

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



2800787

<https://www.phoenixcontact.com/in/products/2800787>

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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.

## Your advantages

- Predictive monitoring with 3-stage LED display
- Integration of the status message into the system controller via group remote signaling
- Install quickly and error-free with DIN rail connectors
- Maximum ease of maintenance, thanks to the 2-piece design
- Maximum protection for MCR applications with high discharge capacity

## Commercial Data

Item number	2800787
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	CL2
Product Key	CL2151
Catalog Page	Page 132 (C-4-2019)
GTIN	4046356645218
Weight per Piece (including packing)	110 g
Weight per Piece (excluding packing)	106.2 g
Customs tariff number	85363010
Country of origin	DE

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## Technical Data

### Notes

#### General

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.
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### Product properties

IEC test classification	C1 C2 C3 D1
Type	DIN rail module, two-section, divisible
Product type	Surge protection for MCR technology
Product family	PLUGTRAB IQ
Surge protection fault message	Optical, multi-stage

#### Insulation characteristics

Overvoltage category	III
Pollution degree	2

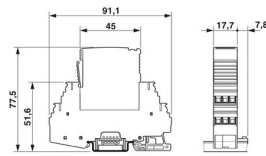
### Electrical properties

Nominal voltage $U_N$	24 V DC
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### Connection data

Connection method	Screw connection
Screw thread	M3
Tightening torque	0.5 Nm
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section rigid	0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross section AWG	24 ... 12

### Dimensions

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

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## Material specifications

Color	jet black RAL 9005
Flammability rating according to UL 94	V-0
Housing material	PA 6.6

## Mechanical properties

### Mechanical data

Open side panel	No
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## Protective circuit

Direction of action	Line-Line & Line-Signal Ground/Shield & optional Signal Ground/Shield-Earth Ground
Maximum continuous voltage $U_C$	30 V DC
	21 V AC
Rated current	1000 mA (40 °C)
Operating effective current $I_C$ at $U_C$	$\leq 1$ mA (per path)
Residual current $I_{PE}$	$\leq 1$ mA (per path)
Nominal discharge surge current $I_n$ (8/20) $\mu$ s (Core-Earth)	10 kA
Pulse discharge current $I_{imp}$ (10/350) $\mu$ s (line-earth)	2.5 kA
Total discharge current $I_{total}$ (8/20) $\mu$ s	20 kA
Voltage protection level $U_p$ (line-earth)	$\leq 75$ V (C1 - 1 kV / 500 A)
	$\leq 135$ V (C2 - 10 kV / 5 kA)
	$\leq 55$ V (C3 - 25 A)
	$\leq 60$ V (C3 - 50 A)
Response time $t_A$ (line-earth)	$\leq 1$ ns
Input attenuation aE, asym.	typ. 0.3 dB ( $\leq 300$ kHz / 150 $\Omega$ )
Cut-off frequency $f_g$ (3 dB), asym. (PE) in 150 $\Omega$ system	typ. 1.1 MHz
Capacity (Core-Earth)	typ. 2 nF
Resistance per path	1.2 $\Omega \pm 5\%$
Surge protection fault message	Optical, multi-stage
Max. required back-up fuse	1 A (FF)
Impulse durability (line-earth)	C1 - 1 kV / 500 A
	C2 - 10 kV / 5 kA
	C2 - 10 kA
	C3 - 50 A
	D1 - 2.5 kA
Pulse reset time (line-earth)	$\leq 350$ ms

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

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Altitude	≤ 4000 m (amsl (above mean sea level))
Permissible humidity (operation)	5 % ... 95 %

