

## Surge protection device - S-PT-1X2-24DC-1/2" - 2882569

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Surge protection in the IP67 screw-on module for measuring sensors, direct mounting with 1/2" 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	
GTIN	4046356091657

### Technical data

#### Dimensions

Height	33.5 mm
Width	33.5 mm
Depth	148 mm

#### Ambient conditions

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

#### General

Housing material	Zinc die-cast, surface bronzed and nickel-plated
Color	silver
Standards for clearances and creepage distances	IEC 60664-1
	VDE 0110-1
Mounting type	direct screw connection

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## Technical data

### General

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 $U_C$	40 V DC
	28 V AC
Rated current	450 mA (55 °C)
Operating effective current $I_C$ at $U_C$	$\leq 10 \mu\text{A}$
Residual current $I_{PE}$	$\leq 2 \mu\text{A}$
Nominal discharge current $I_n$ (8/20) $\mu\text{s}$ (line-line)	10 kA
Nominal discharge current $I_n$ (8/20) $\mu\text{s}$ (line-earth)	10 kA (per path)
Nominal discharge current $I_n$ (8/20) $\mu\text{s}$ (shield-earth)	10 kA (optional)
Pulse discharge current $I_{imp}$ (10/350) $\mu\text{s}$	1 kA
Total discharge current $I_{total}$ (8/20) $\mu\text{s}$	20 kA
Total discharge current $I_{total}$ (10/350) $\mu\text{s}$	2 kA
Max. discharge current $I_{max}$ (8/20) $\mu\text{s}$ maximum (line-line)	10 kA
Max. discharge current $I_{max}$ (8/20) $\mu\text{s}$ maximum (line-earth)	10 kA (per path)
Max. discharge current $I_{max}$ (8/20) $\mu\text{s}$ maximum (shield-earth)	10 kA
Nominal pulse current $I_{an}$ (10/1000) $\mu\text{s}$ (line-line)	23 A
Nominal pulse current $I_{an}$ (10/1000) $\mu\text{s}$ (line-earth)	100 A
Nominal pulse current $I_{an}$ (10/1000) $\mu\text{s}$ (shield-earth)	100 A
Output voltage limitation at 1 kV/ $\mu\text{s}$ (line-line) spike	$\leq 55 \text{ V}$
Output voltage limitation at 1 kV/ $\mu\text{s}$ (line-earth) spike	$\leq 450 \text{ V}$ (Direct grounding)
Output voltage limitation at 1 kV/ $\mu\text{s}$ (shield-earth) spike	$\leq 600 \text{ V}$ (optional)
Output voltage limitation at 1 kV/ $\mu\text{s}$ (line-line) static	$\leq 55 \text{ V}$
Output voltage limitation at 1 kV/ $\mu\text{s}$ (line-earth) static	$\leq 450 \text{ V}$ (Direct grounding)
Residual voltage at $I_n$ (line-line)	$\leq 55 \text{ V}$
Residual voltage with $I_{an}$ (10/1000) $\mu\text{s}$ (line-line)	$\leq 65 \text{ V}$
Voltage protection level $U_p$ (line-line)	$\leq 80 \text{ V}$ (C2 - 10 kV / 5 kA)
Voltage protection level $U_p$ (line-earth)	$\leq 450 \text{ V}$ (C2 - 10 kV / 5 kA)
Voltage protection level $U_p$ (shield-earth)	$\leq 600 \text{ V}$ (C2 - 10 kV / 5 kA)
Voltage protection level $U_p$ static (line-line)	$\leq 50 \text{ V}$ (C2 - 10 kV / 5 kA)
Response time $t_A$ (line-line)	$\leq 1 \text{ ns}$
Response time $t_A$ (line-earth)	$\leq 100 \text{ ns}$

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### Protective circuit

Response time tA (shield-earth)	≤ 100 ns
Input attenuation aE, sym.	typ. 0.5 dB (≤ 1.5 MHz / 50 Ω)
	typ. 0.2 dB (≤ 300 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 MHz
Resistance per path	2.2 Ω ±10 %
Surge protection fault message	none
Max. required back-up fuse	500 mA (T)
Impulse durability (line-line)	C2 - 10 kV / 5 kA D1 - 1 kA
Impulse durability (line-earth)	C2 - 10 kV / 5 kA D1 - 1 kA
Impulse durability (shield-earth)	C2 - 10 kV/5 kA D1 - 1 kA

