

# Surge protection device - PT-IQ-2X1-24DC-UT - 2800787

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



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.

## Your advantages

- ✓ Surge protection system
- ✓ Multi-level state monitoring
- ✓ Collective message about supply and remote module
- ✓ System supplied via DIN rail bus
- ✓ Up to 28 protection modules per supply module
- ✓ Maximum ease of maintenance thanks to the two-piece design
- ✓ Codable plug
- ✓ Impedance-neutral disconnection of plug for maintenance purposes
- ✓ Base element remains an integral part of the installation



## Key Commercial Data

|              |               |
|--------------|---------------|
| Packing unit | 1 pc          |
| GTIN         |               |
| GTIN         | 4046356645218 |

## Technical data

### Dimensions

|                  |                                 |
|------------------|---------------------------------|
| Height           | 91.1 mm                         |
| Width            | 17.7 mm                         |
| Depth            | 77.5 mm (incl. DIN rail 7.5 mm) |
| Horizontal pitch | 1 Div.                          |

### Ambient conditions

|   |                  |
|---|------------------|
| Ambient temperature (operation)         | -40 °C ... 70 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |

# Surge protection device - PT-IQ-2X1-24DC-UT - 2800787

## Technical data

### Ambient conditions

|                      |  |
|----------------------|--|
| Altitude             | ≤ 4000 m (amsl (above mean sea level)) |
| Degree of protection | IP20                                   |

### General

|  |  |
|--|--|
| Housing material                       | PA 6.6   |
| Flammability rating according to UL 94 | V-0  |
| Color                                  | jet black RAL 9005   |
| 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 DIN rail connector are established by snapping the module into place on the DIN rail connector. |
|------|---|

### Protective circuit

|  |                                 |
|--|---------------------------------|
| IEC test classification                                      | C1                              |
|  | C2                              |
|  | C3                              |
|  | D1                              |
| Nominal voltage $U_N$  | 24 V DC                         |
| Maximum continuous voltage $U_C$                             | 30 V DC                         |
|  | 21 V AC                         |
| Rated current  | 1000 mA (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) μs (line-earth)       | 10 kA                           |
| Pulse discharge current $I_{imp}$ (10/350) μs (line-earth)   | 2.5 kA                          |
| Total discharge current $I_{total}$ (8/20) μs                | 20 kA                           |
| Voltage protection level $U_p$ (line-earth)                  | ≤ 75 V (C1 - 1 kV/500 A)        |
|  | ≤ 135 V (C2 - 10 kV / 5 kA)     |
|  | ≤ 55 V (C3 - 25 A)              |
|  | ≤ 60 V (C3 - 50 A)              |
| Response time $t_A$ (line-earth)                             | ≤ 1 ns                          |
| Input attenuation aE, asym.                                  | typ. 0.3 dB (≤ 300 kHz / 150 Ω) |
| Cut-off frequency $f_g$ (3 dB), asym. (PE) in 150 Ohm system | typ. 1.1 MHz                    |
| Capacity (line-earth)  | typ. 2 nF                       |
| Resistance per path  | 1.2 Ω ±5 %                      |
| Surge protection fault message                               | Optical, multi-stage            |
| Max. required back-up fuse                                   | 1 A (FF)                        |
| Impulse durability (line-earth)                              | C1 - 1 kV / 500 A               |

# Surge protection device - PT-IQ-2X1-24DC-UT - 2800787

## Technical data

### Protective circuit

|                               |                   |
|-------------------------------|-------------------|
|                               | C2 - 10 kV / 5 kA |
|                               | C2 - 10 kA        |
|                               | C3 - 50 A         |
|                               | D1 - 2.5 kA       |
| Pulse reset time (line-earth) | ≤ 350 ms          |

### Connection data

|                                  |   |
|----------------------------------|---|
| Connection method                | Screw connection                            |
| Screw thread                     | M3  |
| Tightening torque                | 0.5 Nm                                      |
| Stripping length                 | 8 mm  |
| Conductor cross section flexible | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Conductor cross section solid    | 0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>   |
| Conductor cross section AWG      | 24 ... 12                                   |

### Connection, equipotential bonding

|                   |               |
|-------------------|---------------|
| Connection method | DIN rail NS35 |
|-------------------|---------------|

