

Surge protection device - S-PT-4-EX-24DC - 2800036

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Two-level surge protection for three or four signals of floating signal circuits in screw-on module with IP67 protection for sensor heads, connection M20 x 1.5. Tested according to 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.

Your advantages

- ✓ Arresters in hexagonal pipe with various outer threads



Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 411042
GTIN	4046356411042
Weight per Piece (excluding packing)	207.020 g
Custom tariff number	85363010
Country of origin	Germany
Note	Made to Order (non-returnable)

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
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Surge protection device - S-PT-4-EX-24DC - 2800036

Technical data

General

Color	silver
Standards for clearances and creepage distances	IEC 60664-1
	IEC 60079-11
Mounting type	M20
Type	Screw-in module
Number of positions	4
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	$\leq 5 \mu A$
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
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. 40 MHz
Capacity (line-line)	typ. 20 pF
Capacity (line-earth)	typ. 5 pF
Surge protection fault message	none

Surge protection device - S-PT-4-EX-24DC - 2800036

Technical data

Protective circuit

Impulse durability (line-line)	C3 - 25 A
Impulse durability (line-earth)	C1 - 1 kV / 500 A
	C2 - 10 kV / 5 kA
	C3 - 100 A
	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

Surge protection device - S-PT-4-EX-24DC - 2800036

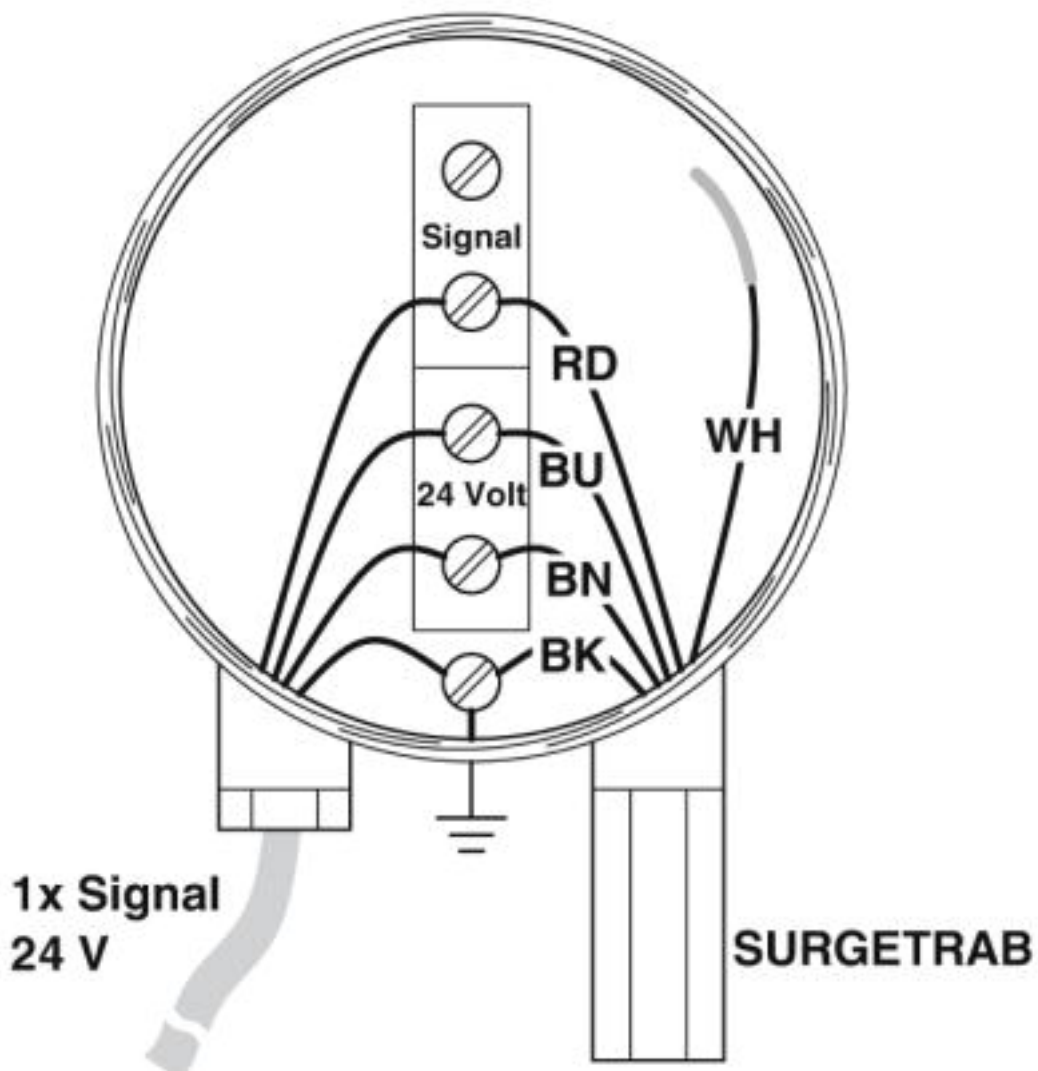
Technical data

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

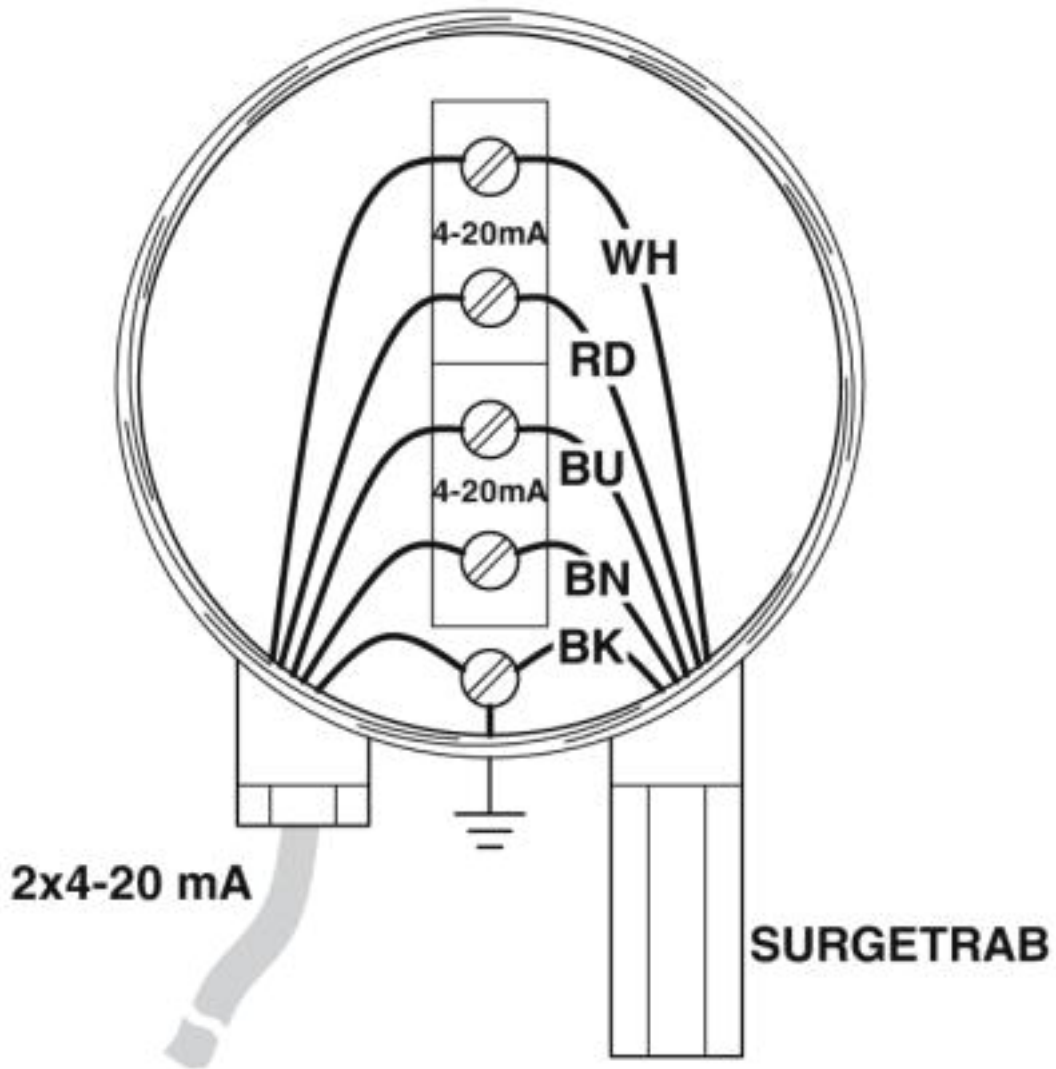
Drawings

Application drawing



Surge protection device - S-PT-4-EX-24DC - 2800036

