

Surge protection device - S-PT-EX-24DC-1/2" - 2800035

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Surge protection for one floating signal circuit in screw-on module with IP67 degree of protection for sensor heads, connection: 1/2-inch 14 NPT. Tested in accordance with types of protection in Ex areas Ex d / Ex tD / Ex ia IIC / Ex iaD. Suitable for use in the fieldbus system in accordance with the FISCO concept, HART-compatible.

Your advantages

- ✓ Arresters in hexagonal pipe with various outer threads



Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 411011
GTIN	4046356411011

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
Color	silver
Mounting type	1/2" NPT
Type	Screw-in module
Number of positions	2

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Technical data

General

Direction of action	Line-Line & Line-Earth Ground
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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 (line-line)	260 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
Max. discharge current I_{max} (8/20) μs maximum (line-line)	260 A
Max. discharge current I_{max} (8/20) μs maximum (line-earth)	20 kA
Nominal pulse current I_{an} (10/1000) μs (line-line)	50 A
Output voltage limitation at 1 kV/ μs (line-line) spike	$\leq 130 V$
Output voltage limitation at 1 kV/ μs (line-earth) spike	$\leq 1.1 kV$
Output voltage limitation at 1 kV/ μs (line-line) static	$\leq 60 V$
Voltage protection level U_p (line-line)	$\leq 65 V$ (C3 - 10 A)
Voltage protection level U_p (line-earth)	$\leq 1.1 kV$ (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 (line-line)	$\leq 1 ns$
Response time t_A (line-earth)	$\leq 100 ns$
Input attenuation aE, sym.	typ. 0.1 dB (30 MHz / 50 Ω)
	typ. 0.1 dB (6 MHz / 150 Ω)
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. 70 MHz
Capacity (line-line)	typ. 20 pF
Capacity (line-earth)	typ. 5 pF
Surge protection fault message	none
Impulse durability (line-line)	C3 - 25 A
Impulse durability (line-earth)	C1 - 1 kV / 500 A
	C2 - 10 kV / 5 kA
	C3 - 100 A

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Technical data

Protective circuit

	D1 - 1 kA
Alternating current carrying capacity (line-earth)	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 (T4 / ≤ 75 °C)
	500 mA (T5 / ≤ 75 °C)
	500 mA (T6 / ≤ 60 °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 °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

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally friendly use period: unlimited = EFUP-e

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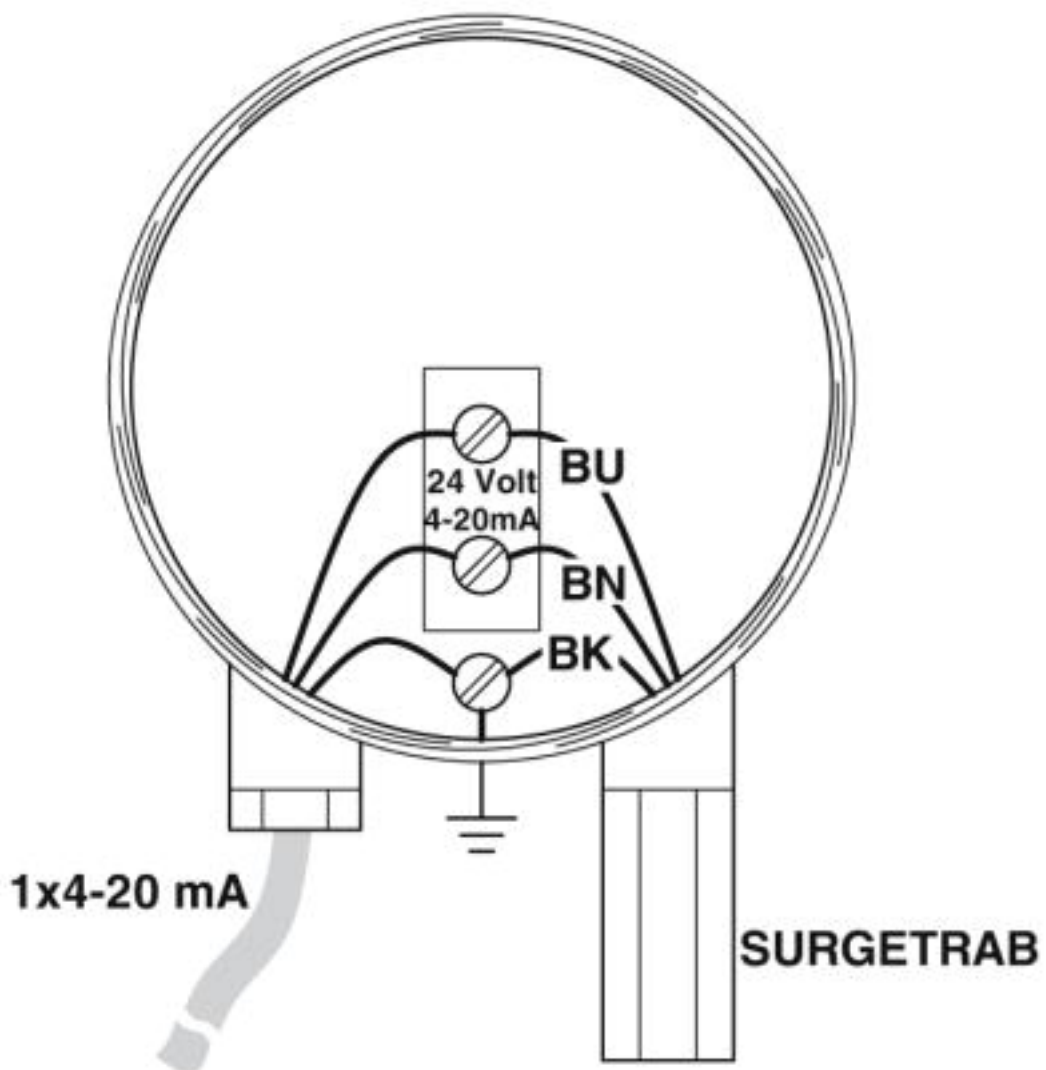
Technical data

