

## HLSA12,5-385/4+0

- Lightning impulse current and surge arresters type T1+T2 ensure the equipotential bonding, eliminate the effects of lightning current and reduce switching, induced and residual overvoltage in single-phase and three-phase power supply systems.
- Suitable for objects with considerable levels of protection LPL III and LPL IV, such as small administration complexes, residential buildings, family houses or properties and halls without the incidence of persons and indoor equipment.
- Installed at the boundaries of LPZ 0 – LPZ 1 and higher zones, closest to where overhead line enters the building i.e. in the main distribution boards.
- The products consist of varistors with big discharge ability.
- Configurations 1+1 and 3+1 are additionally combined with a gas discharge tube which ensures zero leakage current through the PE conductor.
- If the product contains two PE (or PEN) terminals, it must not be used as a PE (PEN) bridge.
- **S** indication specifies a version with remote monitoring.

| Type  |             | HLSA12,5-385/4+0  |
|---|-------------|---|
| Test class according to EN 61643-11:2012 (IEC 61643-11:2011)  |             | T1, T2  |
| System  |             | TN-S  |
| Number of poles   |             | 4   |
| Rated operating AC voltage  | $U_N$       | 230 V   |
| Maximum continuous operating voltage AC   | $U_C$       | 385 V   |
| Maximum discharge current (8/20)  | $I_{max}$   | 50 kA   |
| Impulse discharge current for class I test (10/350)   | $I_{imp}$   | 12.5 kA   |
| Charge  | $Q$         | 6.25 As   |
| Specific energy for class I test  | $W/R$       | 39 kJ/Ω   |
| Total discharge current (10/350) L1+L2+L3+N->PE   | $I_{Total}$ | 50 kA   |
| Total discharge current (8/20) L1+L2+L3+N->PE   | $I_{Total}$ | 200 kA  |
| Nominal discharge current for class II test (8/20)  | $I_n$       | 20 kA   |
| Open circuit voltage of the combination wave generator  | $U_{OC}$    | 6 kV  |
| Voltage protection level at $I_n$   | $U_p$       | < 1.5 kV  |
| Temporary overvoltage test (TOV) for $t_T = 5$ s  | $U_T$       | 466 V   |
| Response time   | $t_A$       | < 25 ns   |
| Maximal back-up fuse  |             | 160 A gL/gG   |
| Short-circuit current rating at maximum back-up fuse  | $I_{SCCR}$  | 60 kA <sub>rms</sub>                                      |
| Lightning protection zone   |             | LPZ 0-1, LPZ 1-2, LPZ 2-3                                 |
| Housing material  |             | Polyamid PA6, UL94 V-0                                    |
| Degree of protection  |             | IP20  |
| Operating temperature   | $\theta$    | -40 ÷ 70 °C   |
| Minimum cross-section of connected Cu conductors accord. to HD 60364-5-53:2022 (doesn't apply to „V“ connection) for T1 | $S$         | 6 mm <sup>2</sup> (L, N)<br>16 mm <sup>2</sup> (PE, PEN)  |
| Minimum cross-section of connected Cu conductors accord. to HD 60364-5-53:2022 (doesn't apply to „V“ connection) for T2 | $S$         | 2.5 mm <sup>2</sup> (L, N)<br>6 mm <sup>2</sup> (PE, PEN) |
| Clamp fastening range (solid conductor)   |             | 1.5 ÷ 25 mm <sup>2</sup>                                  |

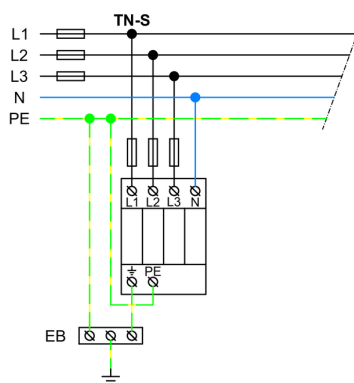
|  |   |   |
|--|---|---|
| <b>Type</b>  |   | <b>HLSA12,5-385/4+0</b>                 |
| Clamp fastening range (stranded conductor)   |   | 1.5 ÷ 16 mm <sup>2</sup>                |
| Tightening moment  |   | 3 Nm                                    |
| Installation   |   | On DIN rail 35 mm                       |
| Modular width  |   | 8 TE                                    |
| Operating position   |   | Any                                     |
| Signalling at the device   |   | Optic                                   |
| Importance of local signaling  |   | OK – clear target<br>FAULT – red target |
| Remote signalling  |   | No                                      |
| Modular design   |   | No                                      |
| Lifetime   |   | > 100 000 h                             |
| <b>Designed according to standards</b>   |   |   |
| Requirements and test methods for SPDs connected to low-voltage power systems        |   | IEC 61643-11:2011                       |
| Safety of Flammability of Plastic Materials  |   | UL 94                                   |
| <b>Application standards</b>   |   |   |
| Protection against lightning   |   | IEC 62305:2010                          |
| Selection and erection of electrical equipment – Switchgear and controlgear          |   | HD 60364-5-53:2022                      |
| Selection and application principles for SPDs connected to low-voltage power systems |   | CLC/TS 61643-12:2009                    |
| <b>Ordering, packaging and additional data</b>                                       |   |   |
| Mass   | m | 948 g                                   |
| Mass (including the packaging)   | m | 992 g                                   |
| Packaging dimensions (H x W x D)   |   | 71 x 177 x 106 mm                       |
| Packaging value  | V | 1.33 dm <sup>3</sup>                    |
| ETIM group   |   | EG000021                                |
| ETIM class   |   | EC001457                                |
| Customs tariff no.   |   | 85363010                                |
| EAN code   |   | 8590681113721                           |
| <b>Art. number</b>   |   | <b>10 326</b>                           |



The link in the QR code leads to the online presentation of the **HLSA12,5-385/4+0**. There, in addition to the always up-to-date data sheet, you will also find all diagrams and drawings, declarations of conformity, or 2D or 3D models and other necessary materials. For more information, visit [www.hakel.com](http://www.hakel.com)



### Application wiring diagram (installation)



### Internal diagram