### 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	IEC 61643-21 2002
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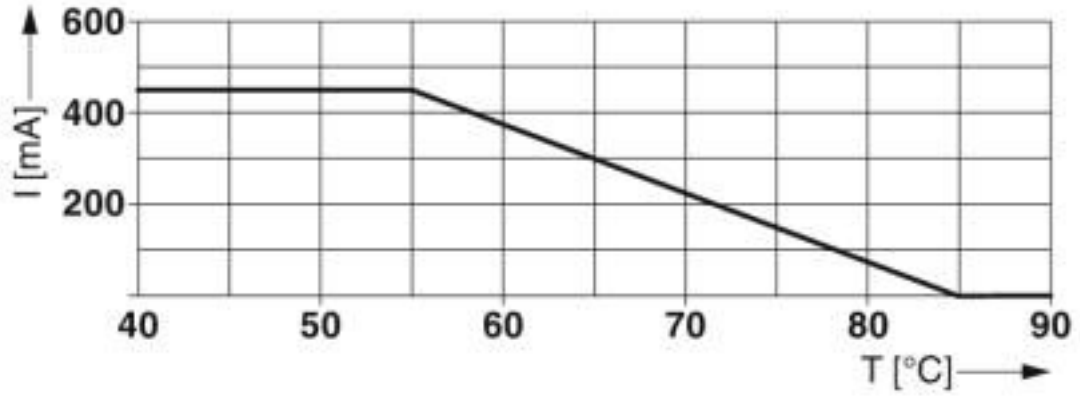
### Environmental Product Compliance

