Surge protection device - S-PT-2XEX-48DC - 2800038

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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.

Your advantages

- Arresters in hexagonal pipe with various outer threads

Key Commercial Data

Packing unit	1 pc
GTIN	4 046356 410977
GTIN	4046356410977
Weight per Piece (excluding packing)	211.920 g
Custom tariff number	85363010
Country of origin	Germany
Note	Made to Order (non-returnable)

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

General

Housing material	Stainless steel

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Technical data

General

Color	silver
Standards for cearances 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	48 V DC
Maximum continuous voltage U_C	53 V DC
	37 V AC
Operating effective current I_C at U_C	≤ 5 µA
Residual current I_{PE}	≤ 2 µA
Nominal discharge current I_n (8/20) µs (line-line)	170 A
Nominal discharge current I_n (8/20) µs (line-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 Ian (10/1000) µs (line-line)	34 A
Output voltage limitation at 1 kV/µs (line-line) spike	≤ 85 V
Output voltage limitation at 1 kV/µs (line-earth) spike	≤ 1.1 kV
Output voltage limitation at 1 kV/µs (line-line) static	≤ 80 V
Voltage protection level U_p (line-line)	≤ 80 V (C3 - 10 A)
Voltage protection level U_p (line-earth)	≤ 1.1 kV (C3 - 100 A)
	≤ 1.1 kV (C1 - 1 kV/500 A)
	≤ 1.2 kV (C2 - 10 kV / 5 kA)
Response time t_A (line-line)	≤ 1 ns
Response time t_A (line-earth)	≤ 100 ns
Input attenuation aE, sym.	typ. 0.1 dB (1 MHz / 50 Ω)
	typ. 0.1 dB (500 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. 3 MHz
Capacity (line-line)	typ. 1 nF
Capacity (line-earth)	typ. 5 pF
Surge protection fault message	none

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Protective circuit

Impulse durability (line-line)	C3 - 10 A
Impulse durability (line-earth)	C1 - 1 kV / 500 A
	C2 - 10 kV / 5 kA
	C3 - 100 A
	D1 - 1 kA
Alternating current carrying capacity (line-earth)	10 A - 1 s

Connection data

Connection method	Individual wires

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	1.14 nF
Max. internal inductance L_i	1 µH
Max. input current I_i	500 mA (T4 / ≤ 75 °C)
	500 mA (T5 / ≤ 75 °C)
	500 mA (T6 / ≤ 60 °C)
Max. input voltage U_i	53 V DC
max. input power P_i	3 W
Insulation voltage to ground	500 V AC
Ambient temperature (operation)	-40 °C ... 75 °C (T4)
	-40 °C ... 75 °C (T5)
	-40 °C ... 60 °C (T6)

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
IECEx	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