## Standards and regulations

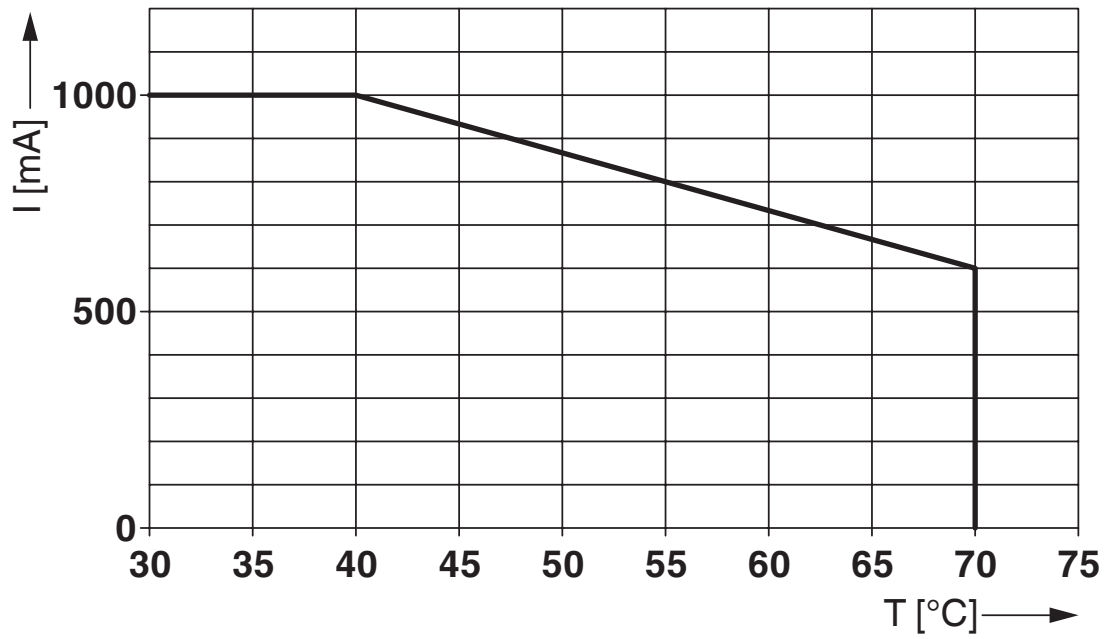
Standards/specifications	IEC 61643-21
Standards/specifications	EN 61643-21
Standards/specifications	EN 61000-6-3
Standards/specifications	EN 61000-6-2

## Mounting

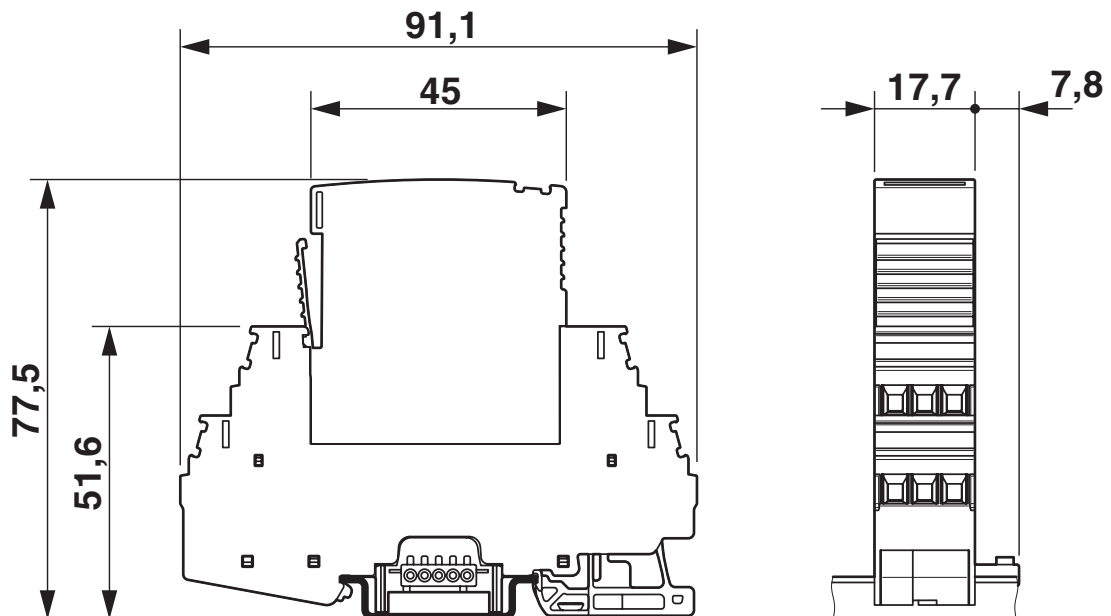
Mounting type	DIN rail: 35 mm
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## Drawings

