

## **HSA-850**

- Surge arresters type T2+T3 ensure the equipotential bonding and reduce switching, induced and residual overvoltage in LV power supply systems.
- 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.
- Installed at the boundaries of LPZ 1 LPZ 3 into subsidiary switchboards and control panels.
- 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.

Туре		HSA-850
Test class according to EN 61643-11:2012 (IEC 61643-11:2011)		T2, T3
System		TN
Number of poles		1
Rated operating AC voltage	$U_N$	720 V
Maximum continuous operating voltage AC	U <sub>C</sub>	850 V
Maximum discharge current (8/20)	I <sub>max</sub>	40 kA
Nominal discharge current for class II test (8/20)	In	15 kA
Open circuit voltage of the combination wave generator	$U_oc$	6 kV
Voltage protection level at I <sub>n</sub>	$U_p$	< 3.3 kV
Voltage protection level at U <sub>oc</sub>	$U_p$	< 2.5 kV
Temporary overvoltage test (TOV) for $t_T = 5 \text{ s}$	$U_T$	1 045 V
Temporary overvoltage test (TOV) for $t_T = 120 \text{ min}$	$U_T$	1 372 V
Response time	t <sub>A</sub>	< 25 ns
Maximal back-up fuse		160 A gL/gG
Residual current	I <sub>PE</sub>	≤ 600 µA
Short-circuit current rating at maximum back-up fuse	I <sub>SCCR</sub>	60 kA <sub>rms</sub>
Lightning protection zone		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 T2	S	2.5 mm² (L, N) 6 mm² (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>
Fightening moment		3 Nm
Installation		On DIN rail 35 mm
Modular width		1 TE
Operating position		Any



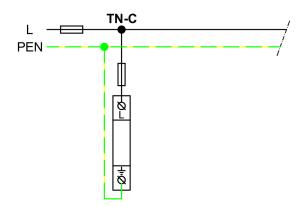
Туре		HSA-850
Product placement environment		Internal
Signalling at the device		Optic
Importance of local signaling		OK – clear target FAULT – red target
Remote signalling		No
Modular design		No
Lifetime		> 100 000 h
Designed according to standards		
Requirements and test methods for SPDs connected to 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	131 g
Mass (including the packaging)	m	142 g
Packaging dimensions (H x W x D)		26 x 98 x 73 mm
Packaging value	V	0.19 dm <sup>3</sup>
ETIM group		EG000021
ETIM class		EC000941
Customs tariff no.		85363010
EAN code		8590681115848
Art. number		24 613



**The link in the QR code** leads to the online presentation of the **HSA-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.hakel.com** 



## Application wiring diagram (installation)



## Internal diagram

