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Surge protection device - PT-IQ-2X2+F-5DC-UT - 2800809

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

The figure shows the PT-IQ-2x2-24DC-UT version



Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 665261

Technical data

Dimensions

Height	91.1 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

General

Housing material	PA 6.6
Flammability rating according to UL 94	V-0
Color	jet black RAL 9005
Mounting type	DIN rail: 35 mm
Type	DIN rail module, two-section, divisible
Direction of action	Line-Line & Line-Signal Ground/Shield & optional Signal Ground/Shield-Earth Ground

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Technical data

Additional descriptions

Note	Remote signaling as well as the power supply of the T-BUS are established by snapping the module onto the T-BUS.
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Protective circuit

IEC test classification	C1
	C2
	C3
	D1
Nominal voltage U_N	5 V DC
Maximum continuous voltage U_C	6 V DC
	4 V AC
Nominal current I_N	700 mA (50 °C)
Operating effective current I_C at U_C	≤ 2 mA (in the signal circuit)
Residual current I_{PE}	≤ 1 μA
Nominal discharge current I_n (8/20) μs (Core-Core)	10 kA
Nominal discharge current I_n (8/20) μs (Core-Earth)	10 kA
Pulse discharge current I_{imp} (10/350) μs (core-ground)	2.5 kA
Pulse discharge current I_{imp} (10/350) μs (core-GND)	2.5 kA
Total surge current (8/20) μs	20 kA
Impulse discharge current (10/350) μs, peak value I_{imp}	2.5 kA
Voltage protection level U_p (core-core)	≤ 85 V (C1 - 1 kV/500 A)
	≤ 110 V (C2 - 10 kV / 5 kA)
	≤ 140 V (C2 - 10 kA)
	≤ 25 V (C3 - 25 A)
	≤ 25 V (C3 - 50 A)
Voltage protection level U_p (core-ground)	≤ 900 V (C1 - 1 kV/500 A)
	≤ 1300 V (C2 - 10 kV / 5 kA)
	≤ 1200 V (C2 - 10 kA)
	≤ 1000 V (C3 - 25 A)
	≤ 1300 V (C3 - 100 A)
Voltage protection level U_p (core-GND)	≤ 600 V (C1 - 1 kV/500 A)
	≤ 750 V (C2 - 10 kV / 5 kA)
	≤ 800 V (C2 - 10 kA)
	≤ 700 V (C3 - 25 A)
	≤ 800 V (C3 - 100 A)
Voltage protection level U_p static (core-core)	≤ 26 V (C1 - 1 kV/500 A)
	≤ 70 V (C2 - 10 kV / 5 kA)
	≤ 30 V (C2 - 10 kA)
Response time t_A (Core-Core)	≤ 1 ns
Response time t_A (Core-Earth)	≤ 100 ns
	≤ 100 ns

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Technical data

Protective circuit

Input attenuation aE, sym.	typ. 0.3 dB (≤ 40 kHz/150 Ω)
Cut-off frequency fg (3 dB), sym. in 150 Ohm system	typ. 300 kHz
Capacity (Core-Core)	typ. 7.5 nF
Resistance in series	1.2 $\Omega \pm 5\%$
Surge protection fault message	Optical, multi-stage
Max. required back-up fuse	800 mA (FF)
Impulse durability (conductor-conductor)	C1 - 1 kV/500 A C2 - 10 kV/5 kA C2 - 10 kA C3 - 50 A
Impulse durability (conductor-ground)	C1 - 1 kV/500 A C2 - 10 kV/5 kA C2 - 10 kA C3 - 100 A D1 - 2,5 kA
Impulse durability (conductor-GND)	C1 - 1 kV/500 A C2 - 10 kV/5 kA C2 - 10 kA C3 - 100 A D1 - 2.5 kA
Pulse reset time (conductor-conductor)	≤ 10 ms
Pulse reset time (conductor-ground)	≤ 10 ms
Pulse reset time (conductor-GND)	≤ 10 ms

Connection data

Connection method	Screw connection
Connection type IN	Screw terminal blocks
Connection type OUT	Screw terminal blocks
Screw thread	M3
Tightening torque	0.5 Nm
Stripping length	8 mm
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible 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 min.	24
Conductor cross section AWG 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
eCl@ss 7.0	27130807
eCl@ss 8.0	27130807
eCl@ss 9.0	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

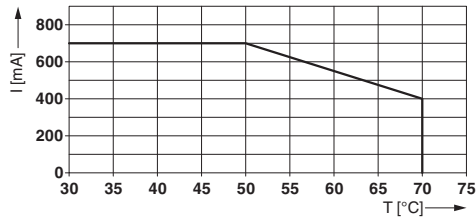
Approval details

UL Listed

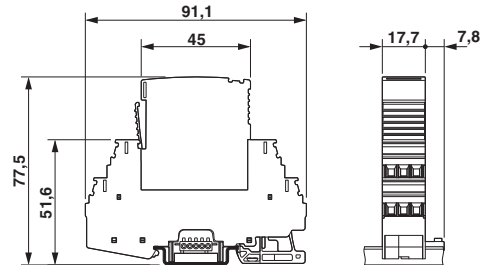
Drawings

Surge protection device - PT-IQ-2X2+F-5DC-UT - 2800809

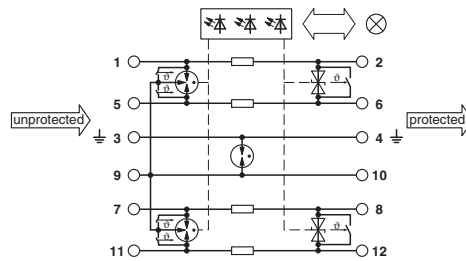
Diagram



Dimensional drawing



Circuit diagram



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Product	Code	Reference	Product link
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