### Standards and Regulations

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

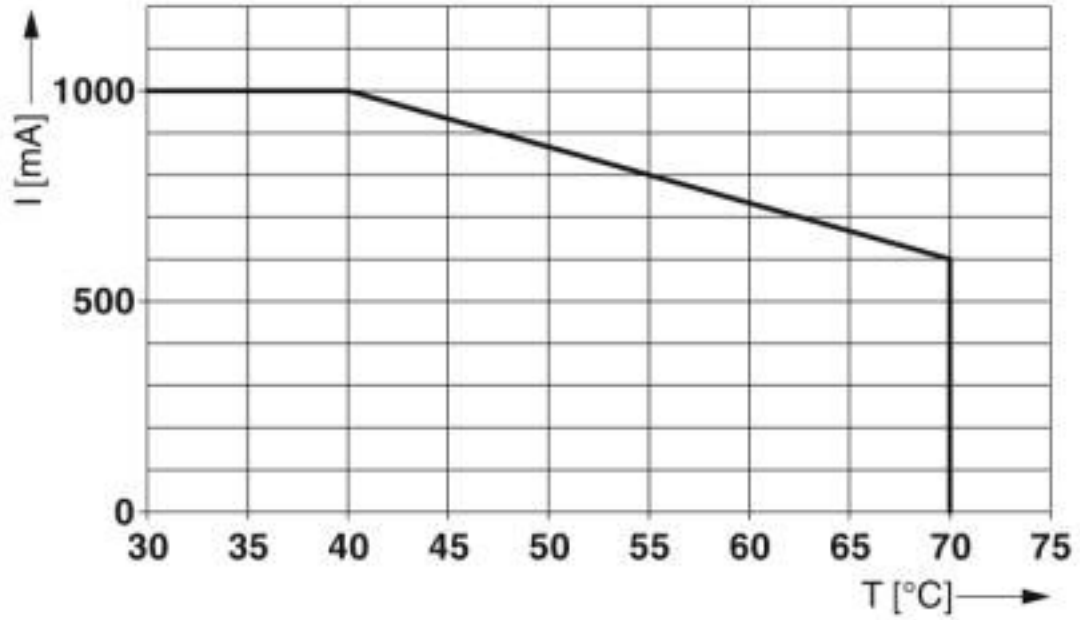
### Environmental Product Compliance

|            |   |
|------------|---|
| REACH SVHC | Lead 7439-92-1  |
| China RoHS | Environmentally Friendly Use Period = 50 years  |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

