





HSAF16

- Two-stage 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 generated in LV 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.

Туре		HSAF16
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	ΙL	16 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	< 0.75 kV
Voltage protection level at U _{oc} (L/PE)	Up	< 1 kV
Voltage protection level at U _{oc} (N/PE)	Up	< 1.5 kV
Nominal discharge current for class II test (8/20) L/N, L/PE	l _n	3 kA
Nominal discharge current for class II test (8/20) N/PE	l _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 $f = 0.15 \div 30 \text{ MHz}$		> 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	< 3.5 W
Maximal back-up fuse		16 A gL/gG
Residual current	I _{PE}	≤ 1 800 μA
Short-circuit current rating at maximum back-up fuse	I _{SCCR}	6 kA _{rms}
Lightning protection zone		LPZ 2-3
Housing material		Polyamid PA6, UL94 V-0
Degree of protection		IP20

Surge arresters T3 with EMI/RFI filter for AC systems



Humidity range RH 5 ÷ 95 % Recommended cross-section of connected conductors S 2.5 mm² Clamp fastening range (stranded conductor) 0.2 ÷ 6 mm² 0.2 ÷ 4 mm² Tightening moment 0.5 Nm 0.5 Nm Installation 0.5 Nm 0.5 Nm Modular width 0.13 TE 0.0 DIN rail 35 mm Operating position Any No Product placement environment Internal 0.2 + 4 mm² Signalling at the device Optic No Importance of local signaling OK - red light off FAULT - red light off Includes EMI / EMC filter No No No Includes EMI / EMC filter No No No Requirements and test methods for SPDs connected to low-voltage power systems REG 61643-11:2011 Sto5017:2011 / CISPR 17:2011 Galery of Hammability of Plastic Materials UL 94 Sto617:2011 / CISPR 17:2011 Sto6143-53:2022 Stoletori an ad application principles for SPDs connected to low-voltage power systems CLC/TS 61643-11:2010 Sto61643-11:2010 Stoletori anad application principles for SPDs connected to low-voltage p	Туре		HSAF16
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	Art. number		30 161



The link in the QR code leads to the online presentation of the HSAF16.

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)





