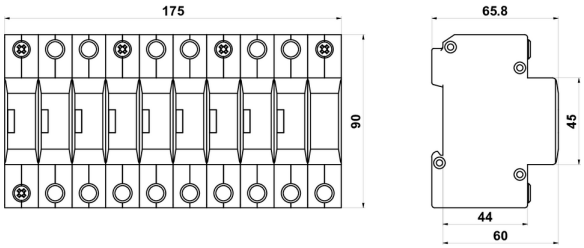
hakel®
Hz in Hearts



HLSA7-850/3+1

- 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+1
Test class according to EN 61643-11:2012 (IEC 61643-11:2011)		T1, T2
System		TN-S, TT
Number of poles		4
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) L/N	I_{imp}	7 kA
Charge (L/N)	Q	3.5 As
Specific energy for class I test (L/N)	W/R	12.25 kJ/Ω
Impulse discharge current for class I test (10/350) N/PE	I_{imp}	50 kA
Charge (N/PE)	Q	25 As
Specific energy for class I test (N/PE)	W/R	625 kJ/Ω
Total discharge current (10/350) L1+L2+L3+N->PE	I_{Total}	28 kA
Total discharge current (8/20) L1+L2+L3+N->PE	I_{Total}	100 kA
Nominal discharge current for class II test (8/20) L/N	I_n	25 kA
Nominal discharge current for class II test (8/20) N/PE	I_n	50 kA
Open circuit voltage of the combination wave generator	U_{OC}	6 kV
Voltage protection level at I_n (L/N)	U_p	< 3.3 kV
Voltage protection level at I_n (N/PE)	U_p	< 1.3 kV
Temporary overvoltage test (TOV) for t_T = 5 s (L/N)	U_T	1 045 V
Temporary overvoltage test (TOV) for t_T = 120 min (L/N)	U_T	1 372 V
Temporary overvoltage test (TOV) for t_T = 0.2 s (N/PE)	U_T	1 200 V
Response time (L/N)	t_A	< 25 ns
Response time (N/PE)	t_A	< 100 ns
Maximal back-up fuse		160 A gL/gG
Residual current	I_{PE}	≤ 5 µA
Follow current interrupt rating (N/PE)	I_{fi}	0.1 kA_{rms}
Short-circuit current rating at maximum back-up fuse	I_{SCCR}	60 kA_{rms}

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Type		HLSA7-850/3+1
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 mm² (L, N) 16 mm² (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 mm² (L, N) 6 mm² (PE, PEN)
Clamp fastening range (solid conductor)		1.5 ÷ 25 mm²
Clamp fastening range (stranded conductor)		1.5 ÷ 16 mm²
Tightening moment		3 Nm
Installation		On DIN rail 35 mm
Modular width		10 TE
Operating position		Any
Product placement environment		Internal
Signalling at the device		Optic
Importance of local signaling		OK – clear target FAULT – red target
Remote signalling		No
Modular design		No
Lifetime		> 100 000 h
Designed according to standards		
Requirements and test methods for SPDs connected to low-voltage power systems		IEC 61643-11:2011
Safety of Flammability of Plastic Materials		UL 94
Application standards		
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
Ordering, packaging and additional data		
Mass	m	1.349 kg
Mass (including the packaging)	m	1.398 kg
Packaging dimensions (H x W x D)		70 x 228 x 95 mm
Packaging value	V	1.52 dm³
ETIM group		EG000021
ETIM class		EC001457
Customs tariff no.		85363010
EAN code		8590681169629
Art. number		**10 616**

The link in the QR code leads to the online presentation of the **HLSA7-850/3+1**. 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**

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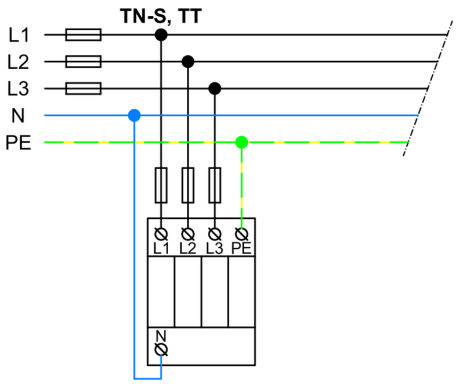
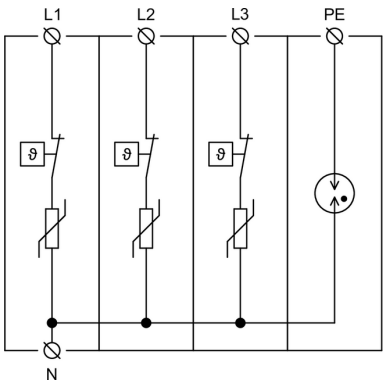
Application wiring diagram (installation)



Internal diagram



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