Environmental Product Compliance

	No hazardous substances above threshold values
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Drawings

Application drawing

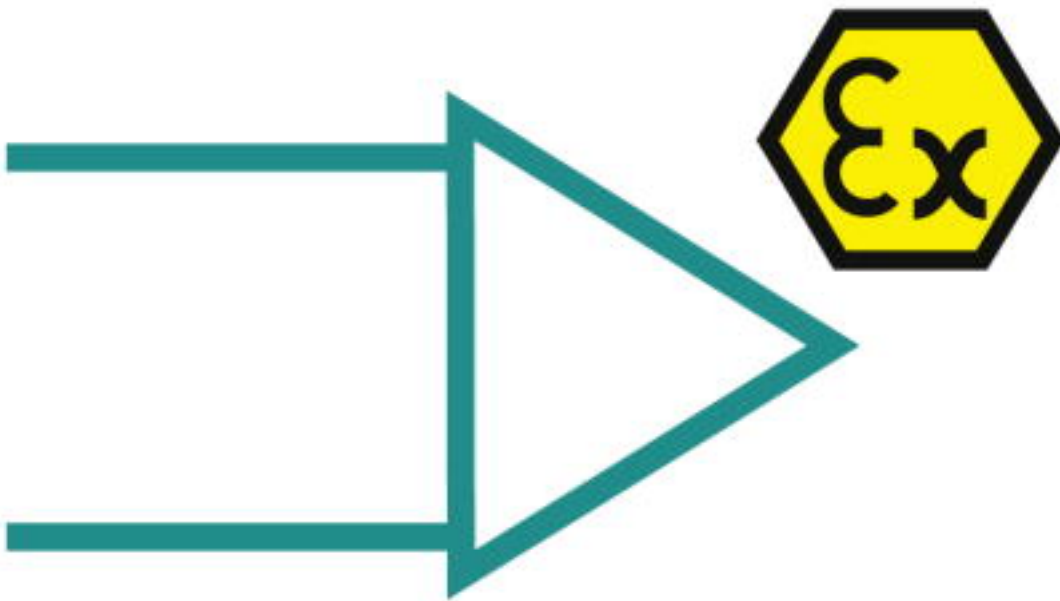


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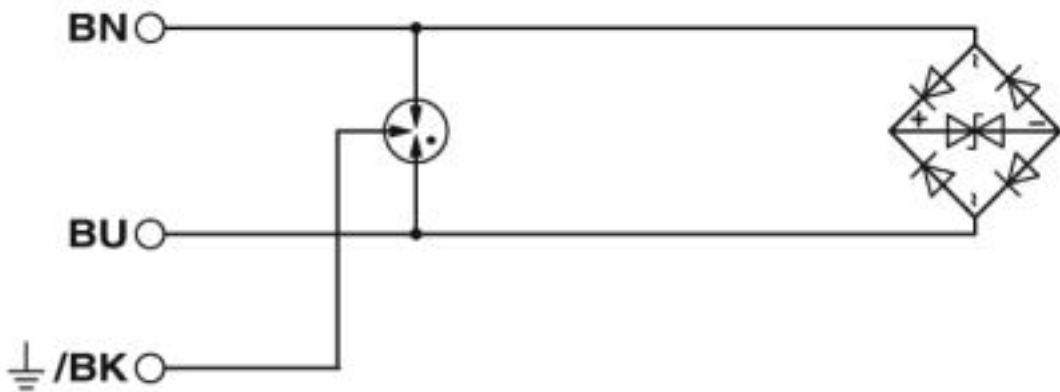
Dimensional drawing



Pictogram



Circuit diagram



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Classifications

eCl@ss

eCl@ss 10.0.1	27130807
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
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

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Approvals

EAC



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