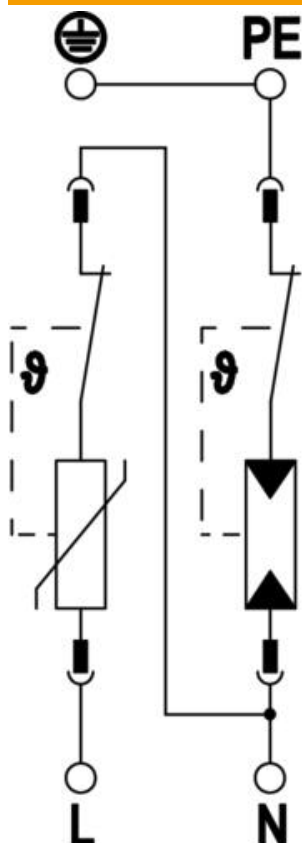
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|  |                     |
|--|---------------------|
| Conductor cross-section, rigid (single-wire/multiwire), max. | 35 mm <sup>2</sup>  |
| Conductor cross-section, rigid (single-wire/multiwire), min. | 16 AWG              |
| Conductor cross-section, rigid (single-wire/multiwire), min. | 1.5 mm <sup>2</sup> |
| Humidity, max.   | 95 %                |
| Humidity, min.   | 5 %                 |
| Max. mains-side overcurrent protection                       | 160 A gL/gG         |
| Maximum back-up fuse   | 160 A               |
| Maximum discharge current (8/20 µs)                          | 40 kA               |
| Maximum discharge current (8/20 µs) [L-N]                    | 40 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               |
| Network form   | Other               |
| TN network form  | yes                 |
| TN-C-S network form  | yes                 |
| TN-S network form  | yes                 |
| TT network form  | yes                 |
| Pole number  | 2                   |
| 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                |
| Protection rating  | IP20                |
| Protective conductor current                                 | < 2 µA              |
| Protection level   | ≤1,3                |
| Protection level [L-N]                                       | ≤1,3                |
| Protection level [N-PE]                                      | 1.3 kV              |
| Signalling on device   | Visual              |
| SPD to EN 61643-11   | Type 2              |
| SPD to IEC 61643-1   | Class 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     |