

## 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.

### 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	0
Minimum order quantity	1
GTIN	 4 046356 665179
Custom tariff number	85363010
Country of origin	GERMANY

### Technical data

Design	DIN rail module, two-section, divisible
Direction of action	Line-Line & Line-Signal Ground/Shield & optional Signal Ground/ Shield-Earth Ground

### General

Housing material	PA 6.6
Inflammability class according to UL 94	V0
Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Mounting type	DIN rail mounting

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## Technical data

### General

Design	DIN rail module, two-section, divisible
Degree of protection	IP20
Direction of action	Line-Line & Line-Signal Ground/Shield & optional Signal Ground/ Shield-Earth Ground
Width	17.7 mm
Height	91.1 mm
Depth	77.5 mm
Pitch unit	1 Div.

### Protective circuit

IEC category	C1
IEC category	C2
IEC category	C3
IEC category	D1
Nominal voltage UN	24 V
Maximum continuous operating voltage UC	30 V DC
Maximum continuous operating voltage UC	21 V AC
Nominal current IN	1000 mA (Up to 45°C)
Operating effective current IC at UC	≤ 2 mA (per system)
Ground conductor current IPE	≤ 1 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
Lightning test current (10/350) µs, peak value limp	2.5 kA
Protection level UP (Core-Core)	≤ 80 V (C1 - 1 kV/500 A)
Protection level UP (Core-Core)	≤ 130 V (C2 - 10 kV / 5 kA)
Protection level UP (Core-Core)	≤ 140 V (C2 - 10 kA)
Protection level UP (Core-Core)	≤ 55 V (C3 - 25 A)
Protection level UP (Core-Core)	≤ 60 V (C3 - 100 A)
Protection level UP (Core-Earth)	≤ 900 V (C1 - 1 kV/500 A)
Protection level UP (Core-Earth)	≤ 1300 V (C2 - 10 kV / 5 kA)
Protection level UP (Core-Earth)	≤ 1200 V (C2 - 10 kA)
Protection level UP (Core-Earth)	≤ 1000 V (C3 - 25 A)
Protection level UP (Core-Earth)	≤ 1300 V (C3 - 100 A)
Protection level UP (Core-GND)	≤ 600 V (C1 - 1 kV/500 A)
Protection level UP (Core-GND)	≤ 750 V (C2 - 10 kV / 5 kA)
Protection level UP (Core-GND)	≤ 800 V (C2 - 10 kA)
Protection level UP (Core-GND)	≤ 700 V (C3 - 25 A)
Protection level UP (Core-GND)	≤ 800 V (C3 - 100 A)
Protection level UP static (core-core)	≤ 64 V (C1 - 1 kV/500 A)
Response time tA (Core-Core)	≤ 1 ns
Response time tA (Core-Earth)	≤ 100 ns
Response time tA (Core-Earth)	≤ 100 ns
Input attenuation aE, sym.	Typ. 0.3 dB (≤ 270 kHz)
Cut-off frequency fg (3 dB), sym. in 150 Ohm system	Typ. 1.1 MHz

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### Protective circuit

Capacity (Core-Earth)	2 nF
Resistance in series	1.2 Ω ±5%
Message: Surge protection fault	Optical, multi-stage
Max. required back-up fuse	1 A (FF)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Core)	C1 (1 kV/500 A)
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-Core)	C2 (10 kA)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Core)	C3 (25 A)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Core)	C3 (50 A)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Core)	C3 (100 A)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C1 (1 kV / 500 A)
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)	C2 (10 kA)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C3 (25 A)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C3 (50 A)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C3 (100 A)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	D1 (2.5 kA)
Surge carrying capacity in acc. with IEC 61643-21 (Core-GND)	C1 (1 kV/500 A)
Surge carrying capacity in acc. with IEC 61643-21 (Core-GND)	C2 (10 kV/5 kA)
Surge carrying capacity in acc. with IEC 61643-21 (Core-GND)	C2 (10 kA)
Surge carrying capacity in acc. with IEC 61643-21 (Core-GND)	C3 (25 A)
Surge carrying capacity in acc. with IEC 61643-21 (Core-GND)	C3 (50 A)
Surge carrying capacity in acc. with IEC 61643-21 (Core-GND)	C3 (100 A)
Pulse reset time $t_r$ in acc. with IEC 61643-21 (Core-Core)	≤ 4000 ms
Pulse reset time $t_r$ in acc. with IEC 61643-21 (Core-Earth)	≤ 30 ms
Pulse reset time $t_r$ in acc. with IEC 61643-21 (Core-GND)	≤ 2600 ms
Overload failure mode as per IEC 61643-21 (plug)	Mode 2
Overload failure mode as per IEC 61643-21 (GND-Ground base element)	Mode 2