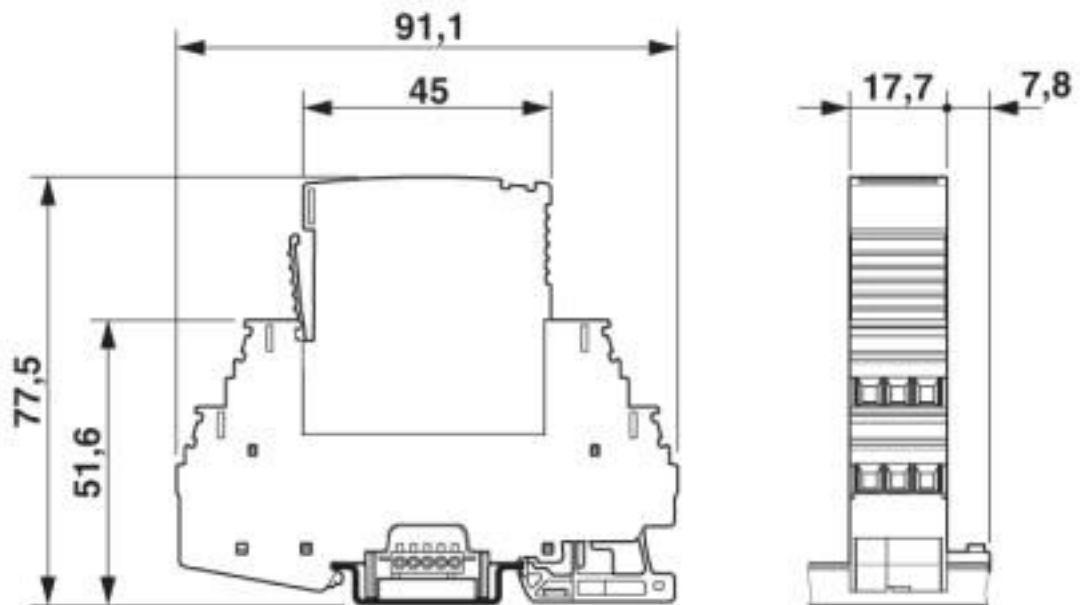
## Drawings

# Surge protection device - PT-IQ-2X1-24DC-UT - 2800787

Diagram

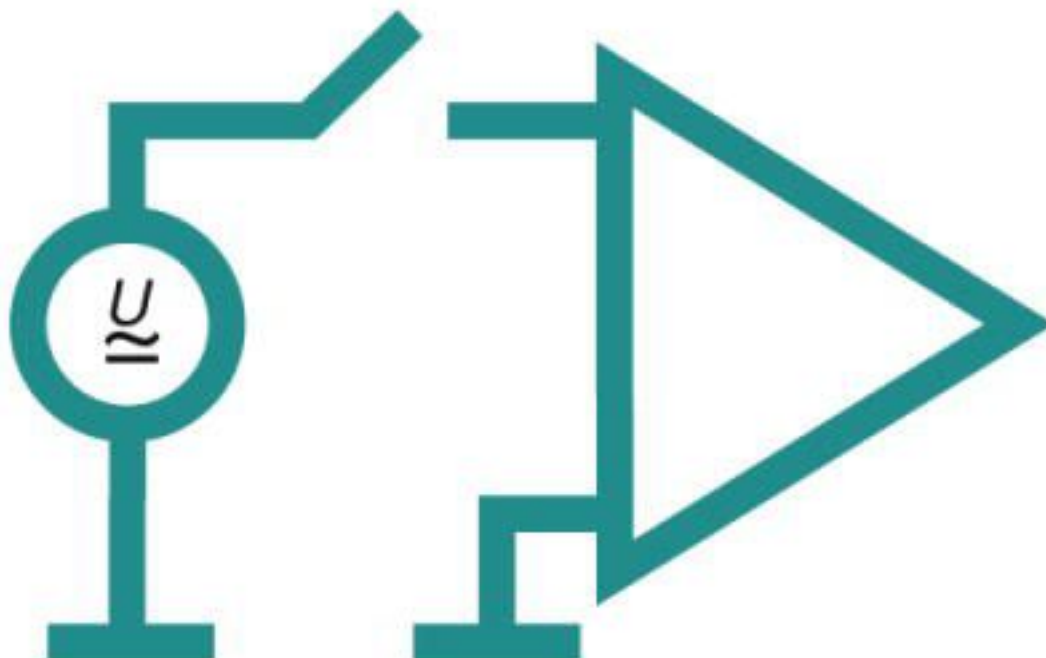


Dimensional drawing

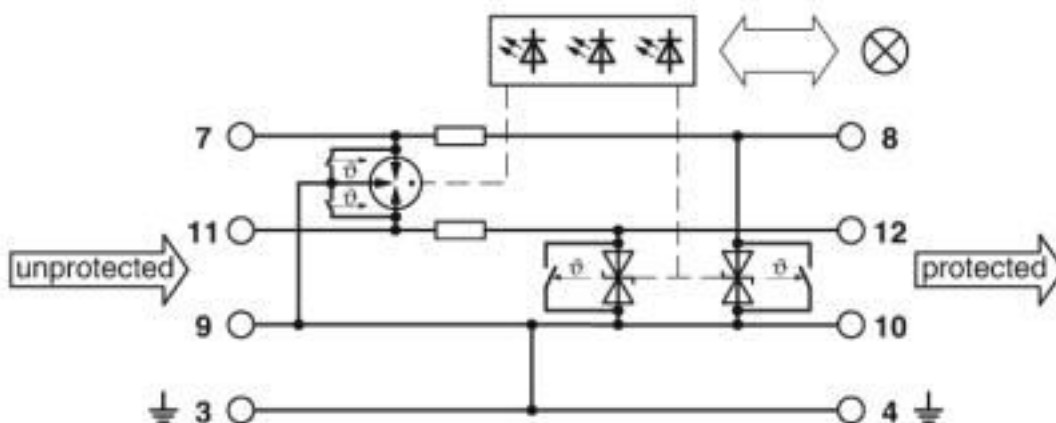


# Surge protection device - PT-IQ-2X1-24DC-UT - 2800787

Pictogram



Circuit diagram



## Classifications

eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27130807 |
| eCl@ss 4.0    | 27130800 |
| eCl@ss 4.1    | 27130800 |
| eCl@ss 5.0    | 27130800 |
| eCl@ss 5.1    | 27130800 |
| eCl@ss 6.0    | 27130800 |
| eCl@ss 7.0    | 27130807 |

# Surge protection device - PT-IQ-2X1-24DC-UT - 2800787

## Classifications

### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 8.0 | 27130807 |
| eCl@ss 9.0 | 27130807 |

### ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC000943 |
| ETIM 4.0 | EC000943 |
| ETIM 5.0 | EC000943 |
| ETIM 6.0 | EC000943 |
| ETIM 7.0 | EC000943 |

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30212010 |
| UNSPSC 7.0901 | 39121610 |
| UNSPSC 11     | 39121610 |
| UNSPSC 12.01  | 39121610 |
| UNSPSC 13.2   | 39121620 |
| UNSPSC 18.0   | 39121620 |
| UNSPSC 19.0   | 39121620 |
| UNSPSC 20.0   | 39121620 |
| UNSPSC 21.0   | 39121620 |

## Approvals

### Approvals

#### Approvals

CSA / UL Listed / CSAus / EAC / cCSAus

#### Ex Approvals

### Approval details

|     |  |   |         |
|-----|--|---|---------|
| CSA |  | <a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a> | 2761632 |
|-----|--|---|---------|

|           |  |   |               |
|-----------|--|---|---------------|
| UL Listed |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 138168 |
|-----------|--|---|---------------|

