

Surge protection device - PT-IQ-1X2+F-5DC-PT - 2801252

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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-PT version



Key commercial data

| | |
|----------------------|----------|
| Packing unit | 1 pc |
| Custom tariff number | 85363030 |
| Country of origin | Germany |

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 |
| Mounting type | DIN rail mounting |
| 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 |
|---------------------|--|

Protective circuit

| | |
|---|--|
| IEC test classification | C1 |
| | C2 |
| | C3 |
| | D1 |
| Nominal voltage U_N | 5 V DC |
| Maximum continuous operating voltage U_C | 6 V DC |
| | 4 V AC |
| Nominal current I_N | 1000 mA (up to 40 °C) |
| Operating effective current I_C at U_C | ≤ 2 mA (per system) |
| Residual current I_{PE} | ≤ 1 μ A |
| Nominal discharge current I_n (8/20) μ s (Core-Core) | 10 kA |
| Nominal discharge current I_n (8/20) μ s (Core-Earth) | 10 kA |
| Impulse discharge current (10/350)# μ s, peak value I_{imp} | 2.5 kA |
| Voltage protection level U_p (Core-Core) | ≤ 85 V (C1 - 1 kV/500 A) |
| | ≤ 110 V (C2 - 10 kV / 5 kA) |
| | ≤ 25 V (C3 - 25 A) |
| Voltage protection level U_p (Core-Earth) | ≤ 900 V (C1 - 1 kV/500 A) |
| | ≤ 1300 V (C2 - 10 kV / 5 kA) |
| | ≤ 1000 V (C3 - 25 A) |
| Voltage protection level U_p (Core-GND) | ≤ 600 V (C1 - 1 kV/500 A) |
| | ≤ 750 V (C2 - 10 kV / 5 kA) |
| | ≤ 700 V (C3 - 25 A) |
| Voltage protection level U_p static (core-core) | ≤ 26 V (C1 - 1 kV/500 A) |
| | ≤ 70 V (C2 - 10 kV / 5 kA) |
| Voltage protection level U_p static (core-ground) | ≤ 130 V (C2 - 10 kV / 5 kA) |
| | ≤ 60 V (C3 - 25 A) |
| Voltage protection level U_p static (core-GND) | ≤ 60 V (C2 - 10 kV / 5 kA) |
| | ≤ 40 V (C3 - 25 A) |
| Response time t_A (Core-Core) | ≤ 1 ns |
| Response time t_A (Core-Earth) | ≤ 100 ns |
| | ≤ 100 ns |
| Input attenuation aE, sym. | typ. 0.3 dB (≤ 40 kHz/150 Ω) |
| Cut-off frequency f_g (3 dB), sym. in 150 Ohm system | typ. 300 kHz |

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Protective circuit

| | |
|---|-----------------------------------|
| Capacity (Core-Core) | typ. 7.5 nF |
| Resistance in series | 1.2 Ω \pm 5 % (per path) |
| Surge protection fault message | 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 |
| | D1 - 2,5 kA |
| | C3 - 25 A |
| Surge carrying capacity in acc. with IEC 61643-21 (Core-GND) | C2 - 10 kA |
| | C3 - 25 A |
| Pulse reset time t_r in acc. with IEC 61643-21 (Core-Core) | \leq 10 ms |
| Pulse reset time t_r in acc. with IEC 61643-21 (Core-Earth) | \leq 10 ms |
| Pulse reset time t_r in acc. with IEC 61643-21 (Core-GND) | \leq 10 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 mm ² |
| Conductor cross section stranded max. | 2.5 mm ² |
| Conductor cross section solid min. | 0.2 mm ² |
| Conductor cross section solid max. | 4 mm ² |
| 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 |

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Classifications

eCl@ss

| | |
|------------|----------|
| 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

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|---------------|----------|
| UNSPSC 6.01 | 30212010 |
| UNSPSC 7.0901 | 39121610 |
| UNSPSC 11 | 39121610 |
| UNSPSC 12.01 | 39121610 |
| UNSPSC 13.2 | 39121620 |

Approvals

Approvals

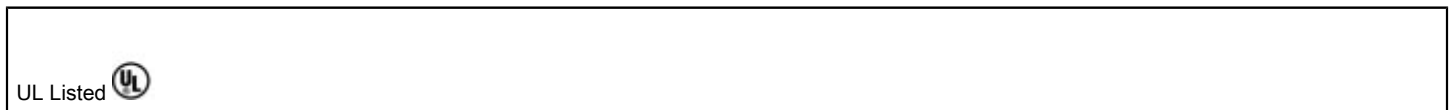
Approvals

UL Listed

Ex Approvals

Approvals submitted

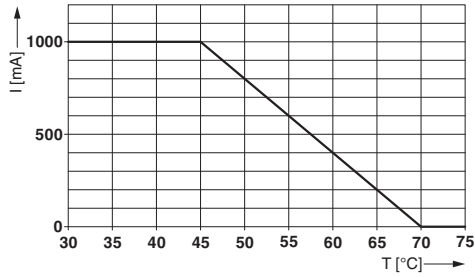
Approval details



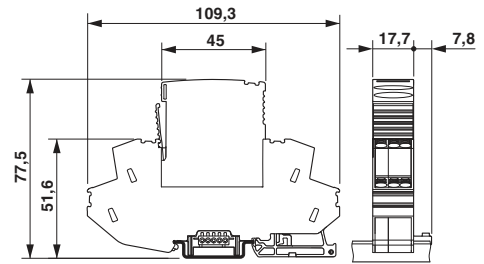
Drawings

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Diagram



Dimensioned drawing



Circuit diagram