Diagram



Dimensional drawing

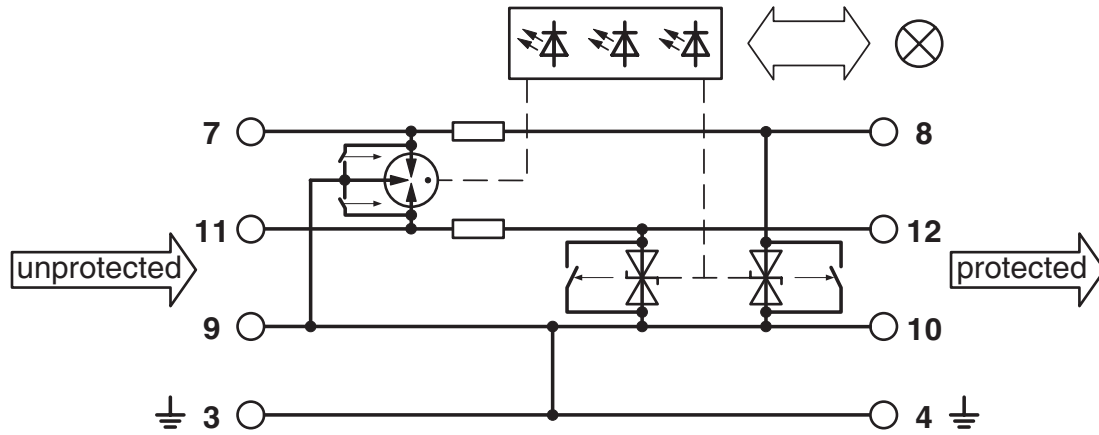


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Circuit diagram



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## Approvals

 **CSA**  
Approval ID: 2761632

 **EAC**  
Approval ID: RU C-DE.\*09.B.00169

 **UL Listed**  
Approval ID: FILE E 138168

 **CSAus**  
Approval ID: 2761632

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## Classifications

### ECLASS

ECLASS-11.0

27130807

### ETIM

ETIM 8.0

EC000943

### UNSPSC

UNSPSC 21.0

39121600



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## Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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## Mandatory Accessories

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

2800768

<https://www.phoenixcontact.com/in/products/2800768>



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

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## Accessories

### X-PEN 0,35 - Marker pen

0811228

<https://www.phoenixcontact.com/in/products/0811228>



Marker pen without ink cartridge, for manual labeling of markers, labeling extremely wipe-proof, line thickness 0.35 mm

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

0808642

<https://www.phoenixcontact.com/in/products/0808642>



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

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

0808668

<https://www.phoenixcontact.com/in/products/0808668>



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snapped, for terminal block width: 5 mm, lettering field size: 5.15 x 5.15 mm, Number of individual labels: 1000

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## ZBF 5,LGS:FORTL.ZAHLEN - Zack Marker strip, flat

0808671

<https://www.phoenixcontact.com/in/products/0808671>



Zack Marker strip, flat, Strip, white, labeled, printed horizontally: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 491 ... 500, mounting type: snapped, for terminal block width: 5 mm, lettering field size: 5.15 x 5.15 mm, Number of individual labels: 10

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## ZBF 5,LGS:GERADE ZAHLEN - Zack Marker strip, flat

0810821

<https://www.phoenixcontact.com/in/products/0810821>



Zack Marker strip, flat, Strip, white, labeled, printed horizontally: consecutive even numbers 2 ... 20, 22 ... 40, etc. up to 82 ... 100, mounting type: snapped, for terminal block width: 5 mm, lettering field size: 5.15 x 5.15 mm, Number of individual labels: 10

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## ZBF 5,LGS:UNGERADE ZAHLEN - Zack Marker strip, flat

0810863

<https://www.phoenixcontact.com/in/products/0810863>



Zack Marker strip, flat, Strip, white, labeled, printed horizontally: Odd numbers 1 - 19, 21 - 39, etc. up to 81 - 99, mounting type: snapped, for terminal block width: 5 mm, lettering field size: 5.15 x 5.15 mm, Number of individual labels: 10

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## ZBF 5,QR:FORTL.ZAHLEN - Zack Marker strip, flat

0808697

<https://www.phoenixcontact.com/in/products/0808697>



Zack Marker strip, flat, Strip, white, labeled, Printed vertically: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 100, mounting type: snapped, for terminal block width: 5 mm, lettering field size: 5.15 x 5.15 mm, Number of individual labels: 10

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## ZBN 18:UNBEDRUCKT - Zack marker strip

2809128

<https://www.phoenixcontact.com/in/products/2809128>



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

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## FK-MC 0,5/ 5-ST-2,5 - PCB connector

1881354

<https://www.phoenixcontact.com/in/products/1881354>



PCB connector, nominal cross section: 0.5 mm<sup>2</sup>, color: green, nominal current: 4 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: FK-MC 0,5/...-ST, pitch: 2.5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, plug-in system: COMBICON FK-MC 0,5, locking: without, mounting: without, type of packaging: packed in cardboard

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## SSA 3-6 - Shield connection

2839295

<https://www.phoenixcontact.com/in/products/2839295>

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



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## SSA 5-10 - Shield connection

2839512

<https://www.phoenixcontact.com/in/products/2839512>

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



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

2800776

<https://www.phoenixcontact.com/in/products/2800776>



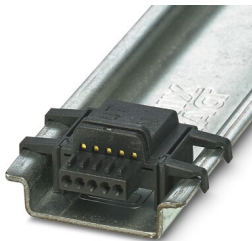
Surge protection plug with integrated multi-stage status indicator on the module for two signal wires with common reference potential. 24 V DC nominal voltage.

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

2906878

<https://www.phoenixcontact.com/in/products/2906878>



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

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