

Surge protection device - S-PT-EX(I)-24DC - 2880671

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Surge protection in the IP67 screw-on module for measuring sensors in intrinsically safe circuits, direct mounting with M20 x 1.5 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 049016
GTIN	4046356049016
Weight per Piece (excluding packing)	402.000 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	137 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

Surge protection device - S-PT-EX(I)-24DC - 2880671

Technical data

General

Housing material	Zinc die-cast, surface bronzed and nickel-plated
Color	silver
Standards for clearances 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	$\leq 10 \mu A$
Residual current I_{PE}	$\leq 2 \mu A$
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 I_{an} (10/1000) μs (line-line)	30 A
Nominal pulse current I_{an} (10/1000) μs (line-earth)	100 A (per path)
Nominal pulse current I_{an} (10/1000) μs (shield-earth)	100 A
Output voltage limitation at 1 kV/ μs (line-line) spike	$\leq 50 V$
Output voltage limitation at 1 kV/ μs (line-earth) spike	$\leq 1.4 kV$ (Direct grounding)
Output voltage limitation at 1 kV/ μs (shield-earth) spike	$\leq 600 V$ (optional)
Output voltage limitation at 1 kV/ μs (line-line) static	$\leq 50 V$
Output voltage limitation at 1 kV/ μs (line-earth) static	$\leq 1.4 kV$ (Direct grounding)
Residual voltage at I_n (line-line)	$\leq 50 V$
Residual voltage with I_{an} (10/1000) μs (line-line)	$\leq 50 V$
Voltage protection level U_p (line-line)	$\leq 50 V$ (C1 - 0.5 kV / 250 A)
	$\leq 55 V$ (C1 - 1 kV/500 A)

Surge protection device - S-PT-EX(I)-24DC - 2880671

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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 t_A (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 f_g (3 dB), sym. in 50 Ohm system	typ. 6 MHz
Cut-off frequency f_g (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 mm ² ... 1.5 mm ²
Conductor cross section solid	0.14 mm ² ... 1.5 mm ²
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 μ H
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"
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