

Surge protection device - S-PT-2XEX-24DC - 2800040

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Surge protection for two floating signal circuits 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. Can be used inside of a fieldbus-system according to the FISCO concept.

Why buy this product

- ☒ Arresters in hexagonal pipe with various outer threads



Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 411028
GTIN	4046356411028
Weight per Piece (excluding packing)	0.220 g
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)
Altitude	≤ 2000 m (amsl (above mean sea level))
Degree of protection	IP67

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Technical data

General

Housing material	Stainless steel
Color	silver
Standards for clearances and creepage distances	IEC 60664-1
	IEC 60079-11
Mounting type	M20
Type	Screw-in module
Number of positions	4
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 voltage U_C	36 V DC
	25 V AC
Operating effective current I_C at U_C	$\leq 5 \mu A$
Residual current I_{PE}	$\leq 2 \mu A$
Nominal discharge current I_n (8/20) μs (Core-Core)	260 A
Nominal discharge current I_n (8/20) μs (core-earth)	10 kA
Pulse discharge current I_{imp} (10/350) μs	1 kA
Total discharge current I_{total} (8/20) μs	20 kA
Total discharge current I_{total} (10/350) μs	2 kA
Nominal pulse current I_{an} (10/1000) μs (Core-Core)	50 A
Output voltage limitation at 1 kV/ μs (core-core) spike	$\leq 65 V$
Output voltage limitation at 1 kV/ μs (core-earth) spike	$\leq 1.1 kV$
Output voltage limitation at 1 kV/ μs (core-core) static	$\leq 50 V$
Voltage protection level U_p (core-core)	$\leq 50 V$ (C3 - 10 A)
Voltage protection level U_p (core-ground)	$\leq 1.1 kV$ (C3 - 100 A)
	$\leq 1.1 kV$ (C1 - 1 kV/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 (1 MHz / 50 Ω)
	typ. 0.1 dB (400 kHz / 150 Ω)
Cut-off frequency f_g (3 dB), sym. in 50 Ohm system	typ. 5 MHz

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Technical data

Protective circuit

Cut-off frequency f_g (3 dB), sym. in 150 Ohm system	typ. 2 MHz
Capacity (core-core)	typ. 1.5 nF
Capacity (core-earth)	typ. 5 pF
Surge protection fault message	none
Impulse durability (conductor-conductor)	C3 - 25 A
Impulse durability (conductor-ground)	C1 - 1 kV/500 A
	C2 - 10 kV/5 kA
	C3 - 100 A
	D1 - 1 kA
Alternating current carrying capacity (conductor-ground)	10 A - 1 s

Connection data

Connection method	Individual wires
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Standards and Regulations

Standards/specifications	EN 61643-21 A2:2013
	EN 60079-0 2012
	EN 60079-1 2007
	EN 60079-11 2012
	EN 60079-31 2009
	IEC 60079-0 2011
	IEC 60079-1 2007
	IEC 60079-11 2011
	IEC 60079-31 2008

General

Maximum inner capacitance C_i	1.65 nF
Max. internal inductance L_i	1 μ H
Max. input current I_i	500 mA ($T_4 / \leq 75^\circ\text{C}$)
	500 mA ($T_5 / \leq 75^\circ\text{C}$)
	500 mA ($T_6 / \leq 60^\circ\text{C}$)
max. input voltage U_i	36 V DC
max. input power P_i	3 W
Insulation voltage to ground	500 V AC
Ambient temperature (operation)	-40 $^\circ\text{C}$... 75 $^\circ\text{C}$ (T_4)
	-40 $^\circ\text{C}$... 75 $^\circ\text{C}$ (T_5)
	-40 $^\circ\text{C}$... 60 $^\circ\text{C}$ (T_6)

Conformity / approvals

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Technical data

Conformity / approvals

ATEX	# II 1 G Ex ia IIC T4...T6
	# II 2 G Ex d IIC T4...T6
	# II 1 D Ex iaD 20 IP6x T85 °C...135 °C
	# II 2 D Ex tD A21 IP6x T85 °C...135 °C
IECEEx	Ga Ex ia IIC T4...T6
	Ex d IIC T4...T6
	Ex iaD IP6x T85 °C...135 °C
	Ex tD A21 IP6x T85 °C...135 °C

Environmental Product Compliance

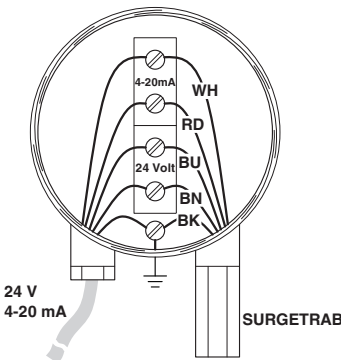
China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

Drawings

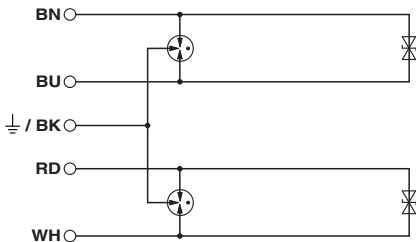
Pictogram



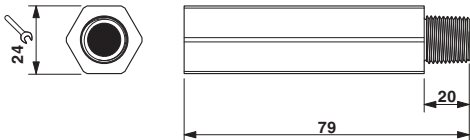
Application drawing



Circuit diagram



Dimensional drawing



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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
eCl@ss 9.0	27130807

ETIM

ETIM 2.0	EC000943
ETIM 3.0	EC000943
ETIM 4.0	EC000943
ETIM 5.0	EC000943
ETIM 6.0	EC000943

UNSPSC

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

Approvals

Approvals

Approvals

EAC / EAC

Ex Approvals

IECEX / ATEX

Approval details

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Approvals

EAC		EAC-Zulassung
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EAC		RU C- DE.A*30.B01561
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