

## Surge protection device - PT-IQ-2X1+F-12DC-PT - 2801246

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Surge protection, consisting of protective plug and base element, with integrated multi-stage status indicator on the module for two signal wires with common reference potential. Indirect grounding via gas-filled surge arrester.

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



### Key commercial data

Packing unit	1 pc
GTIN	 4 046356 766296
Weight per Piece (excluding packing)	138.5 g
Custom tariff number	85363030
Country of origin	Germany
Note	Made to Order (non-returnable)

### 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
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 (40°C)
Operating effective current $I_C$ at $U_C$	≤ 1 mA (per path)
Residual current $I_{PE}$	≤ 1 μA
Nominal discharge current $I_n$ (8/20) μs (Core-Earth)	10 kA
Impulse discharge current (10/350) μs, peak value $I_{imp}$	2.5 kA
Voltage protection level $U_p$ (core-ground)	≤ 750 V (C1 - 1 kV/500 A)
	≤ 850 V (C2 - 10 kV / 5 kA)
	≤ 810 V (C3 - 25 A)
Voltage protection level $U_p$ (core-GND)	≤ 90 V (C1 - 1 kV/500 A)
	≤ 135 V (C2 - 10 kV / 5 kA)
	≤ 35 V (C3 - 25 A)
Voltage protection level $U_p$ static (core-ground)	≤ 300 V (C2 - 10 kV / 5 kA)
	≤ 60 V (C3 - 25 A)
Voltage protection level $U_p$ static (core-GND)	≤ 45 V (C1 - 1 kV/500 A)
	≤ 100 V (C2 - 10 kV / 5 kA)
Response time $t_A$ (Core-Earth)	≤ 1 ns
	≤ 100 ns
Input attenuation $a_E$ , asym.	typ. 0.3 dB (≤ 130 kHz/150 Ω)
Cut-off frequency $f_g$ (3 dB), asym. (GND) in 150 Ohm system	typ. 600 kHz
Capacity (Core-GND)	typ. 4 nF
Resistance in series	1.2 Ω ±5 %
Surge protection fault message	Optical, multi-stage
Impulse durability (conductor-ground)	C1 (1 kV / 500 A)
	C2 - 10 kA
	D1 - 2,5 kA
	C3 - 25 A
Impulse durability (conductor-GND)	C2 - 10 kA
	C3 - 25 A
Pulse reset time (conductor-ground)	≤ 10 ms
Pulse reset time (conductor-GND)	≤ 15 ms

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## Technical data

### Protective circuit

Overload failure mode (connector)	Mode 2
Overload failure mode (GND-ground base element)	Mode 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 <sup>2</sup>
Conductor cross section stranded 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/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
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

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## Approvals

### Approvals

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Approvals

UL Listed / EAC

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Ex Approvals

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Approvals submitted

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### Approval details

UL Listed 

EAC

## Accessories

### Accessories

#### Device marking

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

#### Labeled terminal marker

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

## Surge protection device - PT-IQ-2X1+F-12DC-PT - 2801246

### Accessories

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

### Marker pen

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

### Mounting material

Electronic housing - E/ME TBUS NS35 GY - 2713780



End clamp, stable construction for DIN rail bus connector

### PCB plug

## Surge protection device - PT-IQ-2X1+F-12DC-PT - 2801246

### Accessories

Printed-circuit board connector - FK-MC 0,5/ 5-ST-2,5 - 1881354



Plug component, Nominal current: 4 A, Rated voltage (III/2): 160 V, Number of positions: 5, Pitch: 2.5 mm, Connection method: Spring-cage connection, Color: green, Contact surface: Tin

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### Terminal marking

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

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### Additional products

Shield connection - SSA 3-6 - 2839295



shield fast connections for conductor diameter 3 - 6 mm. Potential connection cable: 200 mm, black

Shield connection - SSA 5-10 - 2839512



Shield fast connection for conductor diameters 5 - 10 mm. Potential connection cable: 200 mm, black

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### Spare parts

# Surge protection device - PT-IQ-2X1+F-12DC-PT - 2801246

## Accessories

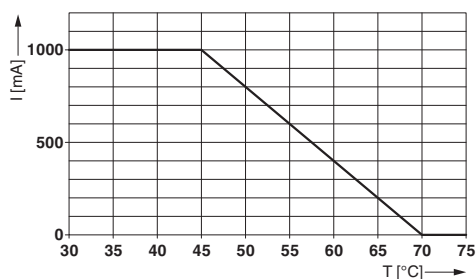
Surge protection plug - PT-IQ-2X1-12DC-P - 2800775



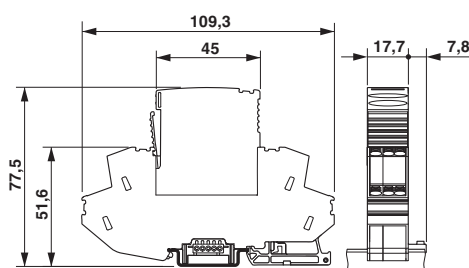
Surge protection plug with integrated multi-stage status indicator on the module for two signal wires with common reference potential. 12 V DC nominal voltage.

## Drawings

Diagram



Dimensioned drawing



Circuit diagram

