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Surge protection device - PT-IQ-1X2+F-12DC-PT - 2801254

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The figure shows the PT-IQ-1x2-24DC-PT version

Surge protection, consisting of protective plug and base element, with integrated multi-stage status indicator on the module for one 2-wire floating signal circuit. Indirect grounding via gas-filled surge arrester.



Key commercial data

Packing unit	1 pc
Custom tariff number	85363030
Country of origin	Germany

Technical data

Dimensions

Height	109.3 mm
Width	17.7 mm
Depth	77.5 mm
Horizontal pitch	1 Div.

Ambient conditions

Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Degree of protection	IP20

General

Housing material	PA 6.6
Inflammability class according to UL 94	V0
Color	black
Mounting type	DIN rail mounting
Type	DIN rail module, two-section, divisible

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Technical data

General

Direction of action	Line-Line & Line-Signal Ground/Shield & optional Signal Ground/Shield-Earth Ground
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Protective circuit

IEC test classification	C1
	C2
	C3
	D1
Nominal voltage U_N	12 V DC
Maximum continuous operating voltage U_C	15 V DC
	10 V AC
Nominal current I_N	1000 mA (up to 40 °C)
Operating effective current I_C at U_C	≤ 1 mA (per system)
Residual current I_{PE}	≤ 1 μ A
Nominal discharge current I_n (8/20) μ s (Core-Core)	10 kA
Nominal discharge current I_n (8/20) μ s (Core-Earth)	10 kA
Impulse discharge current (10/350) μ s, peak value I_{imp}	2.5 kA
Voltage protection level U_P (Core-Core)	≤ 65 V (C1 - 1 kV/500 A)
	≤ 95 V (C2 - 10 kV / 5 kA)
	≤ 35 V (C3 - 25 A)
Voltage protection level U_P (Core-Earth)	≤ 900 V (C1 - 1 kV/500 A)
	≤ 1300 V (C2 - 10 kV / 5 kA)
	≤ 1000 V (C3 - 25 A)
Voltage protection level U_P (Core-GND)	≤ 600 V (C1 - 1 kV/500 A)
	≤ 750 V (C2 - 10 kV / 5 kA)
	≤ 700 V (C3 - 25 A)
Voltage protection level U_P static (core-core)	≤ 45 V (C1 - 1 kV/500 A)
Voltage protection level U_P static (core-ground)	≤ 130 V (C2 - 10 kV / 5 kA)
	≤ 60 V (C3 - 25 A)
Voltage protection level U_P static (core-GND)	≤ 60 V (C2 - 10 kV / 5 kA)
	≤ 40 V (C3 - 25 A)
Response time t_A (Core-Core)	≤ 1 ns
Response time t_A (Core-Earth)	≤ 100 ns
	≤ 100 ns
Input attenuation aE, sym.	typ. 0.3 dB (≤ 95 kHz/150 Ω)
Cut-off frequency f_g (3 dB), sym. in 150 Ohm system	typ. 600 kHz
Capacity (Core-Core)	typ. 4 nF

Surge protection device - PT-IQ-1X2+F-12DC-PT - 2801254

Technical data

Protective circuit

Resistance in series	1.2 Ω \pm 5 % (per path)
Surge protection fault message	Optical, multi-stage
Max. required back-up fuse	1 A (FF)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Core)	C3 - 25 A
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C2 - 10 kA
	D1 - 2,5 kA
	C3 - 25 A
Surge carrying capacity in acc. with IEC 61643-21 (Core-GND)	C2 - 10 kA
	C3 - 25 A
Pulse reset time t_r in acc. with IEC 61643-21 (Core-Core)	\leq 25 ms
Pulse reset time t_r in acc. with IEC 61643-21 (Core-Earth)	\leq 50 ms
Pulse reset time t_r in acc. with IEC 61643-21 (Core-GND)	\leq 50 ms
Overload failure mode as per IEC 61643-21 (plug)	2
Overload failure mode as per IEC 61643-21 (GND-Ground base element)	2

Connection data

Connection method	Push-in connection
Connection type IN	Push-in connection
Connection type OUT	Push-in connection
Stripping length	10 mm
Conductor cross section stranded min.	0.2 mm ²
Conductor cross section stranded max.	2.5 mm ²
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	4 mm ²
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	12

Connection, equipotential bonding

Connection method	NS 35 DIN rail or connection terminal block
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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

Surge protection device - PT-IQ-1X2+F-12DC-PT - 2801254

Classifications

eCl@ss

eCl@ss 7.0	27130807
eCl@ss 8.0	27130807

ETIM

ETIM 3.0	EC000943
ETIM 4.0	EC000943
ETIM 5.0	EC000943

UNSPSC

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

Approvals

Approvals


Approvals

UL Listed

Ex Approvals

Approvals submitted

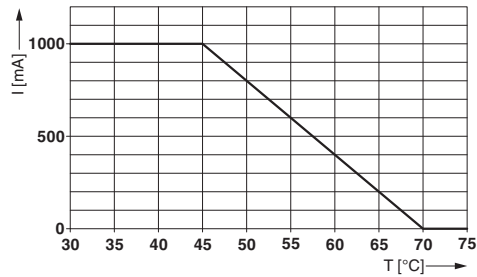
Approval details

UL Listed 

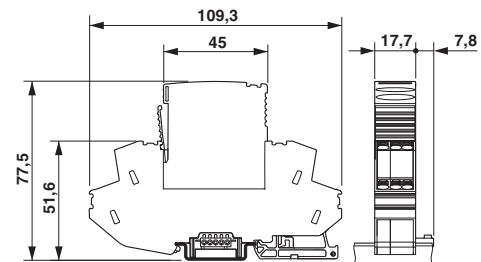
Drawings

Surge protection device - PT-IQ-1X2+F-12DC-PT - 2801254

Diagram



Dimensioned drawing



Circuit diagram

