

## HLSA7-850/3+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 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                                                                                                                    |             | HLSA7-850/3+0                                            |
|-------------------------------------------------------------------------------------------------------------------------|-------------|----------------------------------------------------------|
| Test class according to EN 61643-11:2012 (IEC 61643-11:2011)                                                            |             | T1, T2                                                   |
| System                                                                                                                  |             | TN-C                                                     |
| Number of poles                                                                                                         |             | 3                                                        |
| 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                                               |
| Total discharge current (10/350) L1+L2+L3->PEN                                                                          | $I_{Total}$ | 21 kA                                                    |
| Total discharge current (8/20) L1+L2+L3->PEN                                                                            | $I_{Total}$ | 150 kA                                                   |
| 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                                                                                                   | θ           | -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) |

| Type                                                                                                                    |   | HLSA7-850/3+0                                             |
|-------------------------------------------------------------------------------------------------------------------------|---|-----------------------------------------------------------|
| 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>                                  |
| Clamp fastening range (stranded conductor)                                                                              |   | 1.5 ÷ 16 mm <sup>2</sup>                                  |
| Tightening moment                                                                                                       |   | 3 Nm                                                      |
| Installation                                                                                                            |   | On DIN rail 35 mm                                         |
| Modular width                                                                                                           |   | 9 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 | 1.191 kg                                                  |
| Mass (including the packaging)                                                                                          | m | 1.235 kg                                                  |
| 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                                                                                                                |   | 8590681169612                                             |
| <b>Art. number</b>                                                                                                      |   | <b>10 615</b>                                             |

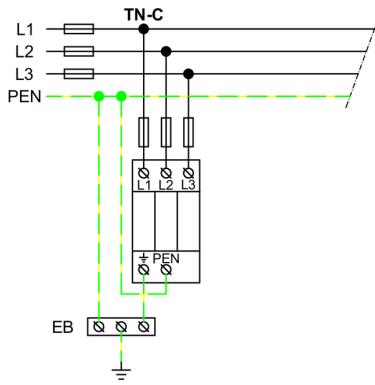


The link in the QR code leads to the online presentation of the **HLSA7-850/3+0**. There, in addition to the always up-to-date data sheet, you will also find all diagrams and drawings, declarations of conformity, or 2D or 3D models and other necessary materials. For more information, visit [www.hakil.com](http://www.hakil.com)



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**Application wiring diagram (installation)**



**Internal diagram**

