

Surge protection device - PT-IQ-4X1+F-48DC-PT - 2801274

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Surge protection, consisting of protective plug and base element, with integrated multi-stage status indicator on the module for four signal wires with common reference potential. Indirect grounding via gas-filled surge arrester.

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



Key Commercial Data

Packing unit	1 STK
Weight per Piece (excluding packing)	150.200 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.
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Protective circuit

IEC test classification	C1
	C2
	C3
	D1
Nominal voltage U_N	48 V DC
Maximum continuous voltage U_C	53 V DC
	37 V AC
Rated current	300 mA
Operating effective current I_C at U_C	$\leq 6 \mu\text{A}$ (per path)
Residual current I_{PE}	$\leq 1 \mu\text{A}$
Nominal discharge current I_n (8/20) μs (Core-Earth)	10 kA
Nominal discharge current I_n (8/20) μs (Core-GND)	10 kA
Pulse discharge current I_{imp} (10/350) μs (core-ground)	2.5 kA
Pulse discharge current I_{imp} (10/350) μs (core-GND)	2.5 kA
Total discharge current I_{Total} (8/20) μs	20 kA
Voltage protection level U_p (core-ground)	$\leq 750 \text{ V}$ (C1 - 1 kV/500 A)
	$\leq 950 \text{ V}$ (C2 - 10 kV / 5 kA)
	$\leq 850 \text{ V}$ (C3 - 25 A)
Voltage protection level U_p (core-GND)	$\leq 105 \text{ V}$ (C1 - 1 kV/500 A)
	$\leq 160 \text{ V}$ (C2 - 10 kV / 5 kA)
	$\leq 90 \text{ V}$ (C3 - 25 A)
Voltage protection level U_p static (core-ground)	$\leq 200 \text{ V}$ (C2 - 10 kV / 5 kA)
Response time t_A (Core-Earth)	$\leq 1 \text{ ns}$
	$\leq 100 \text{ ns}$
Input attenuation a_E , asym.	typ. 0.3 dB ($\leq 530 \text{ kHz} / 150 \Omega$)
Cut-off frequency f_g (3 dB), asym. (GND) in 150 Ohm system	typ. 1.9 MHz
Capacity (Core-GND)	typ. 1.5 nF
Resistance in series	1.2 $\Omega \pm 5 \%$

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Technical data

Protective circuit

Surge protection fault message	Optical, multi-stage	
Max. required back-up fuse	315 mA (FF)	
Impulse durability (conductor-ground)	C1 - 1 kV/500 A	
	C2 - 10 kV/5 kA	
	C2 - 10 kA	
	C3 - 25 A	
Impulse durability (conductor-GND)	D1 - 2,5 kA	
	C1 - 1 kV/500 A	
	C2 - 10 kV/5 kA	
	C2 - 10 kA	
Impulse durability (conductor-GND)	C3 - 25 A	
	D1 - 2.5 kA	
	Pulse reset time (conductor-ground)	≤ 250 ms
	Pulse reset time (conductor-GND)	≤ 1500 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	0.5 mm ² ... 4 mm ²
Conductor cross section AWG	24 ... 12

Connection, equipotential bonding

Connection method	NS 35 DIN rail or connection terminal block
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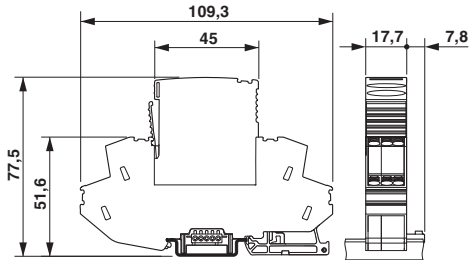
Standards and Regulations

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

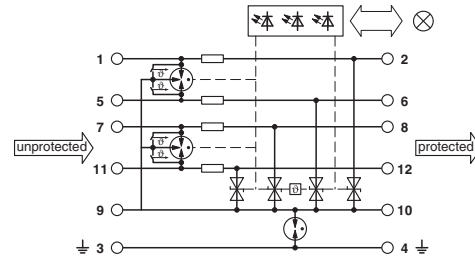
Drawings

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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

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

Approvals

Approvals

Approvals

UL Listed

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Approvals

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

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

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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: 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

PCB plug

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Accessories

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-4X1-48DC-P - 2800814



Surge protection plug with integrated multi-stage status indicator on the module for four signal wires with common reference potential. Nominal voltage: 48 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.
