

# S-PT-EX-48DC

Order No.: 2800053




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Surge protection for one floating signal circuit in screw-on module with IP67 degree of 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.



## Commercial data

GTIN (EAN)	 4 046356 445696
sales group	J331
Pack	1 pcs.
Customs tariff	85363010
Catalog page information	Page 115 (TT-2011)

## Product notes

WEEE/RoHS-compliant since:  
08/25/2008



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## Technical data

### General

Housing material	High-grade steel
Color	silver

Standards for air and creepage distances	IEC 60664-1
	IEC 60079-11
Total surge current (8/20) $\mu$ s	20 kA
Total surge current (10/350) $\mu$ s	2 kA
Ambient temperature (operation)	-25 °C ... 80 °C (non-EX)
Mounting type	M20
Design	Screw-in module
Number of positions	2
Degree of protection	IP67
Direction of action	Line-Line & Line-Earth Ground
Width	28.00 mm
Height	79.00 mm
Length	28.00 mm

#### Protective circuit

IEC category	C1
	C2
	C3
	D1
Nominal voltage $U_N$	48 V DC
Maximum continuous operating voltage $U_C$	53 V DC
	37 V AC
Maximum continuous voltage $U_C$ (wire-wire)	53 V DC
	37 V AC
Ground conductor current $I_{PE}$	$\leq 2 \mu$ A
Nominal discharge surge current $I_n$ (8/20) $\mu$ s (Core-Core)	170 A
Nominal discharge surge current $I_n$ (8/20) $\mu$ s (Core-Earth)	10 kA
Total surge current (8/20) $\mu$ s	20 kA
Nominal pulse current $I_{an}$ (10/1000) $\mu$ s (Core-Core)	34 A
Lightning test current (10/350) $\mu$ s, peak value $I_{imp}$	1 kA
Output voltage limitation at 1 kV/ $\mu$ s (Core-Core) spike	$\leq 160$ V
Output voltage limitation at 1 kV/ $\mu$ s (Core-Earth) spike	$\leq 1.1$ kV

Output voltage limitation at 1 kV/ $\mu$ s (Core-Core) static	$\leq 80$ V
Protection level $U_p$ (Core-Core)	$\leq 90$ V (C3 (10 A))
Protection level $U_p$ (Core-Earth)	$\leq 1.1$ kV (C3 (100A))
	$\leq 1.1$ kV (C1 - 500 A)
	$\leq 1.2$ kV (C2 (10 kV/5 kA))
Response time $t_A$ (Core-Core)	$\leq 1$ ns
Response time $t_A$ (Core-Earth)	$\leq 100$ ns
Input attenuation $a_E$ , sym.	Typ. 0.1 dB (30 MHz / 50 $\Omega$ )
	Typ. 0.1 dB (6 MHz / 150 $\Omega$ )
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 (Core-Core)	Typ. 20 pF
Capacity (Core-Earth)	Typ. 5 pF
Resistance in series	0 $\Omega$
Surge carrying capacity in acc. with IEC 61643-21 (Core-Core)	C3 (10 A)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C1 (1 kV / 500 A)
	C2 (10 kV/5 kA)
	C3 (100 A)
	D1 (1 kA)
Alternating current carrying capacity in acc. with IEC 61643-21 (Core-Earth)	10 A - 1 s

#### Connection data

Connection method	Individual wires
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#### Connection, protective circuit

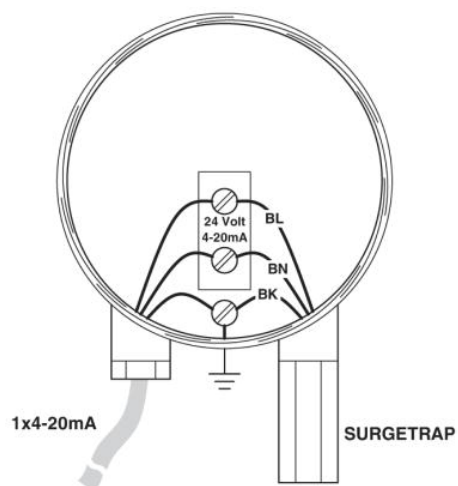
Standards/regulations	EN 61643-21
	EN 60079-0
	EN 60079-1
	EN 60079-11
	EN 60079-26
	EN 61241-0
	EN 61241-1
	EN 61241-11

**Certificates / Approvals**

Certification Ex: IECEX, KEMA-EX

**Diagrams/Drawings**

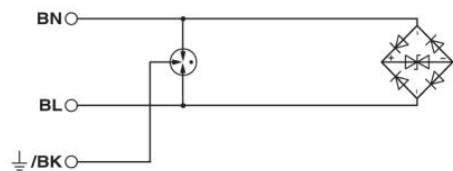
Application drawing



Dimensioned drawing



Circuit diagram



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