

# Surge protection device - PT-IQ-2X1-24DC-PT - 2801247

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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.

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



## Key commercial data

package_quantity	1
GTIN	4046356766302

## Technical data

### Dimensions

Height	109.3 mm
Width	17.7 mm
Depth	77.5 mm
Pitch unit	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
Design	DIN rail module, two-section, divisible
Direction of action	Line-Line & Line-Signal Ground/Shield & optional Signal Ground/ Shield-Earth Ground

### Protective circuit

IEC test classification	C1
IEC test classification	C2
IEC test classification	C3
IEC test classification	D1

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## Technical data

### Protective circuit

Nominal voltage $U_N$	24 V DC
Maximum continuous operating voltage $U_C$	30 V DC
Maximum continuous operating voltage $U_C$	21 V AC
Nominal current $I_N$	1000 mA (up to 40 °C)
Operating effective current $I_C$ at $U_C$	≤ 1 mA (per path)
Residual current $I_{PE}$	≤ 1 mA (per path)
Nominal discharge current $I_n$ (8/20) $\mu$ s (Core-Earth)	10 kA
Impulse discharge current (10/350) $\mu$ s, peak value $I_{imp}$	2.5 kA
Voltage protection level $U_P$ (Core-Earth)	≤ 75 V (C1 - 1 kV/500 A)
Voltage protection level $U_P$ (Core-Earth)	≤ 135 V (C2 - 10 kV / 5 kA)
Voltage protection level $U_P$ (Core-Earth)	≤ 55 V (C3 - 25 A)
Response time $t_A$ (Core-Earth)	≤ 1 ns
Response time $t_A$ (Core-Earth)	≤ 1 ns
Input attenuation $a_E$ , asym.	typ. 0.3 dB (≤ 300 kHz / 150 $\Omega$ )
Cut-off frequency $f_g$ (3 dB), asym. (GND) in 150 Ohm system	typ. 1.1 MHz
Capacity (Core-GND)	typ. 2 nF
Resistance in series	1.2 $\Omega$ ±5 %
Message: Surge protection fault	Optical, multi-stage
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 kA
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-Earth)	C3 - 25 A
Pulse reset time $t_r$ in acc. with IEC 61643-21 (Core-Earth)	≤ 350 ms
Overload failure mode as per IEC 61643-21 (plug)	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

