

Surge protection device - PT-IQ-2X2+F-12DC-UT - 2800985

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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. Indirect grounding via gas-filled surge arrester.

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



Key Commercial Data

Packing unit	1 STK
Custom tariff number	85363010
Country of origin	Germany

Technical data

Dimensions

Height	91 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	12 V DC
Maximum continuous voltage U_C	15 V DC
	10 V AC
Nominal current I_N	700 mA (50 °C)
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}	$\leq 1 \mu\text{A}$
Nominal discharge current I_n (8/20) μs (Core-Core)	10 kA
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-core)	$\leq 65 \text{ V}$ (C1 - 1 kV/500 A)
	$\leq 95 \text{ V}$ (C2 - 10 kV / 5 kA)
	$\leq 110 \text{ V}$ (C2 - 10 kA)
	$\leq 35 \text{ V}$ (C3 - 25 A)
	$\leq 40 \text{ V}$ (C3 - 50 A)
Voltage protection level U_p (core-ground)	$\leq 900 \text{ V}$ (C1 - 1 kV/500 A)
	$\leq 1300 \text{ V}$ (C2 - 10 kV / 5 kA)
	$\leq 1200 \text{ V}$ (C2 - 10 kA)
	$\leq 1000 \text{ V}$ (C3 - 25 A)
	$\leq 1300 \text{ V}$ (C3 - 100 A)
Voltage protection level U_p (core-GND)	$\leq 600 \text{ V}$ (C1 - 1 kV/500 A)

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Protective circuit

	$\leq 750 \text{ V (C2 - 10 kV / 5 kA)}$
	$\leq 800 \text{ V (C2 - 10 kA)}$
	$\leq 700 \text{ V (C3 - 25 A)}$
	$\leq 800 \text{ V (C3 - 100 A)}$
Voltage protection level U_p static (core-core)	$\leq 45 \text{ V (C1 - 1 kV/500 A)}$
	$\leq 50 \text{ V (C2 - 10 kA)}$
Response time t_A (Core-Core)	$\leq 1 \text{ ns}$
Response time t_A (Core-Earth)	$\leq 100 \text{ ns}$
	$\leq 100 \text{ ns}$
Input attenuation aE , sym.	typ. $0.3 \text{ dB } (\leq 95 \text{ kHz/150 } \Omega)$
Cut-off frequency f_g (3 dB), sym. in 150 Ohm system	typ. 600 kHz
Capacity (Core-Core)	typ. 4 nF
Resistance in series	$1.2 \Omega \pm 5 \%$
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
Impulse durability (conductor-GND)	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)	$\leq 25 \text{ ms}$
Pulse reset time (conductor-ground)	$\leq 50 \text{ ms}$
Pulse reset time (conductor-GND)	$\leq 50 \text{ ms}$

Connection data

Connection method	Screw connection
Connection type IN	Screw terminal blocks
Connection type OUT	Screw terminal blocks
Screw thread	M3
Tightening torque	0.5 Nm

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Technical data

Connection data

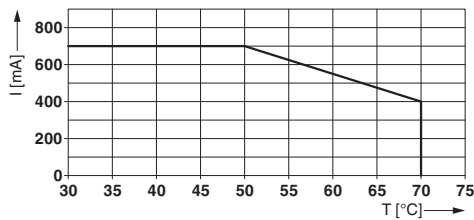
Stripping length	8 mm
Conductor cross section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross section solid	0.2 mm ² ... 4 mm ²
Conductor cross section AWG	24 ... 12

Standards and Regulations

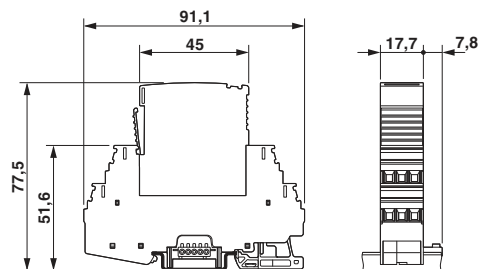
Standards/specifications	IEC 61643-21 2000 + A1:2008, modified
	EN 61643-21 2001 + A1:2009
	EN 61000-6-2 2007 + A1:2011
	EN 61000-6-3 2005

Drawings

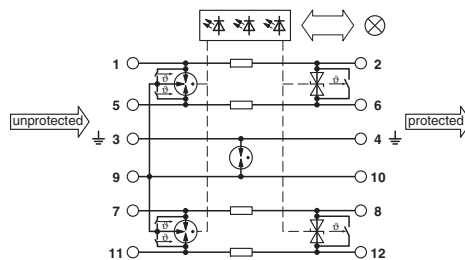
Diagram



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

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Classifications

eCl@ss

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

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

Surge protection device - PT-IQ-2X2+F-12DC-UT - 2800985

Accessories

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

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

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Accessories

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

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

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Accessories

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-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 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

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Accessories

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.