Surge protection device - S-PT-EX(I)-24DC-3/4 - 2882585

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Surge protection in the IP67 screw-on module for measuring sensors in intrinsically safe circuits, direct mounting with 3/4" NPT outer thread, cable gland for the signal cable, two-stage protective circuit. HART-compatible.

Your advantages

- Arresters in hexagonal pipe with various outer threads

Key Commercial Data

Packing unit	1 pc
GTIN	4 046356 098076
GTIN	4046356098076
Weight per Piece (excluding packing)	391.000 g
Custom tariff number	85363010
Country of origin	Germany
Note	Made to Order (non-returnable)

Technical data

Dimensions

Height	33.5 mm
Width	33.5 mm
Depth	148 mm

Ambient conditions

Ambient temperature (operation)	-40 °C ... 50 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	≤ 2000 m (amsl (above mean sea level))
Degree of protection	IP67

General

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Technical data

General

Housing material	Zinc die-cast, surface bronzed and nickel-plated
Color	silver
Standards for cearances and creepage distances	IEC 60664-1
	EN 60079-0
	EN 60079-11
Mounting type	direct 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 voltage U_C	30 V DC
	21 V AC
Rated current	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 (line-line)	10 kA
Nominal discharge current I_n (8/20) µs (line-earth)	10 kA (per path)
Nominal discharge current I_n (8/20) µs (shield-earth)	10 kA (optional)
Pulse discharge current I_{imp} (10/350) µs	1 kA
Max. discharge current I_{max} (8/20) µs maximum (line-line)	10 kA
Max. discharge current I_{max} (8/20) µs maximum (line-earth)	10 kA (per path)
Max. discharge current I_{max} (8/20) µs maximum (shield-earth)	10 kA
Nominal pulse current Ian (10/1000) µs (line-line)	30 A
Nominal pulse current Ian (10/1000) µs (line-earth)	100 A (per path)
Nominal pulse current Ian (10/1000) µs (shield-earth)	100 A
Output voltage limitation at 1 kV/µs (line-line) spike	≤ 50 V
Output voltage limitation at 1 kV/µs (line-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 (line-line) static	≤ 50 V
Output voltage limitation at 1 kV/µs (line-earth) static	≤ 1.4 kV (Direct grounding)
Residual voltage at I_n (line-line)	≤ 50 V
Residual voltage with Ian (10/1000) µs (line-line)	≤ 50 V
Voltage protection level U_p (line-line)	≤ 50 V (C1 - 0.5 kV / 250 A)
	≤ 55 V (C1 - 1 kV/500 A)

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Protective circuit

	≤ 55 V (C2 - 2 kV/1 kA)
	≤ 55 V (C2 - 10 kV / 5 kA)
	≤ 50 V (C3 - 10 A)
	≤ 50 V (C3 - 25 A)
	≤ 80 V (D1 - 1 kA)
Voltage protection level U_p (line-earth)	≤ 1.4 kV (C1 - 1 kV/500 A)
	≤ 1.4 kV (C2 - 2 kV/1 kA)
	≤ 1.4 kV (C2 - 10 kV / 5 kA)
	≤ 1.4 kV (C3 - 25 A)
	≤ 1.4 kV (C3 - 100 A)
	≤ 1.4 kV (D1 - 1 kA)
Voltage protection level U_p (shield-earth)	≤ 600 V (C1 - 0.5 kV / 250 A)
	≤ 650 V (C1 - 1 kV/500 A)
	≤ 650 V (C2 - 2 kV/1 kA)
	≤ 650 V (C2 - 10 kV / 5 kA)
	≤ 650 V (C3 - 10 A)
	≤ 750 V (C3 - 25 A)
	≤ 750 V (C3 - 100 A)
	≤ 650 V (D1 - 1 kA)
Response time t_A (line-line)	≤ 1 ns
Response time t_A (line-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 (≤ 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 per path	2.2 Ω ±10 %
Surge protection fault message	none
Impulse durability (line-line)	C1 - 1 kV / 500 A
	C2 - 10 kV / 5 kA
	C3 - 25 A
	D1 - 1 kA
Impulse durability (line-earth)	C1 - 1 kV / 500 A
	C2 - 10 kV / 5 kA
	C3 - 100 A
	D1 - 1 kA
Impulse durability (shield-earth)	C1 - 1 kV/500 A
	C2 - 10 kV/5 kA
	C3 - 100 A
	D1 - 1 kA

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Protective circuit

Alternating current carrying capacity (line-earth)	10 A - 1 s
Alternating current carrying capacity (shield-earth)	10 A - 1 s

Connection data

Connection method	Screw connection
Connection method IN	Screw terminal blocks
Connection method OUT	Connection line
Connection technology	Screw connection
Screw thread	M3
Tightening torque	0.6 Nm
Stripping length	6 mm
Conductor cross section flexible	0.14 mm² ... 1.5 mm²
Conductor cross section solid	0.14 mm² ... 1.5 mm²
Conductor cross section AWG	26 ... 16

Standards and Regulations

Standards/specifications	EN 61643-21 A2:2013
	EN 60079-0 2012
	EN 60079-11 2012
	EN 60079-26 2007
	IEC 60079-0 2011
	IEC 60079-11 2011
	IEC 60079-26 2006

General

Maximum inner capacitance C_i	2 nF
Max. internal inductance L_i	1 µH
Max. input current I_i	350 mA (T4 / ≤ 50 °C)
	350 mA (T5 / ≤ 50 °C)
	350 mA (T6 / ≤ 50 °C)
Max. input voltage U_i	30 V
max. input power P_i	3 W
Insulation voltage to ground	500 V AC
Ambient temperature (operation)	-40 °C ... 50 °C