## accessories

### Marker pen

X-PEN 0,35 - 0811228



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## Terminal marking

ZBF 5:UNBEDRUCKT - 0808642



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## accessories

ZBF 5/WH-100:UNBEDRUCKT - 0808668



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### Labeled terminal marker

ZBF 5,LGS:FORTL.ZAHLEN - 0808671



ZBF 5,LGS:GERADE ZAHLEN - 0810821



ZBF 5,LGS:UNGERADE ZAHLEN - 0810863



ZBF 5,QR:FORTL.ZAHLEN - 0808697



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### Device marking

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## accessories

ZBN 18:UNBEDRUCKT - 2809128



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## Mounting material

E/ME TBUS NS35 GY - 2713780



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## PCB plug

FK-MC 0,5/ 5-ST-2,5 - 1881354



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## accessories

ZBF 15:SO/CMS - 0814717



ZBF 5:SO/CMS - 0808707



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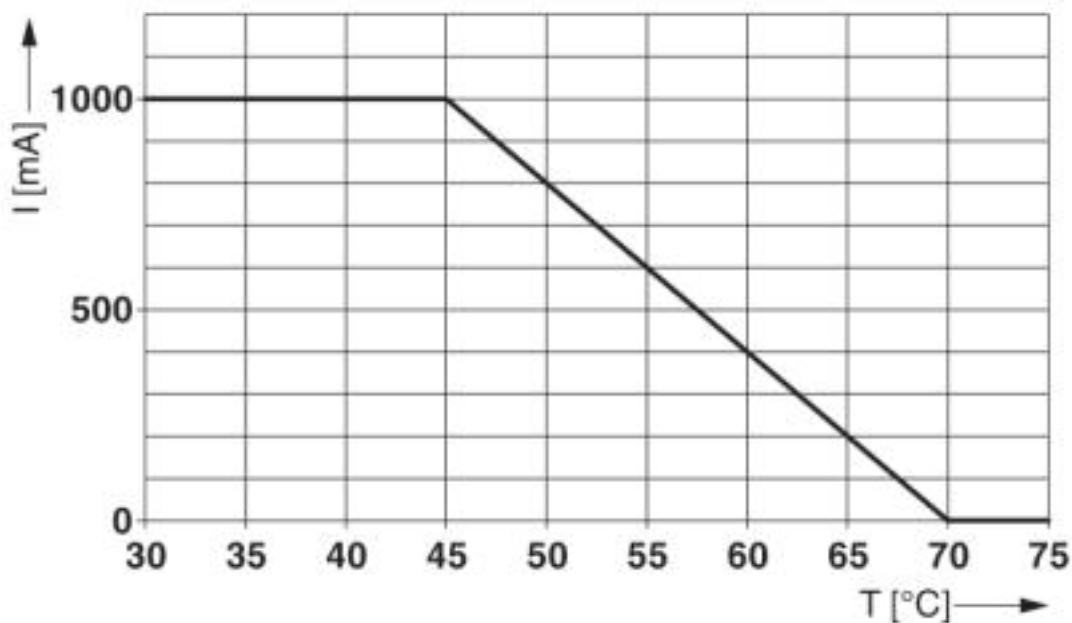
accessories

ZBN 18:SO/CMS - 0800763



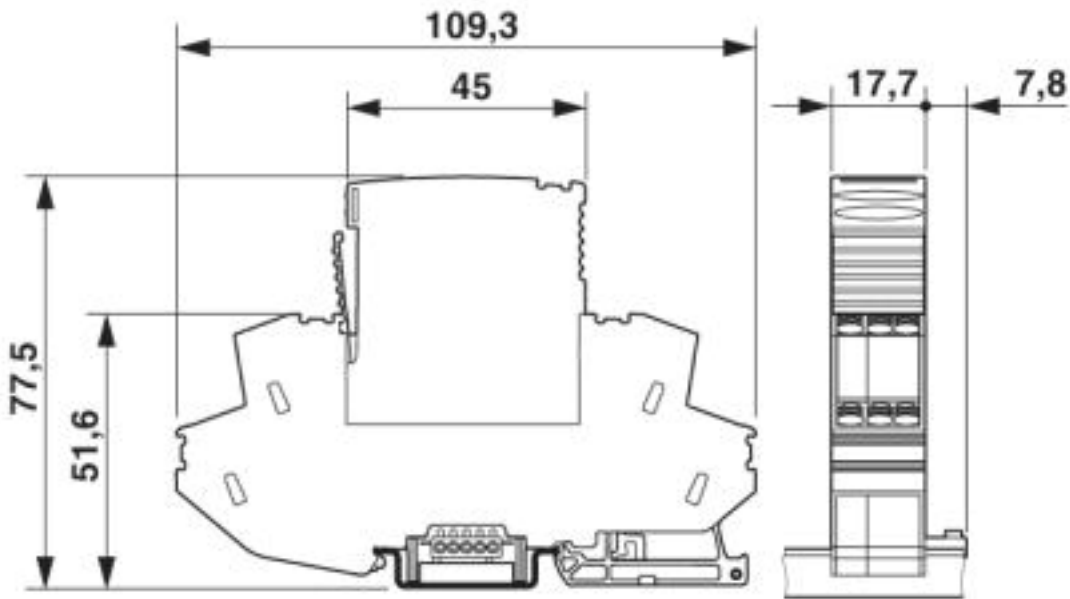
## Drawings

Diagram



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Dimensioned drawing



Circuit diagram