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

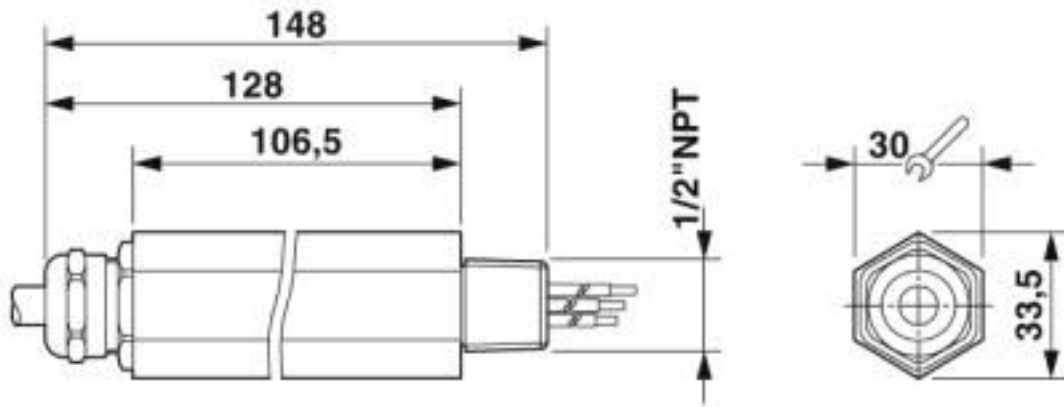
## Drawings

# Surge protection device - S-PT-1X2-24DC-1/2" - 2882569

Diagram

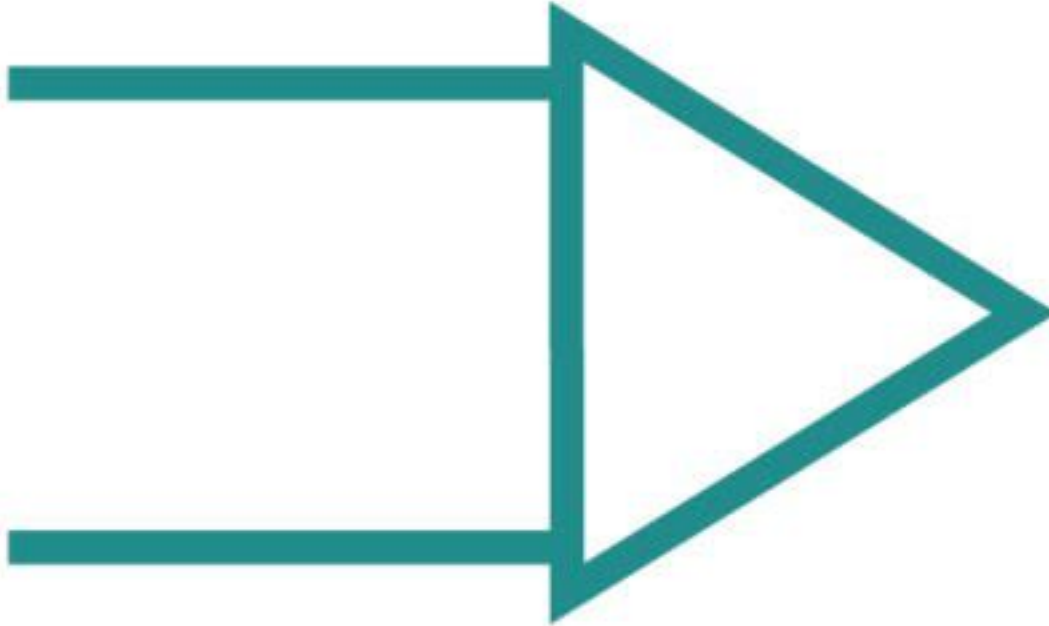


Dimensional drawing

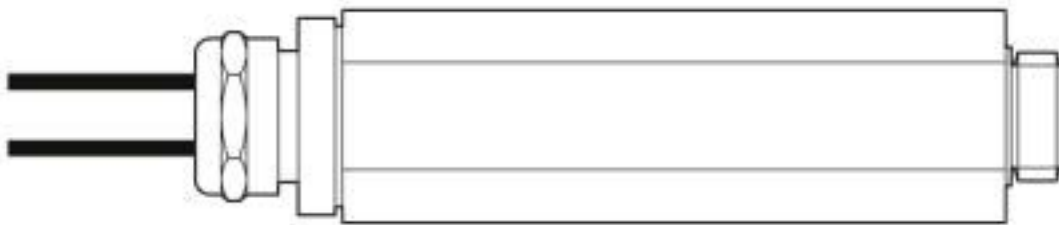


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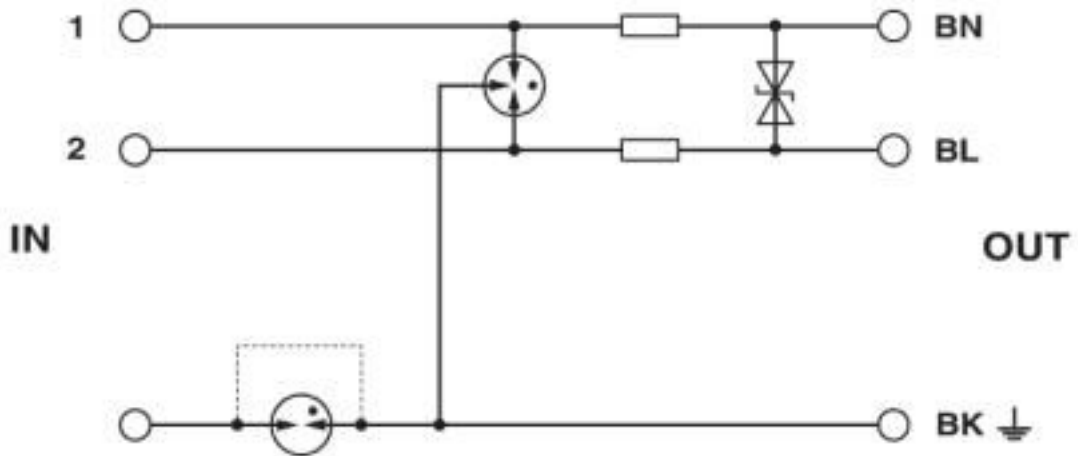
Pictogram



Product drawing



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

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Approvals

EAC

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Ex Approvals

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### Approval details

## Surge protection device - S-PT-1X2-24DC-1/2" - 2882569

### Approvals

EAC



RU C-  
DE.\*09.B.00169

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