

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.



Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 665735
GTIN	4046356665735
Weight per Piece (excluding packing)	146.400 g
Custom tariff number	85363010
Country of origin	Germany
Note	Made to Order (non-returnable)

Technical data

Dimensions

Height	91 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
Altitude	≤ 4000 m (amsl (above mean sea level))
Degree of protection	IP20

General

Housing material	PA 6.6
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Technical data

General

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.
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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 (line-line)	10 kA
Nominal discharge current I_n (8/20) μs (line-earth)	10 kA
Nominal discharge current I_n (8/20) μs (line-signal ground)	10 kA
Pulse discharge current I_{imp} (10/350) μs (line-earth)	2.5 kA
Pulse discharge current I_{imp} (10/350) μs (line-signalground)	2.5 kA
Total discharge current I_{total} (8/20) μs	20 kA
Voltage protection level U_p (line-line)	$\leq 65 \text{ V}$ (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 (line-earth)	$\leq 900 \text{ V}$ (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 (line-signalground)	$\leq 600 \text{ V}$ (C1 - 1 kV/500 A)
	$\leq 750 \text{ V}$ (C2 - 10 kV / 5 kA)

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Technical data

Protective circuit

	≤ 800 V (C2 - 10 kA)
	≤ 700 V (C3 - 25 A)
	≤ 800 V (C3 - 100 A)
Voltage protection level U_p static (line-line)	≤ 45 V (C1 - 1 kV/500 A)
	≤ 50 V (C2 - 10 kA)
Response time t_A (line-line)	≤ 1 ns
Response time t_A (line-signalground)	≤ 100 ns
Response time t_A (line-earth)	≤ 100 ns
Input attenuation aE, sym.	typ. 0.3 dB (≤ 95 kHz/150 Ω)
Cut-off frequency f_g (3 dB), sym. in 150 Ohm system	typ. 600 kHz
Capacity (line-line)	typ. 4 nF
Resistance per path	1.2 Ω ±5 %
Surge protection fault message	Optical, multi-stage
Max. required back-up fuse	800 mA (FF)
Impulse durability (line-line)	C1 - 1 kV / 500 A
	C2 - 10 kV / 5 kA
	C2 - 10 kA
	C3 - 50 A
Impulse durability (line-earth)	C1 - 1 kV / 500 A
	C2 - 10 kV / 5 kA
	C2 - 10 kA
	C3 - 100 A
	D1 - 2.5 kA
Impulse durability (line-signalground)	C1 - 1 kV / 500 A
	C2 - 10 kV / 5 kA
	C2 - 10 kA
	C3 - 100 A
	D1 - 2,5 kA
Pulse reset time (line-line)	≤ 25 ms
Pulse reset time (line-earth)	≤ 50 ms
Pulse reset time (line-signalground)	≤ 50 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 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

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Technical data

Standards and Regulations

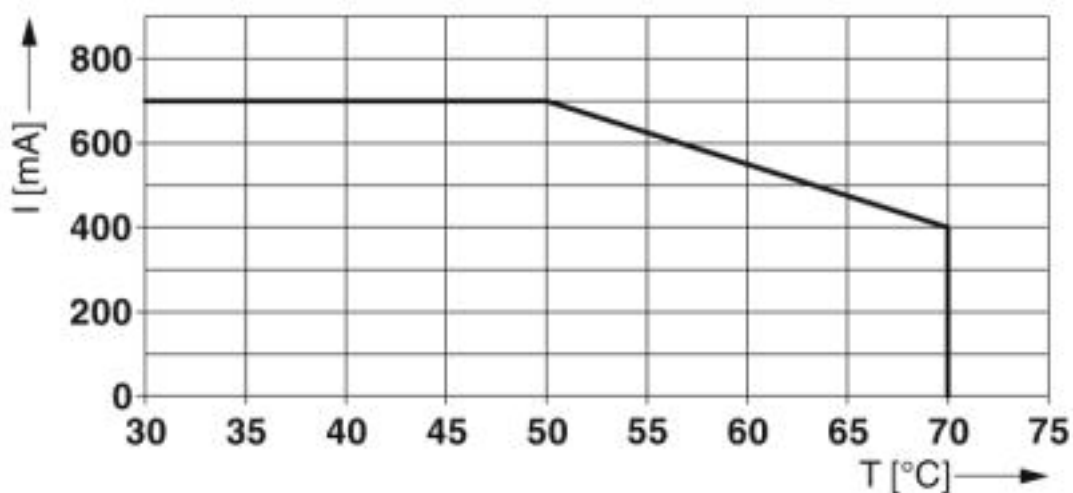
Standards/specifications	IEC 61643-21 2000 + A1:2008, modified
	EN 61643-21 2001 + A1:2009
	EN 61000-6-2 2007 + A1:2011
	EN 61000-6-3 2005