Conformity / approvals

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

Environmental Product Compliance

	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50

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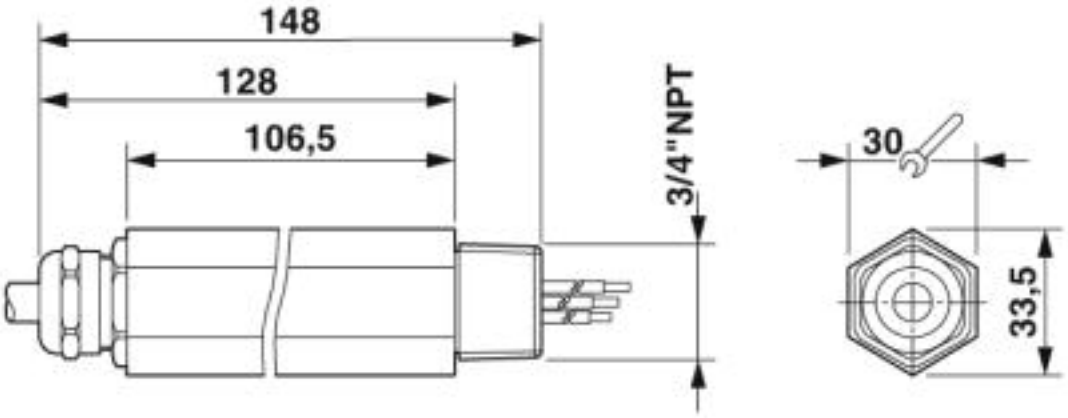
Environmental Product Compliance

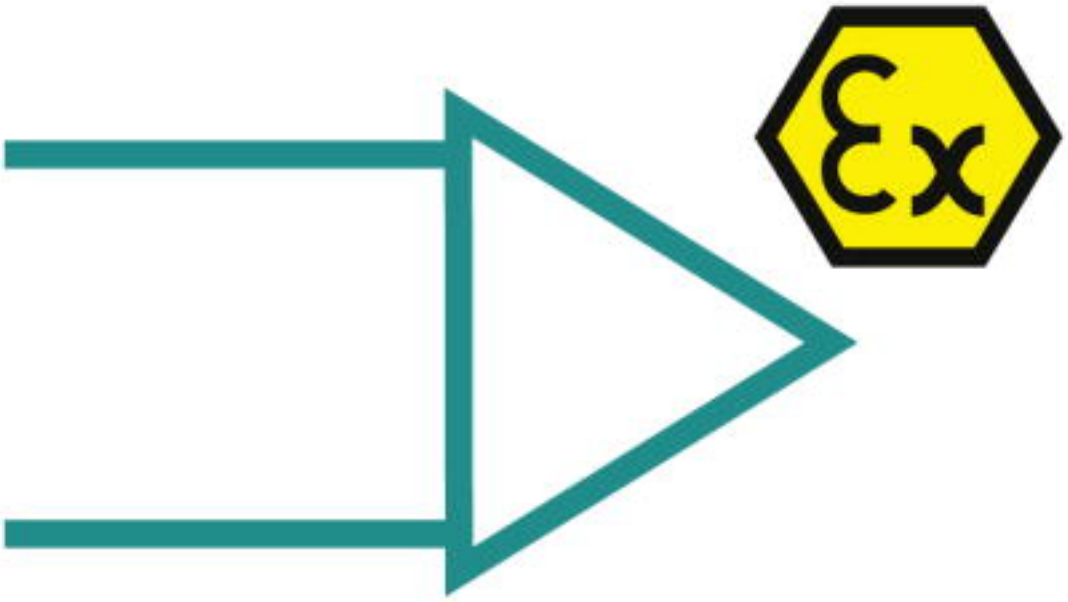
	For details about hazardous substances go to tab “Downloads”, Category “Manufacturer's declaration”

Drawings

Dimensional drawing



Pictogram



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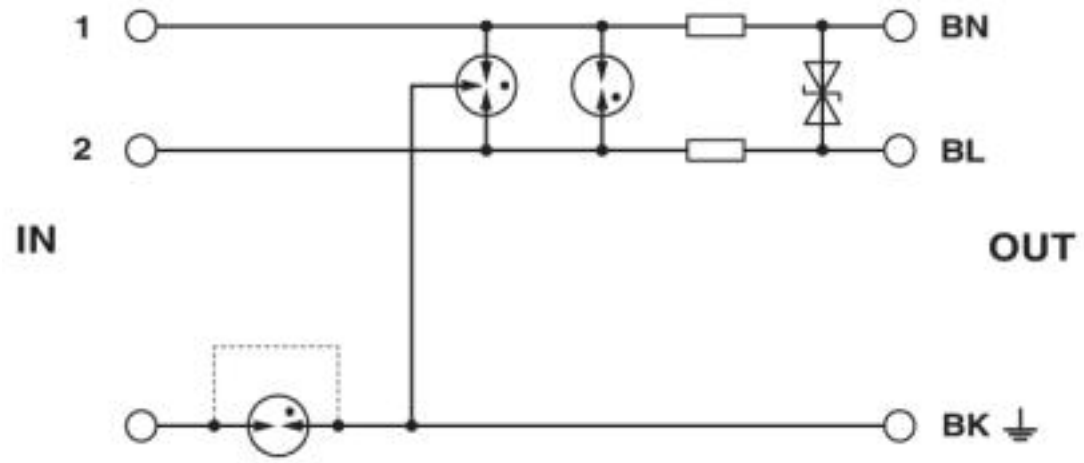
Circuit diagram



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

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UNSPSC

UNSPSC 21.0	39121620

Approvals

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Approvals

EAC / EAC

Ex Approvals

IECEx / ATEX

Approval details

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