

HSAF16 IT

- 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 insulated power supply systems.
  - Contain an improved thermal fuse, which ensures timely disconnection of HSAF\* S from the power grid during the MOV's overheating and thus prevents damage to the HSAF\* 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 must be installed a lightning current and surge arrester T1 and T2 from HAKEL company.
  - **S** indication specifies a version with remote monitoring.

Type		HSAF16 IT
Test class according to EN 61643-11:2012 (IEC 61643-11:2011)		T3
System		IT
Number of poles		2
Rated operating AC voltage	$U_N$	230 V
Maximum continuous operating voltage AC	$U_C$	275 V
Rated load current	$I_L$	16 A
Open circuit voltage of the combination wave generator	$U_{OC}$	6 kV
Voltage protection level at $U_{OC}$ (L1/L2)	$U_p$	< 1.4 kV
Voltage protection level at $U_{OC}$ (L1/PE, L2/PE)	$U_p$	< 0.9 kV
Nominal discharge current for class II test (8/20)	$I_n$	3 kA
Total discharge current (8/20) L1+L2->PE	$I_{Total}$	6 kA
Asymmetrical attenuation of filter at $f = 4$ MHz		> 80 dB
Asymmetrical attenuation of filter at $f = 0.15 \div 30$ MHz		> 35 dB
Temporary overvoltage test (TOV) for $t_T = 5$ s (L1/L2)	$U_T$	337 V
Temporary overvoltage test (TOV) for $t_T = 0.2$ s (L1/PE, L2/PE)	$U_T$	1 455 V
Response time (L1/L2)	$t_A$	< 25 ns
Response time (L1/PE, L2/PE)	$t_A$	< 100 ns
Power dissipation	$P_z$	< 3.5 W
Maximal back-up fuse		16 A gL/gG
Lightning protection zone		LPZ 2-3
Housing material		Polyamid PA6, UL94 V-0
Degree of protection		IP20
Operating temperature	$\vartheta$	-40 ÷ 55 °C
Recommended cross-section of connected conductors	S	2.5 mm <sup>2</sup>
Clamp fastening range (solid conductor)		0.2 ÷ 6 mm <sup>2</sup>
Clamp fastening range (stranded conductor)		0.2 ÷ 4 mm <sup>2</sup>
Tightening moment		0,5 Nm
Installation		On DIN rail 35 mm

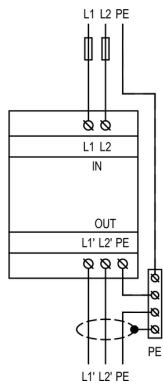
Type		HSAF16 IT
Modular width		3 TE
Operating position		Any
Signalling at the device		Optic
Importance of local signaling		OK – red light off FAULT – red light on
Remote signalling		No
Includes EMI / EMC filter		Yes
Modular design		No
Lifetime		> 100 000 h
Designed according to standards		
Requirements and test methods for SPDs connected to low-voltage power systems		IEC 61643-11:2011
Methods of measurement of the suppression characteristics of passive EMC filtering devices		EN 55017:2011 / CISPR 17:2011
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	180 g
Mass (including the packaging)	m	204 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		EC000942
Customs tariff no.		85363010
EAN code		8590681169216
Art. number		30 500



The link in the QR code leads to the online presentation of the HSAF16 IT. 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](http://www.hakel.com)



Application wiring diagram (installation)



Internal diagram