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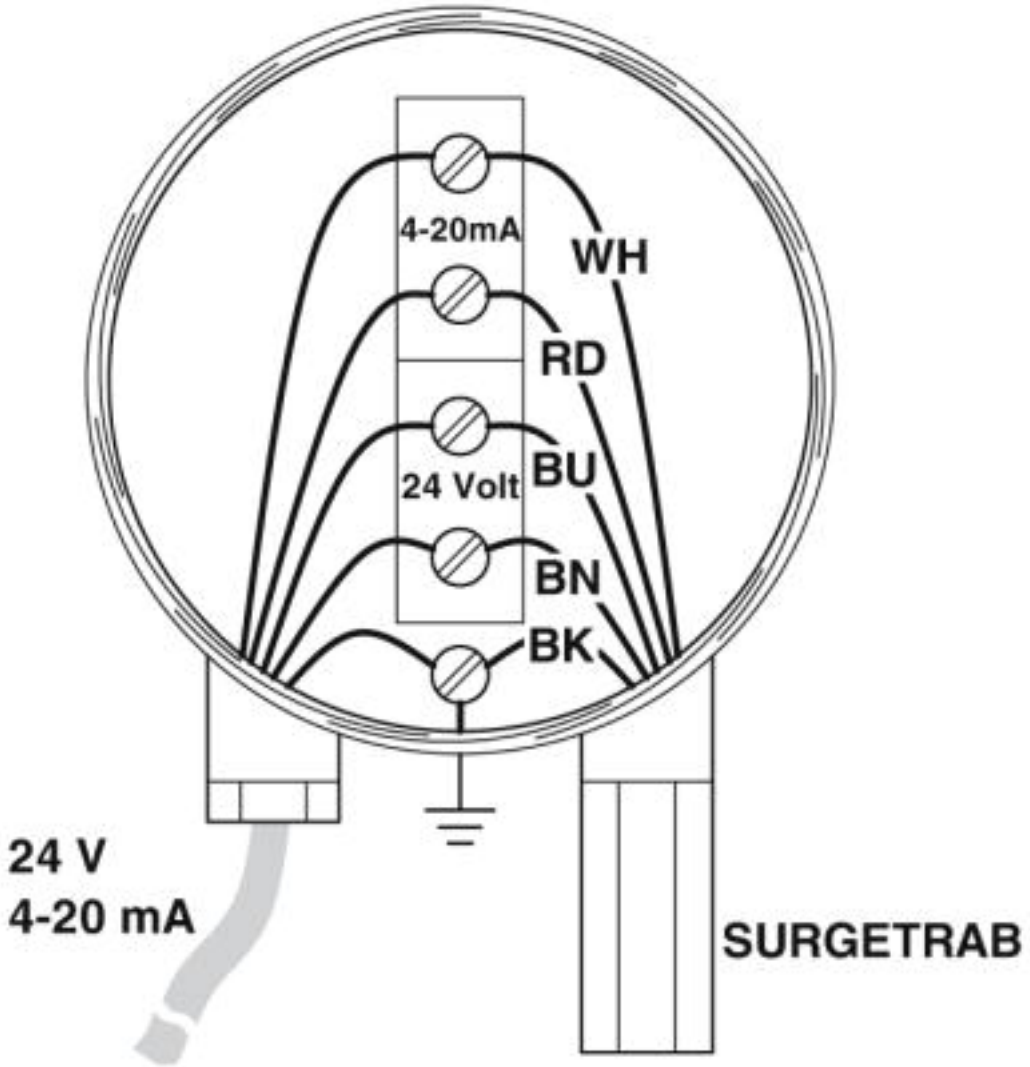
Environmental Product Compliance

REACh SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab “Downloads”, Category “Manufacturer's declaration”

Drawings

Application drawing



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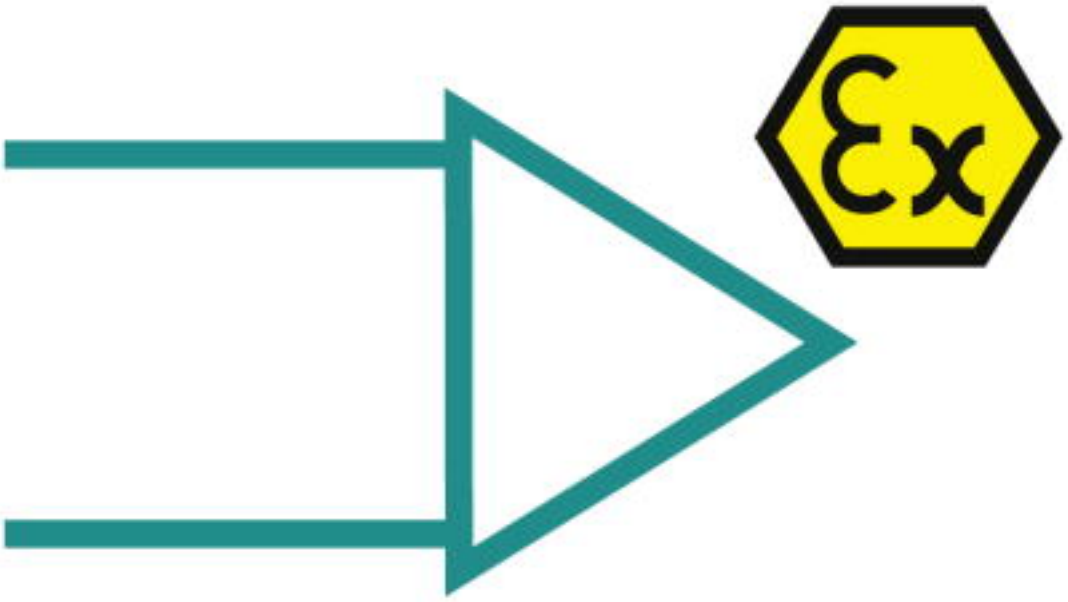
Dimensional drawing

