

## Surge protection device - S-PT-EX-24DC - 2800034

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)




Surge protection for one 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.

### Why buy this product

- Arresters in hexagonal pipe with various outer threads



### Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 411004
GTIN	4046356411004
Weight per Piece (excluding packing)	0.220 g
Custom tariff number	85363010
Country of origin	Germany

### 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

## Surge protection device - S-PT-EX-24DC - 2800034

### Technical data

#### General

Housing material	Stainless steel
Color	silver
Standards for clearances and creepage distances	IEC 60664-1
	IEC 60079-11
Mounting type	M20
Type	Screw-in module
Number of positions	2
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 $U_C$	36 V DC
	25 V AC
Operating effective current $I_C$ at $U_C$	$\leq 5 \mu\text{A}$
Residual current $I_{PE}$	$\leq 2 \mu\text{A}$
Nominal discharge current $I_n$ (8/20) $\mu\text{s}$ (Core-Core)	260 A
Nominal discharge current $I_n$ (8/20) $\mu\text{s}$ (core-earth)	10 kA
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 (Core-Core)	260 A
Max. discharge current $I_{max}$ (8/20) $\mu\text{s}$ maximum (Core-Earth)	20 kA
Nominal pulse current $I_{an}$ (10/1000) $\mu\text{s}$ (Core-Core)	50 A
Output voltage limitation at 1 kV/ $\mu\text{s}$ (core-core) spike	$\leq 130 \text{ V}$
Output voltage limitation at 1 kV/ $\mu\text{s}$ (core-earth) spike	$\leq 1.1 \text{ kV}$
Output voltage limitation at 1 kV/ $\mu\text{s}$ (core-core) static	$\leq 60 \text{ V}$
Voltage protection level $U_p$ (core-core)	$\leq 65 \text{ V}$ (C3 - 10 A)
Voltage protection level $U_p$ (core-ground)	$\leq 1.1 \text{ kV}$ (C3 - 100 A)
	$\leq 1.1 \text{ kV}$ (C1 - 1 kV/500 A)
	$\leq 1.2 \text{ kV}$ (C2 - 10 kV / 5 kA)
Response time $t_A$ (core-core)	$\leq 1 \text{ ns}$
Response time $t_A$ (core-earth)	$\leq 100 \text{ ns}$
Input attenuation $aE$ , sym.	typ. 0.1 dB (30 MHz / 50 $\Omega$ )

## Surge protection device - S-PT-EX-24DC - 2800034

### Technical data

#### Protective circuit

	typ. 0.1 dB (6 MHz / 150 Ω)
Cut-off frequency fg (3 dB), sym. in 50 Ohm system	typ. 70 MHz
Cut-off frequency fg (3 dB), sym. in 150 Ohm system	typ. 40 MHz
Capacity (core-core)	typ. 20 pF
Capacity (core-earth)	typ. 5 pF
Surge protection fault message	none
Impulse durability (conductor-conductor)	C3 - 25 A
Impulse durability (conductor-ground)	C1 - 1 kV/500 A
	C2 - 10 kV/5 kA
	C3 - 100 A
	D1 - 1 kA
Alternating current carrying capacity (conductor-ground)	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 $C_i$	1.65 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 $U_i$	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)

# Surge protection device - S-PT-EX-24DC - 2800034

## Technical data

### 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

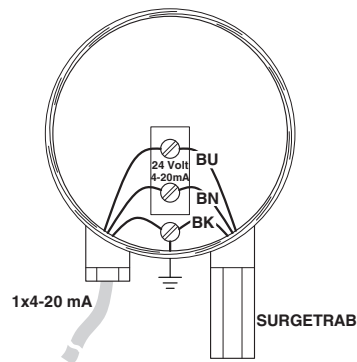
China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

## Drawings

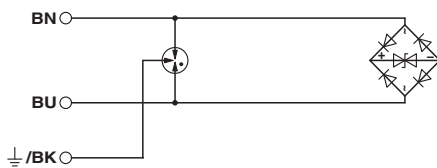
Pictogram



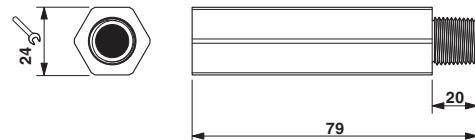
Application drawing



Circuit diagram

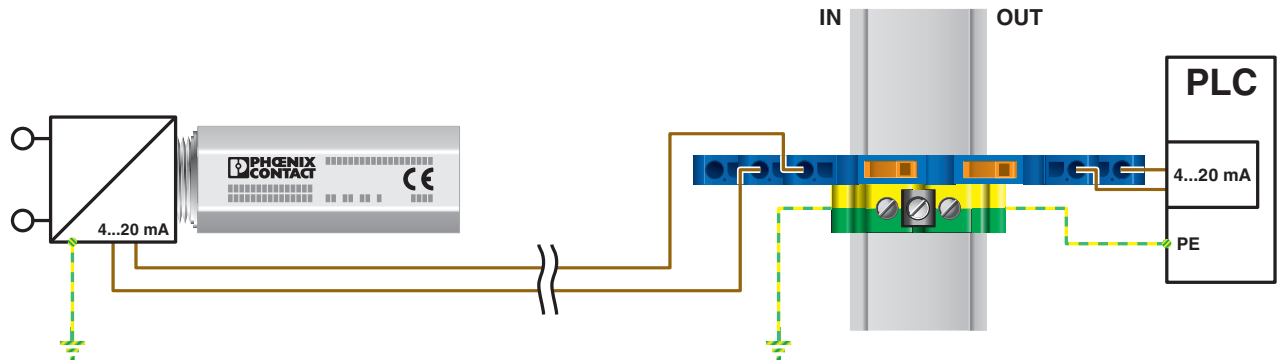


Dimensional drawing



# Surge protection device - S-PT-EX-24DC - 2800034

Application drawing



## Classifications

### eCl@ss

eCl@ss 4.0	27140201
eCl@ss 4.1	27130801
eCl@ss 5.0	27130801
eCl@ss 5.1	27130801
eCl@ss 6.0	27130807
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

### UNSPSC

UNSPSC 6.01	30212010
UNSPSC 7.0901	39121610
UNSPSC 11	39121610
UNSPSC 12.01	39121610
UNSPSC 13.2	39121620

## Surge protection device - S-PT-EX-24DC - 2800034

### Approvals

#### Approvals

---

Approvals

EAC / EAC


---

Ex Approvals

IECEX / ATEX

---

#### Approval details

EAC		EAC-Zulassung
-----	---	---------------

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

---