

## HLSA7-850

- 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 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  | HLSA7-850                 |   |
|---|---------------------------|---|
| Test class according to EN 61643-11:2012 (IEC 61643-11:2011)  | T1, T2                    |   |
| System  | TN                        |   |
| Number of poles   | 1                         |   |
| Rated operating AC voltage  | $U_N$                     | 720 V   |
| Maximum continuous operating voltage AC   | $U_C$                     | 850 V   |
| Maximum discharge current (8/20)  | $I_{max}$                 | 50 kA   |
| Impulse discharge current for class I test (10/350)   | $I_{imp}$                 | 7 kA  |
| Charge  | $Q$                       | 3.5 As  |
| Specific energy for class I test  | $W/R$                     | 12.25 kJ/Ω  |
| Nominal discharge current for class II test (8/20)  | $I_n$                     | 25 kA   |
| Open circuit voltage of the combination wave generator  | $U_{OC}$                  | 6 kV  |
| Voltage protection level at $I_n$   | $U_p$                     | < 3.3 kV  |
| Temporary overvoltage test (TOV) for $t_T = 5$ s  | $U_T$                     | 1 045 V   |
| Temporary overvoltage test (TOV) for $t_T = 120$ min  | $U_T$                     | 1 372 V   |
| Response time   | $t_A$                     | < 25 ns   |
| Maximal back-up fuse  | 160 A gL/gG               |   |
| Residual current  | $I_{PE}$                  | ≤ 600 μA  |
| 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   |
| Humidity range  | RH                        | 5 ÷ 95 %  |
| 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>  |   |

| Type   |   | HLSA7-850                               |
|--|---|---|
| Clamp fastening range (stranded conductor)   |   | 1.5 ÷ 16 mm <sup>2</sup>                |
| Tightening moment  |   | 3 Nm                                    |
| Installation   |   | On DIN rail 35 mm                       |
| Modular width  |   | 3 TE                                    |
| Operating position   |   | Any                                     |
| Product placement environment  |   | Internal                                |
| 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 | 397 g                                   |
| Mass (including the packaging)   | m | 421 g                                   |
| Packaging dimensions (H x W x D)   |   | 60 x 113 x 73 mm                        |
| Packaging value  | V | 0.5 dm <sup>3</sup>                     |
| ETIM group   |   | EG000021                                |
| ETIM class   |   | EC001457                                |
| Customs tariff no.   |   | 85363010                                |
| EAN code   |   | 8590681169582                           |
| <b>Art. number</b>   |   | <b>10 612</b>                           |

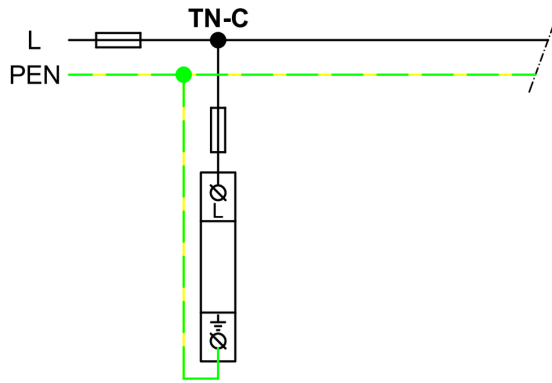


The link in the QR code leads to the online presentation of the **HLSA7-850**. There, in addition to the always up-to-date data sheet, you will also find all diagrams and drawings, declarations of conformity, or 2D or 3D models and other necessary materials. For more information, visit [www.hakil.com](http://www.hakil.com)



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Application wiring diagram (installation)



Internal diagram