Pictogram



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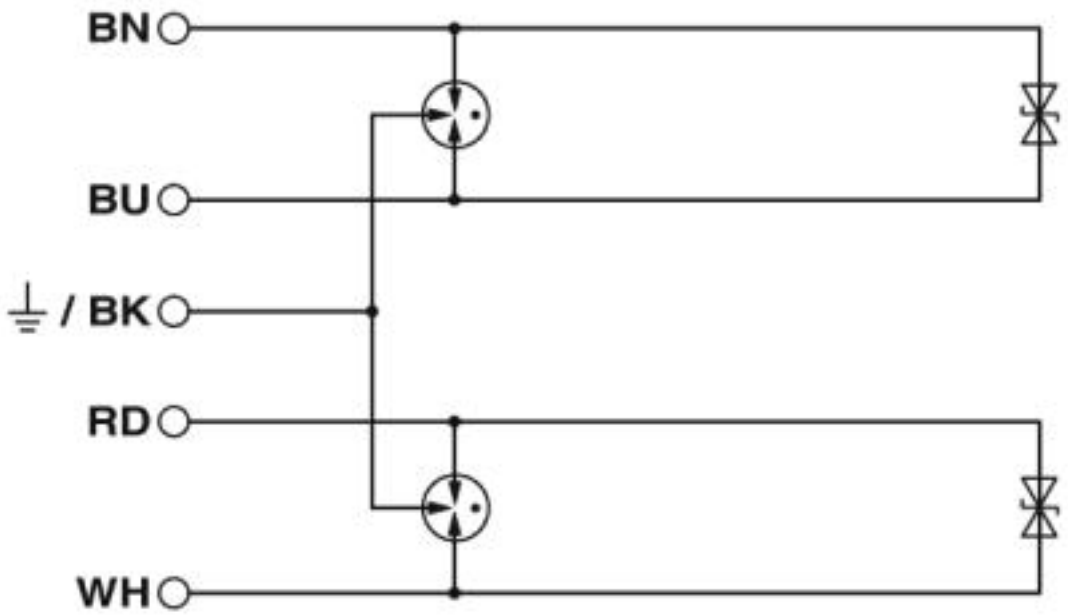
Circuit diagram



Classifications

eCl@ss

eCl@ss 4.0	27130800
eCl@ss 4.1	27130800
eCl@ss 5.0	27130800
eCl@ss 5.1	27130800
eCl@ss 6.0	27130800
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
ETIM 7.0	EC000943

UNSPSC

UNSPSC 6.01	30212010
UNSPSC 7.0901	39121610
UNSPSC 11	39121610
UNSPSC 12.01	39121610

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Classifications

UNSPSC

UNSPSC 13.2	39121620
UNSPSC 18.0	39121620
UNSPSC 19.0	39121620
UNSPSC 20.0	39121620
UNSPSC 21.0	39121620

Approvals

Approvals

Approvals

EAC

Ex Approvals

IECEx / ATEX / EAC Ex

Approval details

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