Surge protection device - S-PT-EX(I)-24DC - 2880671

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (http://phoenixcontact.com/download)

Surge protection in the IP67 screw-on module for measuring sensors in intrinsically safe circuits, direct mounting with M20 x 1.5 outer thread, cable gland for the signal cable, two-stage protective circuit. HART-compatible.

Product Features

- Arresters in hexagonal pipe with various outer threads

Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	380.0 GRM
Custom tariff number	85363010
Country of origin	Germany

Technical data

Dimensions

Height	34 mm
Width	34 mm
Depth	137 mm

Ambient conditions

Ambient temperature (operation)	-40 °C ... 50 °C
Degree of protection	IP67

General

Housing material	Zinc die-cast
Inflammability class according to UL 94	V-0
Color	silver

Surge protection device - S-PT-EX(I)-24DC - 2880671

Technical data

General

Standards for air and creepage distances	IEC 60664-1
	EN 60079-0
	EN 60079-11
Mounting type	ct screw connection
Type	Screw-in module
Number of positions	3
Direction of action	Line-Line & Line-Earth Ground

Protective circuit

IEC test classification	C1
	C2
	C3
	D1
Nominal voltage U_N	24 V DC
Maximum continuous operating voltage U_C	30 V DC
	21 V AC
Maximum continuous voltage UC (wire-wire)	30 V DC
	21 V AC
Nominal current I_N	350 mA (50 °C)
Operating effective current I_C at U_C	≤ 10 µA
Residual current I_{PE}	≤ 2 µA
Nominal discharge current I_n (8/20) µs (Core-Core)	10 kA
Nominal discharge current I_n (8/20) µs (Core-Earth)	10 kA
Nominal discharge current I_n (8/20) µs (Shield-Earth)	10 kA (optional)
Max. discharge current I_{max} (8/20) µs maximum (Core-Core)	10 kA
Max. discharge current I_{max} (8/20) µs maximum (Core-Earth)	10 kA
Max. discharge current I_{max} (8/20) µs maximum (Shield-Earth)	10 kA
Nominal pulse current Ian (10/1000) µs (Core-Core)	30 A
Nominal pulse current Ian (10/1000) µs (Core-Earth)	100 A
Nominal pulse current Ian (10/1000) µs (Shield-Earth)	100 A
Impulse discharge current (10/350)#µs, peak value I_{imp}	1 kA
Output voltage limitation at 1 kV/µs (Core-Core) spike	≤ 50 V
Output voltage limitation at 1 kV/µs (Core-Earth) spike	≤ 1.4 kV (Direct grounding)
Output voltage limitation at 1 kV/µs (Shield-Earth) spike	≤ 600 V (optional)
Output voltage limitation at 1 kV/µs (Core-Core) static	≤ 50 V
Output voltage limitation at 1 kV/µs (Core-Earth) static	≤ 1.4 kV (Direct grounding)
Residual voltage at I_n, (conductor-conductor)	≤ 50 V

Surge protection device - S-PT-EX(I)-24DC - 2880671

Technical data

Protective circuit

Residual voltage with Ian (10/1000)µs (conductor-conductor)	≤ 50 V
Voltage protection level U_P (Core-Core)	≤ 55 V (C2 -5 kA)
	≤ 50 V (C1 - 250 A)
	≤ 50 V (C3 - 25 A)
	≤ 80 V (D1 - 1 kA)
Voltage protection level U_P (Core-Earth)	≤ 1.4 kV (C2 -5 kA, direct grounding)
	≤ 1.4 kV (C1 - 500 A)
	≤ 1.4 kV (C3 - 100 A)
	≤ 1.4 kV (D1 - 1 kA)
Voltage protection level U_P (Shield-Earth)	≤ 650 V (C2 -5 kA optional)
Response time tA (Core-Core)	≤ 1 ns
Response time tA (Core-Earth)	≤ 100 ns
Response time tA (Shield-Earth)	≤ 100 ns
Input attenuation aE, sym.	typ. 0.5 dB (≤ 1 MHz / 50 Ω)
	typ. 0.2 dB (Up to 400 kHz, 150 Ω)
Cut-off frequency fg (3 dB), sym. in 50 Ohm system	typ. 6 MHz
Cut-off frequency fg (3 dB), sym. in 150 Ohm system	typ. 2.5 MHz
Resistance in series	2.2 Ω ±10 %
Surge protection fault message	None
Surge current resistance (conductor-conductor)	C2 - 10 kV/5 kA
	D1 - 1 kA
Surge current resistance (conductor-ground)	C2 - 10 kV/5 kA
	D1 - 1 kA
Surge current resistance (shield-ground)	C2 (10 kV/5 kA)
	D1 (1 kA)
Alternating current carrying capacity (conductor-ground)	10 A - 1 s
Alternating current carrying capacity (shield-ground)	10 A - 1 s

Connection data

Connection name	Input/output
Connection method	Screw connection
Connection type IN	Screw terminal blocks
Connection type OUT	Connection line
Connection method	Screw connection
Screw thread	M3
Tightening torque	0.6 Nm
Stripping length	6 mm
Conductor cross section stranded min.	0.14 mm²

Surge protection device - S-PT-EX(I)-24DC - 2880671

Technical data

Connection data

Conductor cross section stranded max.	1.5 mm²
Conductor cross section solid min.	0.14 mm²
Conductor cross section solid max.	1.5 mm²
Conductor cross section AWG/kcmil min.	26
Conductor cross section AWG/kcmil max	16

Standards and Regulations

Standards/regulations	DIN EN 61643-21
	EN 60079-0
	EN 60079-11
	EN 60079-26

General

Maximum inner capacitance C_i	2 nF
Maximum inner inductance L_i	1 µH
Max. input current I_i	350 mA (T4,T5,T6/≤ 50°C)
Max. input voltage U_i	30 V
Maximum input power Pi	3 W

Conformity / approvals

ATEX	# II 1G Ex ia IIC T4...T6 Ga
IECEx	Ex ia IIC T4...T6 Ga

Classifications

eCl@ss

eCl@ss 4.0	27140201
eCl@ss 4.1	27130801
eCl@ss 5.0	27130801
eCl@ss 5.1	27130801
eCl@ss 6.0	27130807
eCl@ss 7.0	27130807
eCl@ss 8.0	27130807

ETIM

ETIM 2.0	EC000943
ETIM 3.0	EC000943
ETIM 4.0	EC000943
ETIM 5.0	EC000943

Surge protection device - S-PT-EX(I)-24DC - 2880671

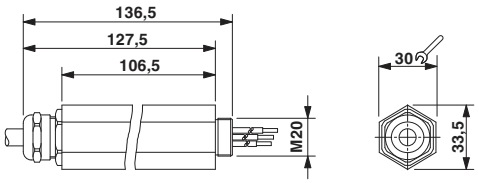
Classifications

UNSPSC

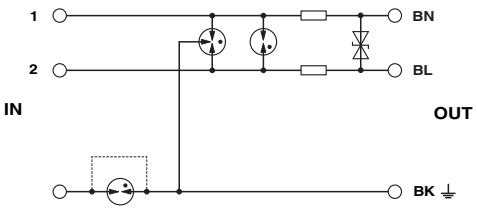
UNSPSC 6.01	30212010
UNSPSC 7.0901	39121610
UNSPSC 11	39121610
UNSPSC 12.01	39121610
UNSPSC 13.2	39121620

Drawings

Dimensioned drawing



Circuit diagram



Application drawing