

## Surge protection device - S-PT-EX-48DC - 2800053

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Surge protection for one floating signal circuit in screw-on module with IP67 protection for sensor heads, connection M20 x 1.5. Tested in acc. with the protection types in Ex areas Ex d / Ex tD / Ex ia IIC / Ex iaD.

### Product Features

- Arresters in hexagonal pipe with various outer threads



### Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	0.22 GRM
Custom tariff number	85363010
Country of origin	Germany

### Technical data

#### Dimensions

Height	28 mm
Width	28 mm
Depth	79 mm

#### Ambient conditions

Ambient temperature (operation)	-40 °C ... 80 °C (non-EX)
Degree of protection	IP67

#### General

Housing material	High-grade steel
Color	silver
Standards for air and creepage distances	IEC 60664-1

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### Technical data

#### General

	IEC 60079-11
Mounting type	M20
Type	Screw-in module
Number of positions	2
Direction of action	Line-Line & Line-Earth Ground

#### Protective circuit

IEC test classification	C1
	C2
	C3
	D1
Nominal voltage $U_N$	48 V DC
Maximum continuous operating voltage $U_C$	53 V DC
	37 V AC
Maximum continuous voltage $U_C$ (wire-wire)	53 V DC
	37 V AC
Residual current $I_{PE}$	$\leq 2 \mu A$
Nominal discharge current $I_n$ (8/20) $\mu s$ (Core-Core)	170 A
Nominal discharge current $I_n$ (8/20) $\mu s$ (Core-Earth)	10 kA
Total surge current (8/20) $\mu s$	20 kA
Total surge current (10/350) $\mu s$	2 kA
Nominal pulse current $I_{an}$ (10/1000) $\mu s$ (Core-Core)	34 A
Impulse discharge current (10/350) $\mu s$ , peak value $I_{imp}$	1 kA
Output voltage limitation at 1 kV/ $\mu s$ (Core-Core) spike	$\leq 160 V$
Output voltage limitation at 1 kV/ $\mu s$ (Core-Earth) spike	$\leq 1.1 kV$
Output voltage limitation at 1 kV/ $\mu s$ (Core-Core) static	$\leq 80 V$
Voltage protection level $U_p$ (Core-Core)	$\leq 90 V$ (C3 - 10 A)
Voltage protection level $U_p$ (Core-Earth)	$\leq 1.1 kV$ (C3 - 100 A)
	$\leq 1.1 kV$ (C1 - 500 A)
	$\leq 1.2 kV$ (C2 - 10 kV / 5 kA)
Response time $t_A$ (Core-Core)	$\leq 1 ns$
Response time $t_A$ (Core-Earth)	$\leq 100 ns$
Input attenuation $a_E$ , sym.	typ. 0.1 dB (30 MHz / 50 $\Omega$ )
	typ. 0.1 dB (6 MHz / 150 $\Omega$ )
Cut-off frequency $f_g$ (3 dB), sym. in 50 Ohm system	typ. 70 MHz
Cut-off frequency $f_g$ (3 dB), sym. in 150 Ohm system	typ. 40 MHz
Capacity (Core-Core)	typ. 20 pF

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### Technical data

#### Protective circuit

Capacity (Core-Earth)	typ. 5 pF
Surge protection fault message	None
Surge carrying capacity in acc. with IEC 61643-21 (Core-Core)	C3 - 10 A
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C1 - 1 kV / 500 A
	C2 - 10 kV / 5 kA
	C3 - 100 A
	D1 - 1kA
Alternating current carrying capacity in acc. with IEC 61643-21 (Core-Earth)	10 A - 1 s

#### Connection data

Connection method	Individual wires
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#### Standards and Regulations

Standards/regulations	EN 61643-21
	EN 60079-0
	EN 60079-1
	EN 60079-11
	EN 60079-26
	EN 61241-0
	EN 61241-1
	EN 61241-11

### 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

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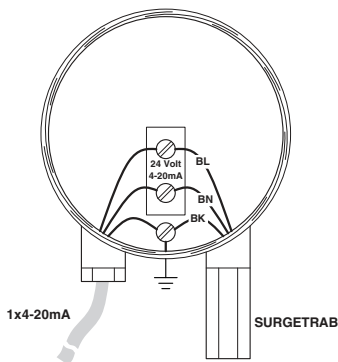
## Classifications

### UNSPSC

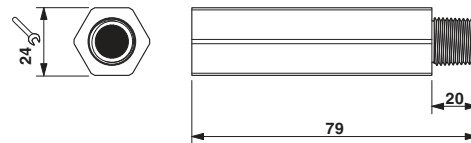
UNSPSC 6.01	30212010
UNSPSC 7.0901	39121610
UNSPSC 11	39121610
UNSPSC 12.01	39121610
UNSPSC 13.2	39121620

## Drawings

Application drawing



Dimensioned drawing



Circuit diagram

