Surge protection device - PT-IQ-1X2+F-24DC-PT - 2801256

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

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.

Key commercial data

package_quantity	1
GTIN	4046356766395

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
Mounting type	DIN rail mounting
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

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Protective circuit

IEC test classification	D1
Nominal voltage U_N	4 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 system)
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
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)
Voltage protection level U_P (Core-Core)	≤ 130 V (C2 - 10 kV / 5 kA)
Voltage protection level U_P (Core-Core)	≤ 55 V (C3 - 25 A)
Voltage protection level U_P (Core-Earth)	≤ 900 V (C1 - 1 kV/500 A)
Voltage protection level U_P (Core-Earth)	≤ 1300 V (C2 - 10 kV / 5 kA)
Voltage protection level U_P (Core-Earth)	≤ 1000 V (C3 - 25 A)
Voltage protection level U_P (Core-GND)	≤ 600 V (C1 - 1 kV/500 A)
Voltage protection level U_P (Core-GND)	≤ 750 V (C2 - 10 kV / 5 kA)
Voltage protection level U_P (Core-GND)	≤ 700 V (C3 - 25 A)
Voltage protection level U_P static (core-core)	≤ 65 V (C1 - 1 kV/500 A)
Voltage protection level U_P static (core-ground)	≤ 130 V (C2 - 10 kV / 5 kA)
Voltage protection level U_P static (core-ground)	≤ 60 V (C3 - 25 A)
Voltage protection level U_P static (core-GND)	≤ 60 V (C2 - 10 kV / 5 kA)
Voltage protection level U_P static (core-GND)	≤ 40 V (C3 - 25 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/150 Ω)
Cut-off frequency fg (3 dB), sym. in 150 Ohm system	typ. 1.1 MHz
Capacity (Core-Core)	typ. 2 nF
Resistance in series	1.2 Ω ± 5% (per path)
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)	C3 (25 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
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
Pulse reset time tr in acc. with IEC 61643-21 (Core-Core)	≤ 4000 ms

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Protective circuit

Pulse reset time tr in acc. with IEC 61643-21 (Core-Earth)	≤ 30 ms
Pulse reset time tr in acc. with IEC 61643-21 (Core-GND)	≤ 2600 ms
Overload failure mode as per IEC 61643-21 (plug)	2
Overload failure mode as per IEC 61643-21 (GND-Ground base element)	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 mm²
Conductor cross section stranded max.	2.5 mm²
Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	4 mm²
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

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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accessories

