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Especialistas en Automatización

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## Surge protection device - PT-IQ-1X2+F-24DC-UT - 2800977

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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.

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

### Why buy this product

- Surge protection system
- Multi-level state monitoring
- Collective message about supply and remote module
- System supplied via DIN rail bus
- Up to 28 protection modules per supply module
- Maximum ease of maintenance thanks to the two-piece design
- Codable plug
- Impedance-neutral disconnection of plug for maintenance purposes
- Base element remains an integral part of the installation



### Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 665179

### Technical data

#### Dimensions

Height	91.1 mm
Width	17.7 mm
Depth	77.5 mm
Horizontal pitch	1 Div.

#### Ambient conditions

# Surge protection device - PT-IQ-1X2+F-24DC-UT - 2800977

## Technical data

### 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
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

### 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 $U_N$	24 V DC
Maximum continuous voltage $U_C$	30 V DC
	21 V AC
Nominal current $I_N$	1000 mA (40°C)
Operating effective current $I_C$ at $U_C$	≤ 1 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
Impulse discharge current (10/350) μs, peak value $I_{imp}$	2.5 kA
Voltage protection level $U_p$ (core-core)	≤ 80 V (C1 - 1 kV/500 A)
	≤ 130 V (C2 - 10 kV / 5 kA)
	≤ 150 V (C2 - 10 kA)
	≤ 55 V (C3 - 25 A)
	≤ 60 V (C3 - 100 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)

## Surge protection device - PT-IQ-1X2+F-24DC-UT - 2800977

### Technical data

#### Protective circuit

Voltage protection level $U_p$ (core-GND)	$\leq 600$ V (C1 - 1 kV/500 A)
	$\leq 750$ V (C2 - 10 kV / 5 kA)
	$\leq 800$ V (C2 - 10 kA)
	$\leq 700$ V (C3 - 25 A)
	$\leq 800$ V (C3 - 100 A)
Voltage protection level $U_p$ static (core-core)	$\leq 65$ V (C1 - 1 kV/500 A)
	$\leq 65$ V (C2 - 10 kA)
Response time $t_A$ (Core-Core)	$\leq 1$ ns
Response time $t_A$ (Core-Earth)	$\leq 100$ ns
	$\leq 100$ ns
Input attenuation $a_E$ , sym.	typ. 0.3 dB ( $\leq 270$ kHz/150 $\Omega$ )
Cut-off frequency $f_g$ (3 dB), sym. in 150 Ohm system	typ. 1.1 MHz
Capacity (Core-Earth)	typ. 2 nF
Resistance in series	1.2 $\Omega \pm 5\%$
Surge protection fault message	Optical, multi-stage
Max. required back-up fuse	1 A (FF)
Impulse durability (conductor-conductor)	C1 - 1 kV/500 A
	C2 - 10 kV/5 kA
	C2 - 10 kA
	C3 - 100 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)	$\leq 4000$ ms
Pulse reset time (conductor-ground)	$\leq 30$ ms
Pulse reset time (conductor-GND)	$\leq 2600$ 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

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## Technical data

### Connection data

Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	4 mm <sup>2</sup>
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

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### Approvals

UL Listed / EAC / EAC / CSA / CSAus / cCSAus

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# Surge protection device - PT-IQ-1X2+F-24DC-UT - 2800977

## Approvals

Ex Approvals

Approvals submitted

## Approval details

UL Listed

EAC

EAC

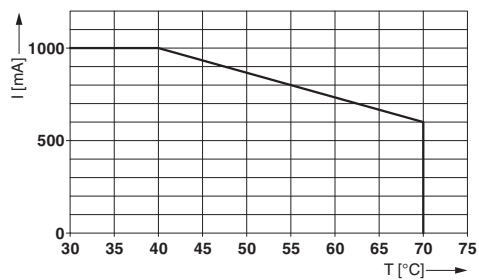
CSA

CSAus

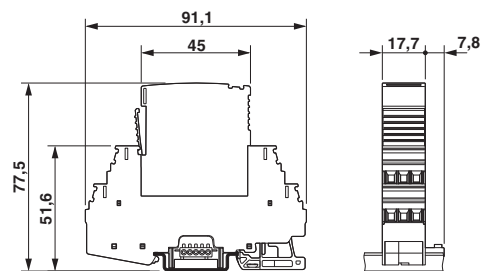
cCSAus

## Drawings

Diagram

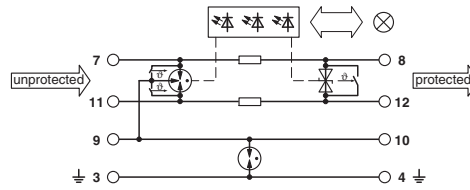


Dimensional drawing



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Circuit diagram



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