Environmental Product Compliance

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

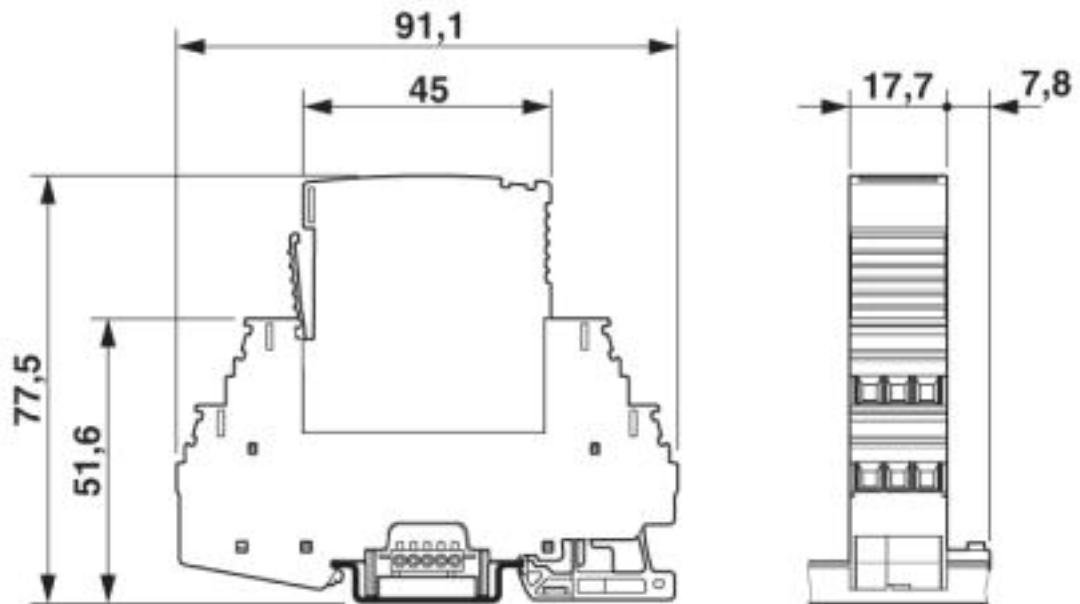
Drawings

Diagram

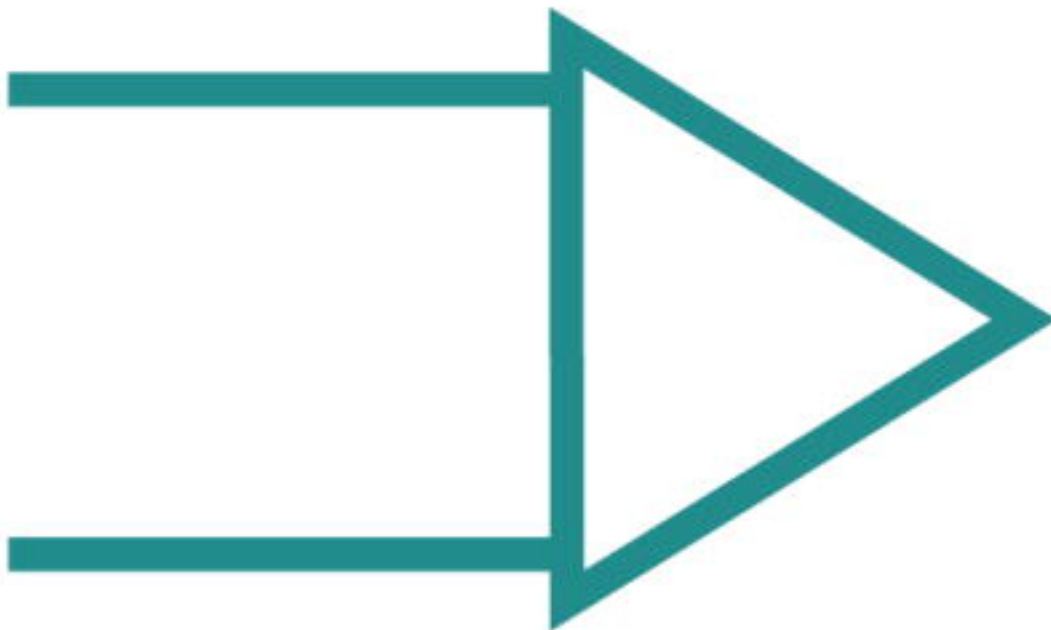


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Dimensional drawing

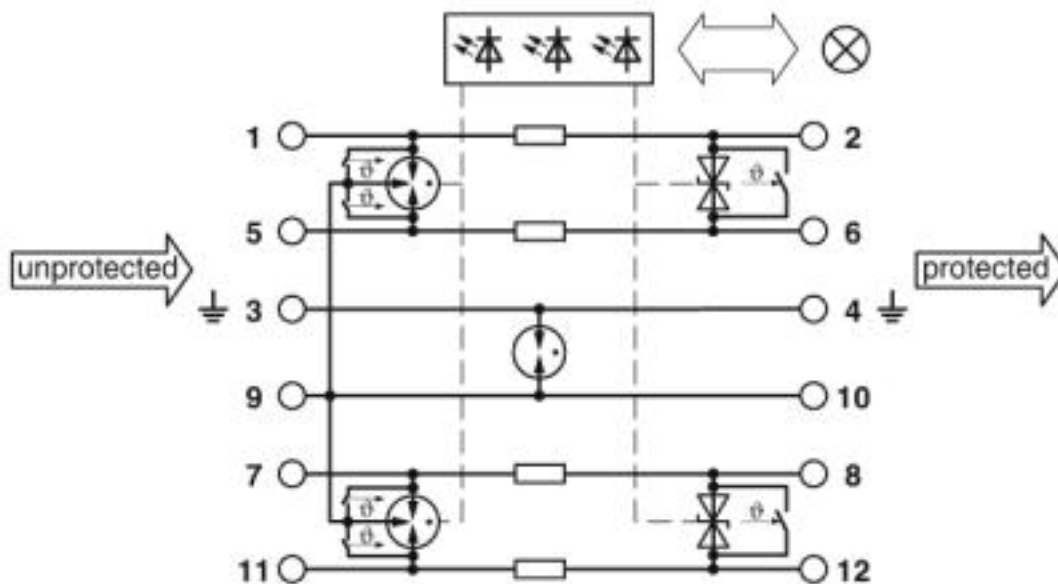


Pictogram



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Circuit diagram



Classifications

eCl@ss

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
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

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Classifications

UNSPSC

UNSPSC 19.0	39121620
UNSPSC 20.0	39121620
UNSPSC 21.0	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
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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

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

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

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Accessories

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 mm², 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: 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 mm², color: black

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Accessories

Shield connection - SSA 5-10 - 2839512



Shield fast connection for 5 ... 10 mm cable diameter. Potential connecting cable: 200 mm, 1 mm², color: 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.