# Surge protection device - PT-IQ-2X1-24DC-UT - 2800787

## Approvals

|       |  |   |         |
|-------|--|---|---------|
| CSAus |  | <a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a> | 2761632 |
|-------|--|---|---------|

|     |  |  |                         |
|-----|--|--|-------------------------|
| EAC |  |  | RU C-<br>DE.*09.B.00169 |
|-----|--|--|-------------------------|

|        |  |  |  |
|--------|--|--|--|
| cCSAus |  |  |  |
|--------|--|--|--|

## Accessories

### Accessories

#### Device marking

Zack marker strip - ZBN 18:UNBEDRUCKT - 2809128



Zack marker strip, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into tall marker groove, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

#### 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 size: 5.15 x 5.15 mm, Number of individual labels: 10

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 size: 5.15 x 5.15 mm, Number of individual labels: 10

## Surge protection device - PT-IQ-2X1-24DC-UT - 2800787

### Accessories

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 size: 5.15 x 5.15 mm, Number of individual labels: 10

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 size: 5.15 x 5.15 mm, Number of individual labels: 10

### 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

End clamp - E/ME TBUS NS35 GY - 2713780



End clamp, stable construction for DIN rail bus connector

### PCB plug

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



PCB connector, nominal current: 4 A, rated voltage (III/2): 160 V, nominal cross section: 0.5 mm<sup>2</sup>, number of positions: 5, pitch: 2.5 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

### Terminal marking



## Surge protection device - PT-IQ-2X1-24DC-UT - 2800787

### Accessories

Zack Marker strip, flat - ZBF 5:UNBEDRUCKT - 0808642



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into flat marker groove, for terminal block width: 5 mm, lettering field size: 5.1 x 5.2 mm, Number of individual labels: 10

Zack Marker strip, flat - ZBF 5/WH-100:UNBEDRUCKT - 0808668



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into flat marker groove, for terminal block width: 5 mm, lettering field size: 5.15 x 5.15 mm, Number of individual labels: 10

### Necessary add-on products

Supply and remote module - PT-IQ-PTB-UT - 2800768



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

### Additional products

Shield connection - SSA 3-6 - 2839295



Shield fast connection for 3 ... 6 mm cable diameter. Potential connecting cable: 200 mm, 1 mm<sup>2</sup>, color: black

Shield connection - SSA 5-10 - 2839512



Shield fast connection for 5 ... 10 mm cable diameter. Potential connecting cable: 200 mm, 1 mm<sup>2</sup>, color: black

### Spare parts

## Surge protection device - PT-IQ-2X1-24DC-UT - 2800787

### Accessories

Surge protection plug - PT-IQ-2X1-24DC-P - 2800776



Surge protection plug with integrated multi-stage status indicator on the module for two signal wires with common reference potential. 24 V DC nominal voltage.

---

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.

---

Phoenix Contact 2020 © - all rights reserved  
<http://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG  
Flachsmarktstr. 8  
32825 Blomberg  
Germany  
Tel. +49 5235 300  
Fax +49 5235 3 41200  
<http://www.phoenixcontact.com>

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Surge Suppressors](#) category:*

*Click to view products by [Phoenix Contact](#) manufacturer:*

Other Similar products are found below :

[GUS1](#) [GUS12](#) [BSPM1A600D600LVR](#) [2800521](#) [29-2053](#) [GUS11](#) [GUS2](#) [GUS3](#) [30460](#) [SRA64C060X](#) [PC642C015](#) [1810-15-A3](#) [2713175](#)  
[4B06B-EC1-150LF](#) [SRA6LC](#) [BPMA75D100LV](#) [CX06M](#) [CCTV1](#) [GUS13](#) [GUS14](#) [GUS5](#) [GUS6](#) [VAL-MS 320/3+0-FM](#) [VAL-US-](#)  
[120/40/1+1-FM](#) [VAL-US-120/65/1+1-FM](#) [VAL-US-480D/30/3+0-FM](#) [VAL-US-120/40/1+0-FM](#) [LP-BFDN-CW](#) [LP-STRL-NFF](#) [LP-STRL-](#)  
[DFF](#) [GUS22](#) [0804111](#) [5053609](#) [5053201](#) [SPD2-150-1P0](#) [SPD2-550-1P0](#) [6720005416](#) [6720005417](#) [1-2191595-2](#) [STC-CAT6-P0E-I](#) [SPD2-](#)  
[350-1P0](#) [FLT-CP-350-ST](#) [TTC-6P-3-HF-F-M-12DC-UT-I](#) [SMTPA200](#) [2800989](#) [2906776](#) [2906810](#) [2906847](#) [2906848](#) [2906851](#)