

Surge protection device - PT-IQ-2X2-12DC-PT - 2801261

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Surge protection, consisting of protective plug and base element, with integrated multi-stage status indicator on the module for two 2-wire floating signal circuits.

The figure shows the PT-IQ-2x2-24DC-PT version



Key Commercial Data

| | |
|--------------------------------------|-----------|
| Packing unit | 1 STK |
| Weight per Piece (excluding packing) | 140.000 g |
| Custom tariff number | 85363010 |
| 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 |
| Flammability rating according to UL 94 | V-0 |
| Color | jet black RAL 9005 |

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Technical data

General

| | |
|---------------------|------------------------------------------------------------------------------------|
| Mounting type | DIN rail: 35 mm |
| Type | DIN rail module, two-section, divisible |
| Direction of action | Line-Line & Line-Signal Ground/Shield & optional Signal Ground/Shield-Earth Ground |

Additional descriptions

| | |
|------|------------------------------------------------------------------------------------------------------------------|
| Note | Remote signaling as well as the power supply of the T-BUS are established by snapping the module onto the T-BUS. |
|------|------------------------------------------------------------------------------------------------------------------|

Protective circuit

| | |
|------------------------------------------------------------------------|--------------------------------------------------|
| IEC test classification | C1 |
| | C2 |
| | C3 |
| | D1 |
| Nominal voltage U_N | 12 V DC |
| Maximum continuous voltage U_C | 15 V DC |
| | 10 V AC |
| Rated current | 700 mA (50 °C) |
| Operating effective current I_C at U_C | $\leq 1 \mu\text{A}$ (in the signal circuit) |
| Residual current I_{PE} | $\leq 2 \mu\text{A}$ (per signal circuit) |
| Nominal discharge current I_n (8/20) μs (Core-Core) | 10 kA |
| Nominal discharge current I_n (8/20) μs (Core-Earth) | 10 kA |
| Pulse discharge current I_{imp} (10/350) μs (core-ground) | 2.5 kA |
| Total discharge current I_{Total} (8/20) μs | 20 kA |
| Voltage protection level U_p (core-core) | $\leq 65 \text{ V}$ (C1 - 1 kV/500 A) |
| | $\leq 95 \text{ V}$ (C2 - 10 kV / 5 kA) |
| | $\leq 35 \text{ V}$ (C3 - 25 A) |
| | $\leq 40 \text{ V}$ (C3 - 50 A) |
| Voltage protection level U_p (core-ground) | $\leq 600 \text{ V}$ (C1 - 1 kV/500 A) |
| | $\leq 750 \text{ V}$ (C2 - 10 kV / 5 kA) |
| | $\leq 700 \text{ V}$ (C3 - 25 A) |
| | $\leq 800 \text{ V}$ (C3 - 50 A) |
| Voltage protection level U_p , static (core-core) | $\leq 45 \text{ V}$ (C1 - 1 kV/500 A) |
| Response time t_A (Core-Core) | $\leq 1 \text{ ns}$ |
| Response time t_A (Core-Earth) | $\leq 100 \text{ ns}$ |
| Input attenuation aE , sym. | typ. 0.3 dB ($\leq 95 \text{ kHz}/150 \Omega$) |
| Cut-off frequency f_g (3 dB), sym. in 150 Ohm system | typ. 600 kHz |
| Capacity (Core-Core) | typ. 4 nF |

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Technical data

Protective circuit

| | |
|------------------------------------------|------------------------|
| Resistance in series | 1.2 Ω \pm 5 % |
| Surge protection fault message | Optical, multi-stage |
| Max. required back-up fuse | 800 mA (FF) |
| Impulse durability (conductor-conductor) | C1 - 1 kV/500 A |
| | C2 - 10 kV/5 kA |
| | C2 - 10 kA |
| | C3 - 50 A |
| Impulse durability (conductor-ground) | C1 - 1 kV/500 A |
| | C2 - 10 kV/5 kA |
| | C2 - 10 kA |
| | C3 - 100 A |
| | D1 - 2,5 kA |
| Pulse reset time (conductor-conductor) | \leq 25 ms |
| Pulse reset time (conductor-ground) | \leq 50 ms |

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 flexible | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross section solid | 0.2 mm ² ... 4 mm ² |
| Conductor cross section AWG | 24 ... 12 |

Connection, equipotential bonding

| | |
|-------------------|---------------------------------------------|
| Connection method | NS 35 DIN rail or connection terminal block |
|-------------------|---------------------------------------------|

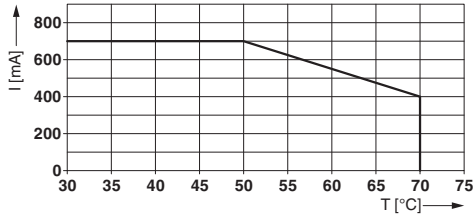
Standards and Regulations

| | |
|--------------------------|---------------------------------------|
| Standards/specifications | IEC 61643-21 2000 + A1:2008, modified |
| | EN 61643-21 2001 + A1:2009 |
| | EN 61000-6-2 2007 + A1:2011 |
| | EN 61000-6-3 2005 |

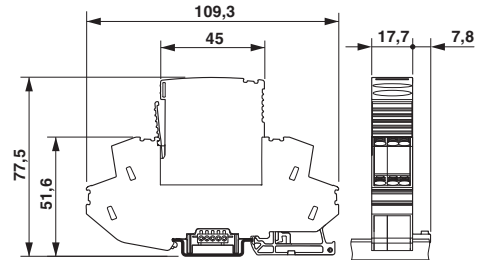
Drawings

Surge protection device - PT-IQ-2X2-12DC-PT - 2801261

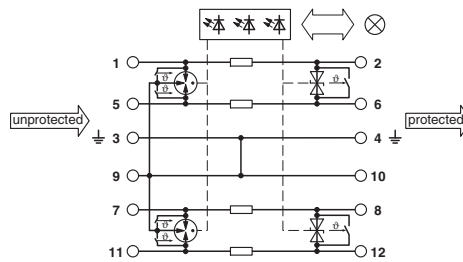
Diagram



Dimensional drawing



Circuit diagram



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 |
| eCl@ss 9.0 | 27130807 |

ETIM

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

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Classifications

UNSPSC

| | |
|-------------|----------|
| UNSPSC 13.2 | 39121620 |
|-------------|----------|

Approvals


Approvals

Approvals

UL Listed

Ex Approvals

Approval details

| |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| UL Listed  http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm FILE E 138168 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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

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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

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Accessories

PCB plug

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: Push-in spring connection, Color: green, Contact surface: Tin

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

Necessary add-on products

Supply and remote module - PT-IQ-PTB-PT - 2801296



Module for power supply and multi-stage, floating remote signaling of connected surge protection modules.

Additional products

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Accessories

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

Spare parts

Surge protection plug - PT-IQ-2X2-12DC-P - 2800803



Surge protection plug with integrated multi-stage status indicator on the module for two 2-wire floating signal circuits.
Nominal voltage: 12 V DC

DIN rail bus connectors - PT-IQ-17,5-TBUS-5-2.0 - 2906878



DIN rail connector for PT-IQ system for establishing remote signaling and the power supply when a surge protection module is snapped on.
