

Surge protection device - S-PT1-2PE-24DC - 2818122

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Screw on module for conduit systems, with two conductor protection for a 2-core floating signal circuit. Design: 24 V DC



Key commercial data

Packing unit	1
Minimum order quantity	30
Catalog page	Page 55 (TT-2002)
GTIN	 4 017918 148355
Custom tariff number	85363010
Country of origin	GERMANY

Technical data

General

Color	silver
Standards for air and creepage distances	VDE 0110-1
Standards for air and creepage distances	IEC 60664-1
Total surge current (8/20) μ s	20 kA
Ambient temperature (operation)	-40 °C ... 80 °C
Mounting type	Connection-specific intermediate plugging
Design	Screw-in module
Number of positions	3
Degree of protection	IP40
Direction of action	Line-Line & Line-Earth Ground
Width	33 mm
Height	33 mm
Depth	120 mm

Protective circuit

IEC category	C1
IEC category	C2
IEC category	C3

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Protective circuit

IEC category	D1
Nominal voltage UN	24 V DC
Maximum continuous operating voltage UC	28 V DC
Maximum continuous operating voltage UC	20 V AC
Maximum continuous voltage UC (wire-wire)	28 V DC
Maximum continuous voltage UC (wire-wire)	20 V AC
Nominal current IN	250 mA (25°C)
Operating effective current IC at UC	≤ 5 µA
Ground conductor current IPE	≤ 2 µA
Nominal discharge surge current In (8/20) µs (Core-Core)	10 kA
Nominal discharge surge current In (8/20) µs (Core-Earth)	10 kA
Total surge current (8/20) µs	20 kA
Max. discharge surge current I _{max} (8/20) µs maximum (Core-Core)	10 kA
Max. discharge surge current I _{max} (8/20) µs maximum (Core-Earth)	10 kA
Nominal pulse current I _{an} (10/1000) µs (Core-Core)	180 A
Nominal pulse current I _{an} (10/1000) µs (Core-Earth)	180 A
Output voltage limitation at 1 kV/µs (Core-Core) spike	≤ 60 V
Output voltage limitation at 1 kV/µs (Core-Earth) spike	≤ 450 V
Output voltage limitation at 1 kV/µs (Core-Core) static	≤ 60 V
Residual voltage at In, (conductor-conductor)	≤ 40 V
Residual voltage at In, (conductor-ground)	≤ 60 V
Residual voltage with I _{an} (10/1000)µs (conductor-conductor)	≤ 25 V
Residual voltage with I _{an} (10/1000)µs (conductor-ground)	≤ 20 V
Protection level UP (Core-Core)	≤ 55 V
Protection level UP (Core-Earth)	≤ 550 V
Response time tA (Core-Core)	≤ 1 ns
Response time tA (Core-Earth)	≤ 100 ns
Input attenuation aE, sym.	≤ 1.6 dB (up to 500 kHz, 50 Ω system)
Input attenuation aE, sym.	≤ 0.6 dB (up to 200 kHz, 150 Ω system)
Input attenuation aE, sym.	≤ 0.2 dB (up to 50 kHz, 600 Ω system)
Cut-off frequency fg (3 dB), sym. in 50 Ohm system	Typ. 3.5 MHz
Cut-off frequency fg (3 dB), sym. in 150 Ohm system	Typ. 1.5 MHz
Cut-off frequency fg (3 dB), sym. in 600 Ohm system	Typ. 400 kHz
Capacity (Core-Core)	Typ. 1.5 nF
Resistance in series	10 Ω 5%
Surge carrying capacity in acc. with IEC 61643-21 (Core-Core)	C2 (10 kV/5 kA)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C2 (10 kV/5 kA)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	D1 (2.5 kA)
Alternating current carrying capacity in acc. with IEC 61643-21 (Core-Earth)	5 A - 1 s

Connection data

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Connection type IN	Screw terminal blocks
Connection type OUT	Screw terminal blocks
Conductor cross section stranded min.	0.14 mm ²
Conductor cross section stranded max.	1.5 mm ²
Conductor cross section solid min.	0.14 mm ²
Conductor cross section solid max.	1.5 mm ²
Conductor cross section AWG/kcmil min.	26
Conductor cross section AWG/kcmil max	16

Connection, protective circuit

Standards/regulations	IEC 61643-21
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Classifications

eclass

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

etim

ETIM 2.0	EC000943
ETIM 3.0	EC000943
ETIM 4.0	EC000943

unspsc

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

Approvals

Approvals

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UL Recognized / GOST / UL Listed

Ex Approvals

UL Listed / cUL Listed / cULus Recognized

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Approvals

Approvals submitted

Approval details

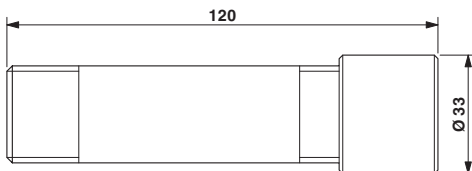
UL Recognized 

GOST 

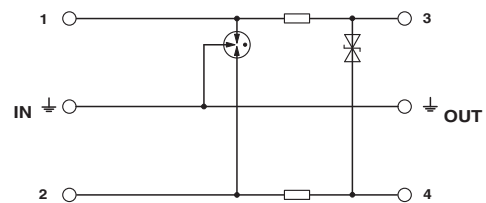
UL Listed 

Drawings

Dimensioned drawing



Circuit diagram





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