Marker pen

X-PEN 0,35 - 0811228

Terminal marking

ZBF 5:UNBEDRUCKT - 0808642

ZBF 5/WH-100:UNBEDRUCKT - 0808668

Labeled terminal marker

ZBF 5,LGS:FORTL.ZAHLEN - 0808671

ZBF 5,LGS:GERADE ZAHLEN - 0810821

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accessories

ZBF 5,LGS:UNGERADE ZAHLEN - 0810863

ZBF 5,QR:FORTL.ZAHLEN - 0808697

Device marking

ZBN 18:UNBEDRUCKT - 2809128

Mounting material

E/ME TBUS NS35 GY - 2713780

PCB plug

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

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accessories

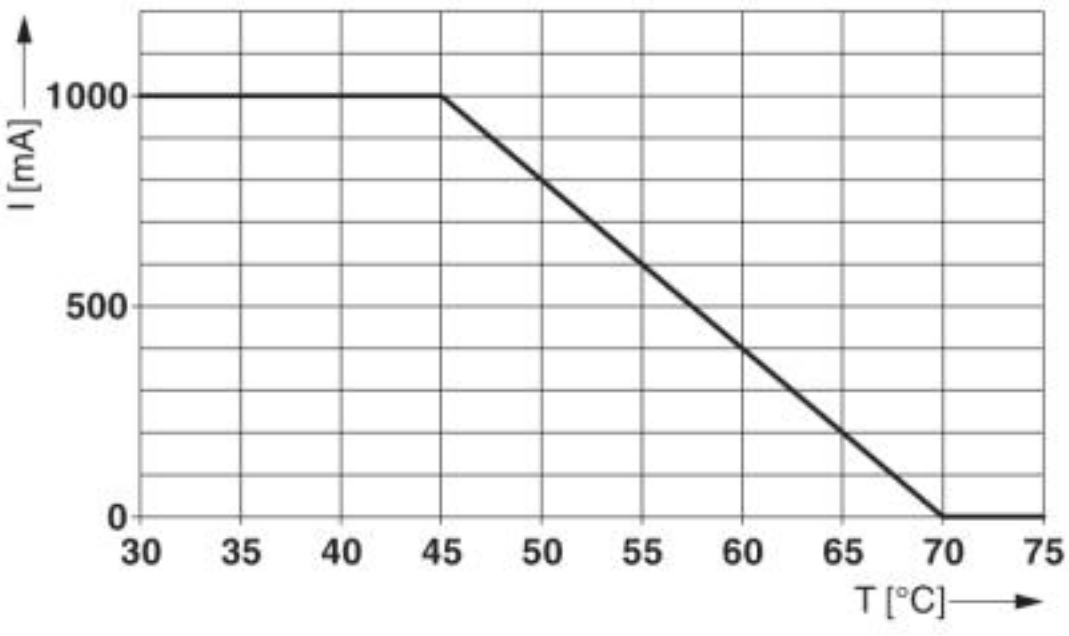
ZBF 15:SO/CMS - 0814717

ZBF 5:SO/CMS - 0808707

ZBN 18:SO/CMS - 0800763

Drawings

Diagram



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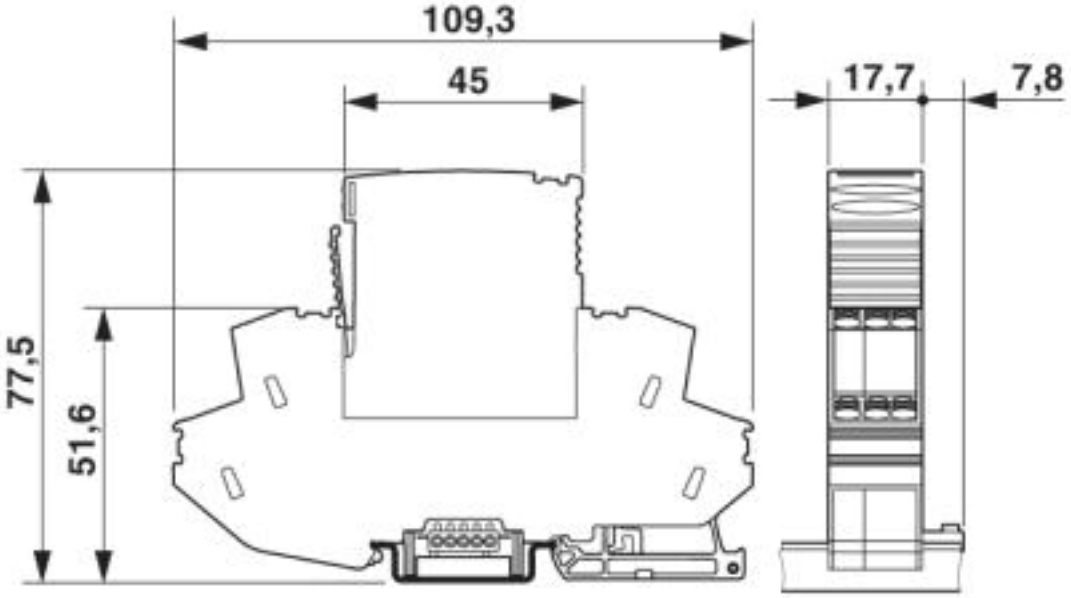
Dimensioned drawing



Circuit diagram