### Connection data

Connection method	Screw connection
Connection type IN	Screw terminal blocks
Connection type OUT	Screw terminal blocks
Tightening torque	0.5 Nm
Stripping length	8 mm
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/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

### eclass

eCl@ss 5.1	27130801
eCl@ss 6.0	27130807
eCl@ss 7.0	27130807

### etim

ETIM 4.0	EC000943
ETIM 5.0	EC000943

## Accessories

### Accessories

#### Marking

Marker pen - X-PEN 0,35 - 0811228



Marker pen without ink cartridge, for manual labeling of markers, labeling extremely wipe-proof, line thickness 0.35 mm

Zack Marker strip, flat - ZBF 5:UNBEDRUCKT - 0808642



Zack Marker strip, flat, Strip, white, Unlabeled, Can be labeled with: Plotter, Mounting type: Snap into flat marker groove, For terminal block width: 5 mm, Lettering field: 5.1 x 5.2 mm

Zack Marker strip, flat - ZBF 5/WH-100:UNBEDRUCKT - 0808668



Zack Marker strip, flat, Strip, white, Unlabeled, Can be labeled with: Plotter, Mounting type: Snap into flat marker groove, For terminal block width: 5 mm, Lettering field: 5.15 x 5.15 mm

Zack Marker strip, flat - ZBF 5,LGS:FORTL.ZAHLEN - 0808671



Zack Marker strip, flat, Strip, white, labeled, Printed horizontally: Consecutive numbers 1 - 10, 11 - 20, etc. up to 491 - 500, Mounting type: Snap into flat marker groove, For terminal block width: 5 mm, Lettering field: 5.15 x 5.15 mm

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Zack Marker strip, flat - ZBF 5,LGS:GERADE ZAHLEN - 0810821



Zack Marker strip, flat, Strip, white, labeled, Printed horizontally: Consecutive numbers 2 - 20, 22 - 40, etc. up to 82 - 100, Mounting type: Snap into flat marker groove, For terminal block width: 5 mm, Lettering field: 5.15 x 5.15 mm

Zack Marker strip, flat - ZBF 5,LGS:UNGERADE ZAHLEN - 0810863



Zack Marker strip, flat, Strip, white, labeled, Printed horizontally: Odd numbers 1 - 19, 21 - 39, etc. up to 81 - 99, Mounting type: Snap into flat marker groove, For terminal block width: 5 mm, Lettering field: 5.15 x 5.15 mm

Zack Marker strip, flat - ZBF 5,QR:FORTL.ZAHLEN - 0808697



Zack Marker strip, flat, Strip, white, labeled, Printed vertically: Consecutive numbers 1 - 10, 11 - 20, etc. up to 91 - 100, Mounting type: Snap into flat marker groove, For terminal block width: 5 mm, Lettering field: 5.15 x 5.15 mm

Zack marker strip - ZBN 18:UNBEDRUCKT - 2809128



Zack marker strip, Strip, white, Unlabeled, Can be labeled with: Plotter, Mounting type: Snap into tall marker groove, For terminal block width: 18 mm, Lettering field: 18 x 5 mm

