

PI-3k16/320

- 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		PI-3k16/320
Test class according to EN 61643-11:2012 (IEC 61643-11:2011)		Т3
System		TN-C-S, TN-S
Number of poles		4
Rated operating AC voltage	U_N	230 V
Maximum continuous operating voltage AC	U _c	320 V
Rated load current	lι	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	< 1.2 kV
Voltage protection level at U _{oc} (L/PE)	U_p	< 1.7 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 $f = 0.15 \div 30 \text{ MHz}$		> 35 dB
Temporary overvoltage test (TOV) for $t_T = 5 s (L/N)$	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	< 7.5 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



Operating temperature 9 440 + 55 °C Humidity range RH 5 + 95 % Hecommended cross-section of connected conductors S 2.5 mm² Clamp fastening range (solid conductor) 0.5 ÷ 6 mm² Clamp fastening range (stranded conductor) 0.5 ÷ 4 mm² Clamp fastening range (stranded conductor) 0.5 ÷ 4 mm² Clamp fastening range (stranded conductor) 0.5 ÷ 4 mm² Installation On DIN rail 35 mm Modular width 9 TE Operating position Any Product placement environment Internal Signalling at the device Optic Importance of local signalling OK – red retracled target Femote signalling Yes Potential tree signal contact (S) (recommended cross-section of remote monitoring max. 1 mm²) AC : 250 V / 0.5 A, DC : 250 V / 0.1 A Includes EMI / EMC filter Yes Modular design No Lifetine > 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 M	Туре		PI-3k16/320
Recommended cross-section of connected conductors 0.5 ± 6 mm²	Operating temperature	9	-40 ÷ 55 °C
Recommended cross-section of connected conductors S 2.5 mm² Clamp fastening range (solid conductor) 0.5 ÷ 4 mm² Clamp fastening range (stranded conductor) 0.5 hm² Tightening moment 0,5 km Installation On DIN rail 35 mm Modular width 9 TE Opperating position Any Product placement environment Internal Signalling at the device Optic Importance of local signaling OK – red retracted target Remote signalling Yes Potential free signal contact (S) (recommended cross-section of remote monitoring max, 1 mm²) AC :250 V / 0.5 A, DC :250 V / 0.1 A Includes EMI / EMC filter Yes Veolutial free signal contact (S) (recommended cross-section of remote monitoring max, 1 mm²) No Includes EMI / EMC filter Yes 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 Salety of Flammability of Plastic Materials UL 94 Protection against lightning IEC 62305:2010	Humidity range	RH	5 ÷ 95 %
Clamp fastening range (stranded conductor) 0.5 ÷ 4 mm² Tightening moment 0.5 Nm Installation On DIN rail 35 mm Modular width 9 TE Operating position Any Product placement environment Internal Signalling at the device Optic Importance of local signaling OK - red retracted target FAULT - red extended target Remote signalling Yes Potential free signal contact (S) (recommended cross-section of remote monitoring max, 1 mm²) AC: 250 V / 0.5 A, DC: 250 V / 0.1 A Includes EMI / EMC filter Yes Modular design No Lifetime > 100 000 h Designed according to standards EC 61643-11:2011 Requirements and test methods for SPDs connected to low-voltage power systems EC 61643-11:2011 Methods of measurement of the suppression characteristics of passive EMC filtering devices EN 55017:2011 / CISPR 17:2011 Salety of Elammability of Plastic Materials UL 94 Protection against lightning IEC 62305:2010 Selection and erection of electrical equipment - Switchgear and controlgear HD 60364-5-53:2022 Selection and erection of electri	Recommended cross-section of connected conductors	S	2.5 mm ²
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Installation On DIN rail 35 mm Modular width 9 TE Operating position Any Product placement environment Internal Signalling at the device Optic Importance of local signaling OK - red retracted target FAULT - red extended target FA	Clamp fastening range (stranded conductor)		0.5 ÷ 4 mm ²
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EAN code 8590681121153	ETIM class		EC000942
	Customs tariff no.		85363010
Art. number 30 310	EAN code		8590681121153
	Art. number		30 310

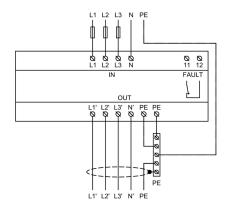


The link in the QR code leads to the online presentation of the **PI-3k16/320**. There, in addition to the always up-to-date data sheet, you will also find all diagrams and drawings, declarations of conformity, or 2D or 3D models and other necessary materials. For more information, visit **www.hakel.com**





Application wiring diagram (installation)



Internal diagram

