

HSAF50 S

- Two-port surge arresters type T3 with high-frequency filters for serial connection.
- Intended for protection of electronic appliances against the effects of switching, induced and residual overvoltage in LV power supply systems.
- Contains an improved thermal fuse, which ensures timely disconnection of HSAF* S and HSAF3*S from the power grid during the MOV's overheating and thus prevents damage to the HSAF* S and HSAF3*S.
- Installed at the boundaries of LPZ 2 LPZ 3, as close to the device to be protected as possible (no further than 5 m).
- In front of HSAF* S and HSAF3*S must be installed a lightning current and surge arrester T1 and T2 from HAKEL company.
- Mounted on the main board of a switchboard using four screws.
- **S** indication specifies a version with remote monitoring.

Туре		HSAF50 S
Test class according to EN 61643-11:2012 (IEC 61643-11:2011)		Т3
System		TN-C-S, TN-S
Number of poles		2
Rated operating AC voltage	U_N	230 V
Maximum continuous operating voltage AC	U _c	275 V
Rated load current	IL	50 A
Open circuit voltage of the combination wave generator (L/N, L/PE)	U _{oc}	6 kV
Open circuit voltage of the combination wave generator (N/PE)	U _{oc}	10 kV
Voltage protection level at U _{oc} (L/N)	U_p	< 0.85 kV
Voltage protection level at U _{oc} (L/PE)	U_p	< 1.5 kV
Voltage protection level at U _{OC} (N/PE)	U_p	< 1.2 kV
Nominal discharge current for class II test (8/20) L/N, L/PE	I _n	3 kA
Nominal discharge current for class II test (8/20) N/PE	I _n	5 kA
Total discharge current (8/20) L+N->PE	I _{Total}	6 kA
Asymmetrical attenuation of filter at f = 4 MHz		> 80 dB
Asymmetrical attenuation of filter at f = 0.15 ÷ 30 MHz		> 35 dB
Temporary overvoltage test (TOV) for $t_T = 5 \text{ s (L/N)}$	U _T	337 V
Temporary overvoltage test (TOV) for $t_T = 120 \text{ min (L/N)}$	U _T	440 V
Temporary overvoltage test (TOV) for $t_T = 0.2 \text{ s}$ (N/PE)	U _T	1 200 V
Response time (L/N)	t _A	< 25 ns
Response time (L/PE, N/PE)	t _A	< 100 ns
Power dissipation	Pz	< 7 W
Maximal back-up fuse		50 A gL/gG
Residual current	I _{PE}	≤ 5 μA
Lightning protection zone		LPZ 2-3
Housing material		Steel plate 1 mm
Degree of protection		IP20
Operating temperature	θ	-40 ÷ 55 °C

Surge arresters T3 with EMI/RFI filter for AC systems



Humidity range	Туре		HSAF50 S
Clamp fastening range (solid conductor) 2.5 ÷ 35 mm² Clamp fastening range (stranded conductor) 2.5 ÷ 25 mm² Tightening moment 3 Nm Installation Using the M4 screws on the chassis Operating position Any Product placement environment Internal Signalling at the device Optic Importance of local signalling K- red light off Remote signalling Yes Potential free signal contact (S) (recommended cross-section of remote monitoring max.1 mm²) AC: 250 V / 1.5 A, DC: 250 V / 0.1 A Includes EMI / EMC filter Yes Modular design No Lifetime > 100 000 h Designed according to standards IEC 61643-11:2011 Requirements and test methods for SPDs connected to low-voltage power systems IEC 61643-11:2011 Methods of measurement of the suppression characteristics of passive EMC filtering devices EN 55017:2011 / CISPR 17:2011 Application standards IEC 62305:2010 Protection against lightning IEC 62305:2010 Selection and erction of electrical equipment – Switchgear and controlgear HD 60364-5-53:2022 Selection and application princi	Humidity range	RH	5 ÷ 95 %
Clamp fastening range (stranded conductor) 2.5 ÷ 25 mm³ Tightening moment 3 Nm Installation Using the Ms screws on the chassis Operating position Any Product placement environment Internal Signalling at the device Optic Importance of local signaling OY- red light off FAULT - red	Recommended cross-section of connected conductors	S	10 mm ²
Tightening moment 3 Nm Installation Using the M4 screws on the chassis Operating position Any Product placement environment Internal Signalling at the device Optic Importance of local signalling OK - red light off FAULT - red light on FAULT - red li	Clamp fastening range (solid conductor)		$2.5 \div 35 \text{ mm}^2$
Installation Using the M4 screws on the chassis Operating position Any Product placement environment Internal Signalling at the device Optic Importance of local signalling Active Devices of the chassis of FAULT - red light off FAULT - red light on Potential free signal contact (S) (recommended cross-section of remote monitoring max. 1 mm²) AC: 250 V / 1.5 A, DC: 250 V / 0.1 A max. 1 mm²) AC: 250 V / 1.5 A, DC: 250 V / 0.1 A max. 1 mm²) No Lifetime Yes Modular design No Lifetime > 100 000 h Pesigned according to standards Requirements and test methods for SPDs connected to low-voltage power systems IEC 61843-11:2011 EN 55017:2011 / CISPR 17:2011 devices Application standards Repulsed of measurement of the suppression characteristics of passive EMC filtering devices BC Forting 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 (mcluding the packaging) m 1.45 kg Mass (including the packaging) m 1.532 kg Packaging dimensions (H x W x D) 87 x 260 x 154 mm Packaging value V 3.48 dm² ETIM group ETIM class EC000942 Customs tariff no. 85363030 EAN code 8590681116920	Clamp fastening range (stranded conductor)		$2.5 \div 25 \text{ mm}^2$
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EAN code 8590681116920	ETIM class		EC000942
	Customs tariff no.		85363030
Art. number 30 173	EAN code		8590681116920
	Art. number		30 173

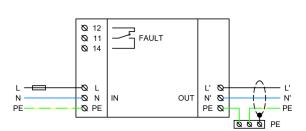


The link in the QR code leads to the online presentation of the **HSAF50 S**. There, in addition to the always up-to-date data sheet, you will also find all diagrams and drawings, declarations of conformity, or 2D or 3D models and other necessary materials. For more information, visit **www.hakel.com**





Application wiring diagram (installation)



Internal diagram