Electronic housing - E/ME TBUS NS35 GY - 2713780

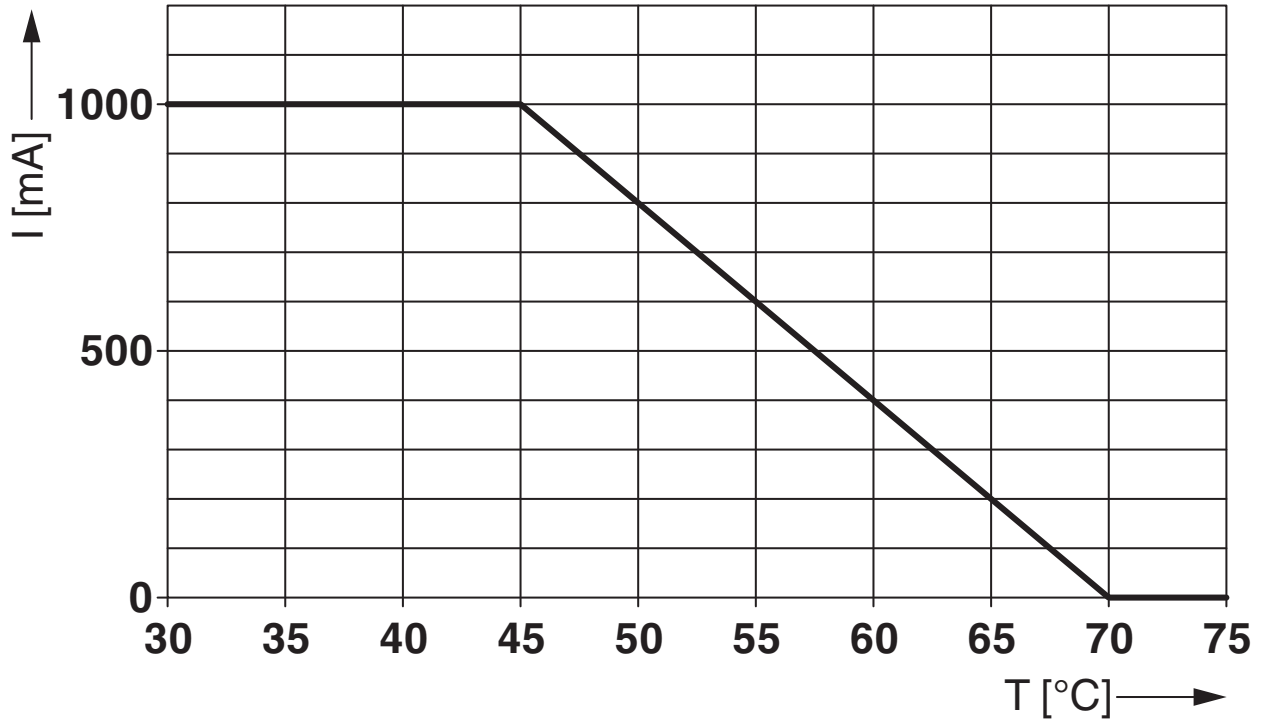


End clamp, stable construction for DIN rail bus connector

### Drawings

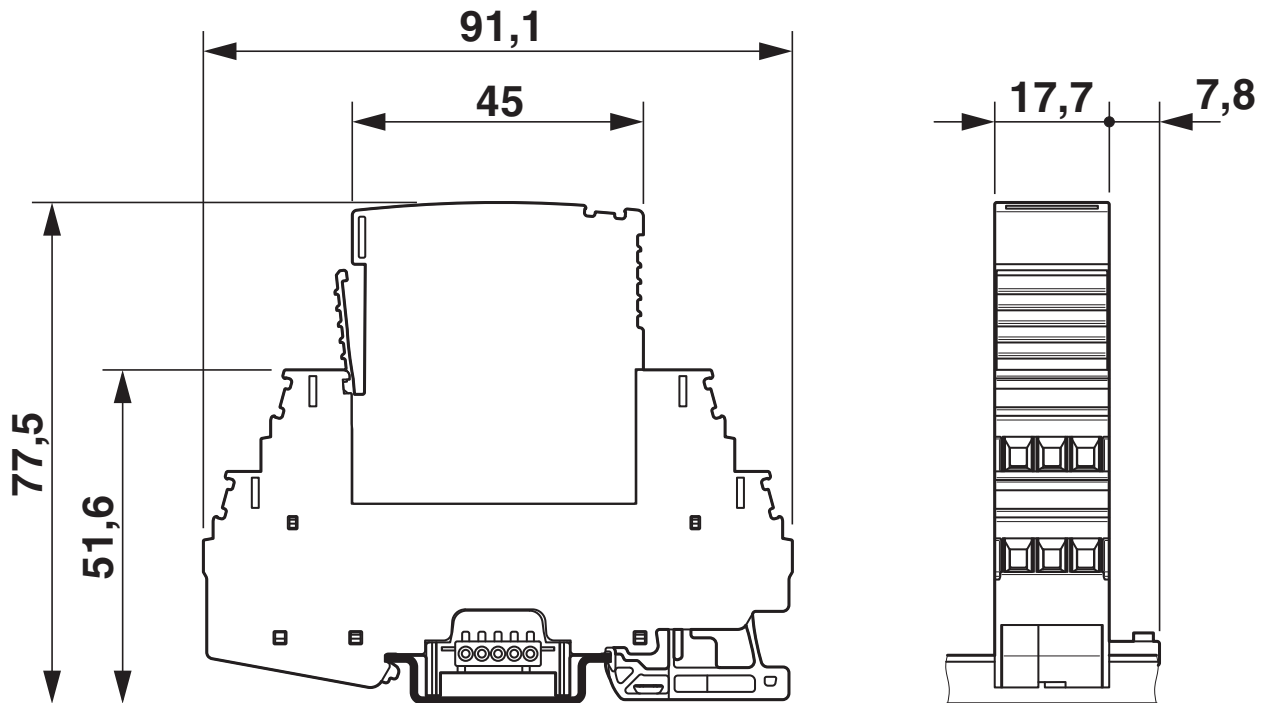
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Diagram



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Dimensioned drawing



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Circuit diagram