Application drawing

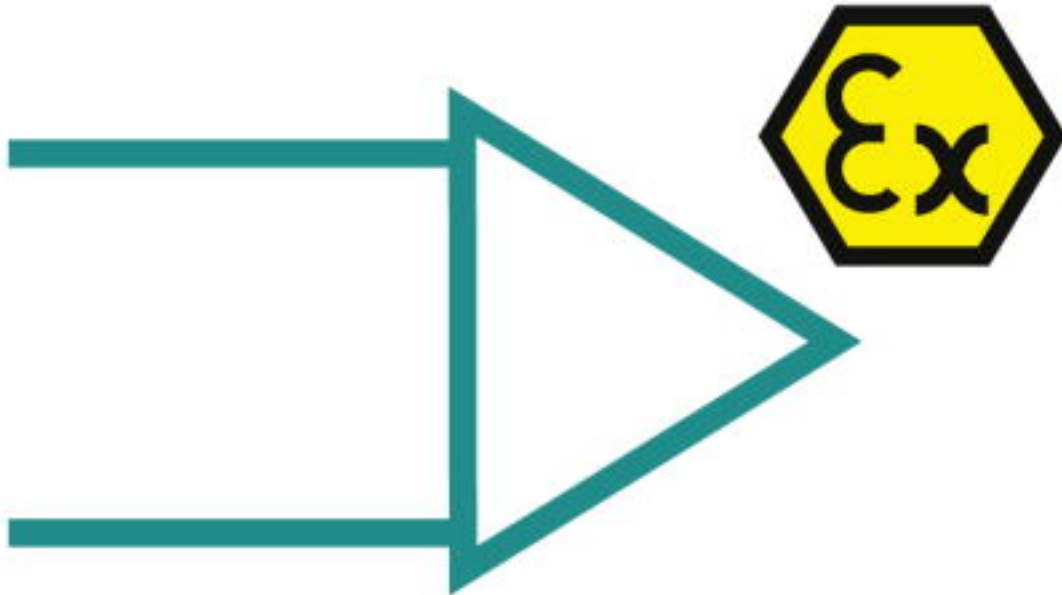


Dimensional drawing

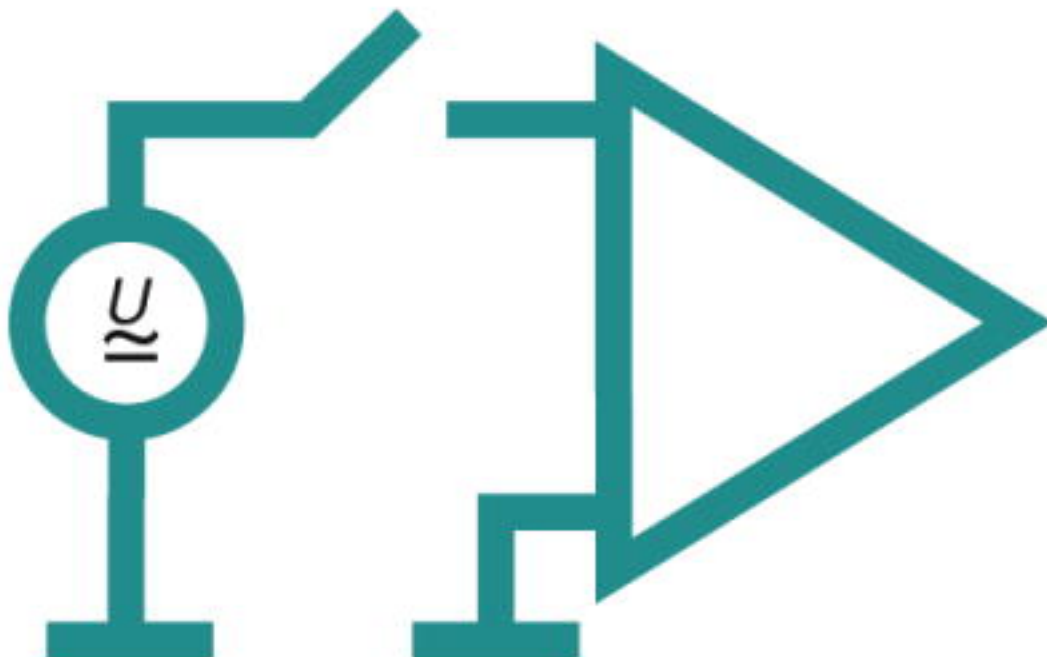


Surge protection device - S-PT-4-EX-24DC - 2800036

Pictogram

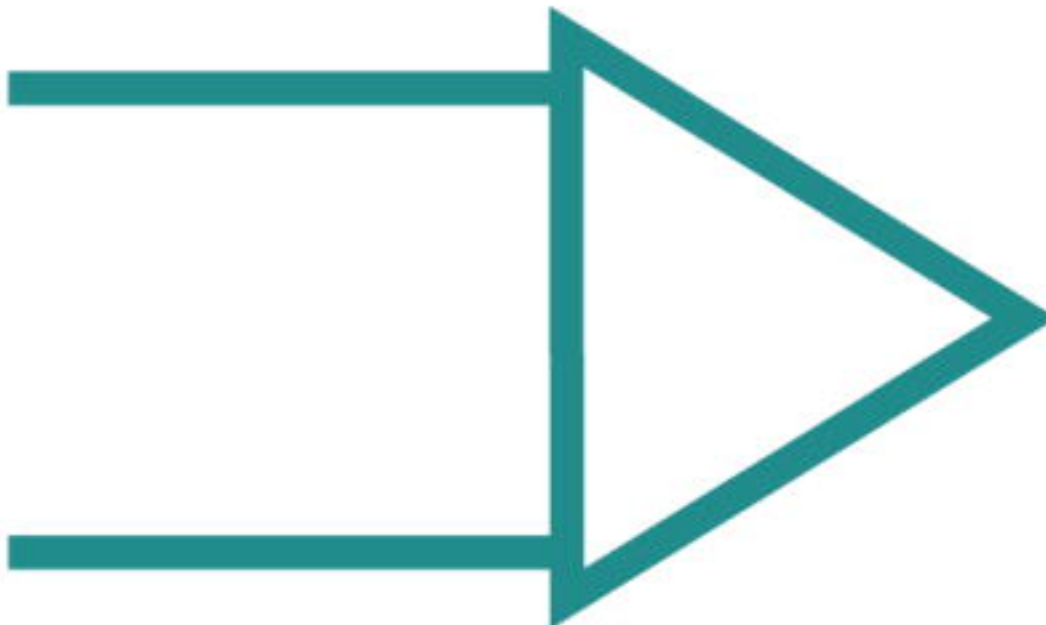


Pictogram

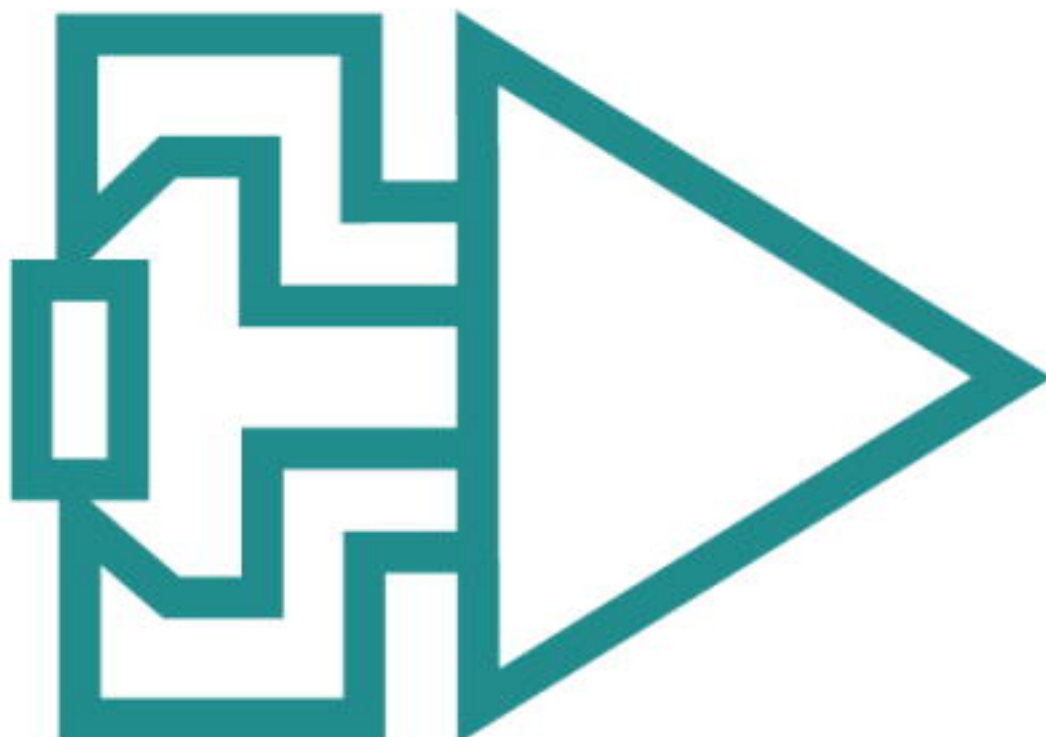


Surge protection device - S-PT-4-EX-24DC - 2800036

Pictogram

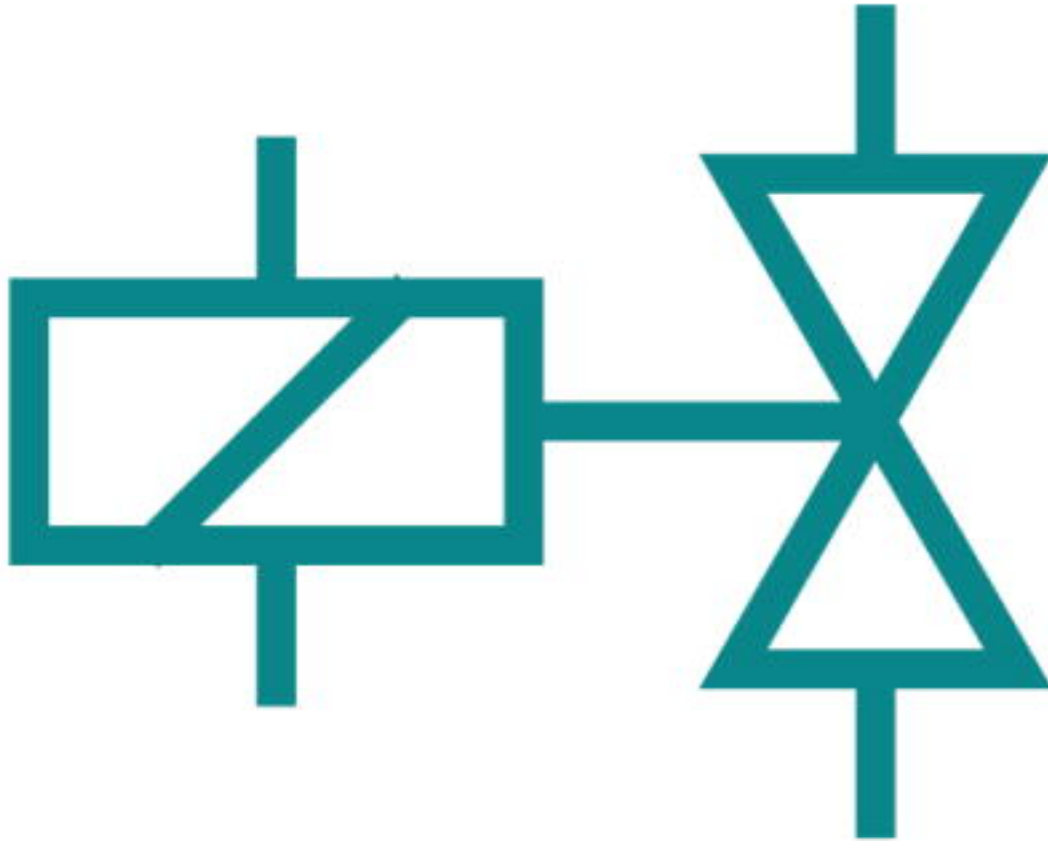


Pictogram

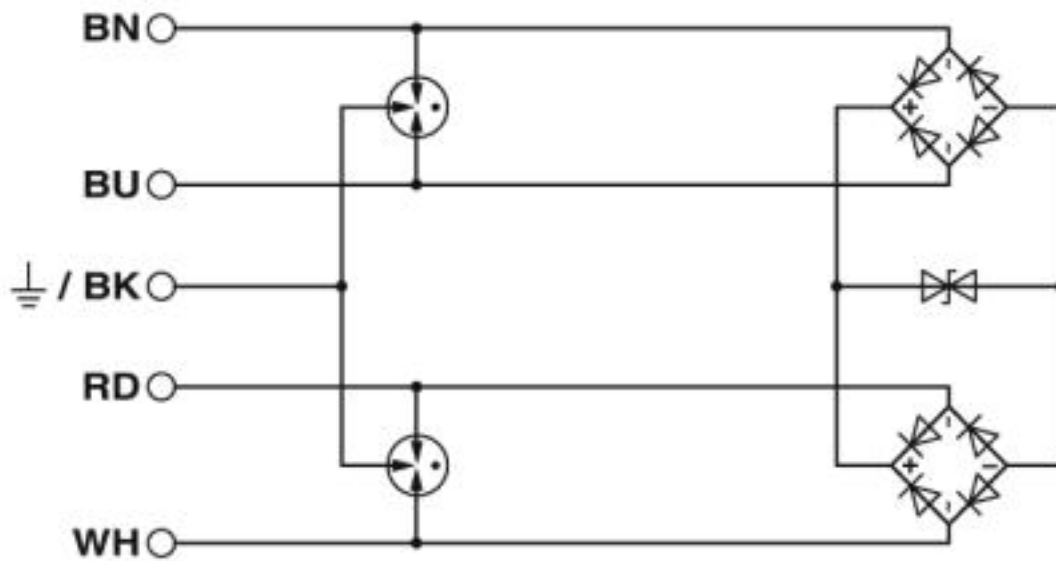


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Pictogram



Circuit diagram



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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
UNSPSC 21.0	39121620

Approvals

Approvals

Approvals

EAC / EAC


Ex Approvals

IECEx / ATEX / EAC Ex

Approval details

Surge protection device - S-PT-4-EX-24DC - 2800036

Approvals

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