

2801513

<https://www.phoenixcontact.com/pc/products/2801513>

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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 Ex-i signal circuits. HART-compatible.

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	2801513
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	CL2152
Catalog page	Page 153 (C-4-2019)
GTIN	4046356801232
Weight per piece (including packing)	126.3 g
Weight per piece (excluding packing)	123 g
Customs tariff number	85363010
Country of origin	DE

Technical data

Product properties

Product type	Surge protection for MCR technology
Product family	PLUGTRAB IQ
IEC test classification	C1
	C2
	C3
	D1
Type	DIN rail module, two-section, divisible
Wire pairs per module	2

Insulation characteristics

Overvoltage category	III
Pollution degree	2

Electrical properties

Nominal voltage U_N	24 V DC
Indicator/remote signaling	
Switching function	via DIN rail connector

Connection data

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

Ex data

Maximum inner capacitance C_i	negligible
Max. internal inductance L_i	negligible
Max. input current I_i	350 mA
Max. input voltage U_i	30 V DC
max. input power P_i	1.20 W
Insulation voltage to ground	> 500 V AC
Ambient temperature (operation)	-40 °C ... 50 °C (T6)
	-40 °C ... 70 °C (T4)

Dimensions

PT-IQ-2X2-EX-24DC-UT - Surge protection device



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

Material specifications

Color	black (RAL 9005)
	black (RAL 9005)
Flammability rating according to UL 94	V-0
Insulating material	PA 6.6
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	350 mA
Operating effective current I_C at U_C	$\leq 5 \mu A$ (per system)
Residual current I_{PE}	$\leq 100 nA$ (per system)
Nominal discharge current I_n (8/20) μs (line-line)	10 kA
Nominal discharge current I_n (8/20) μs (line-ground)	10 kA
Pulse discharge current I_{imp} (10/350) μs (line-earth)	2 kA
Total discharge current I_{total} (8/20) μs	20 kA
Voltage protection level U_p (line-line)	$\leq 60 V$ (C1 - 1 kV / 500 A)
	$\leq 110 V$ (C2 - 10 kV / 5 kA)
	$\leq 140 V$ (C2 - 10 kA)
	$\leq 50 V$ (C3 - 25 A)
	$\leq 55 V$ (C3 - 100 A)
Voltage protection level U_p (line-earth)	$\leq 1.3 kV$ (C2 - 10 kV / 5 kA)
	$\leq 1.5 kV$ (C2 - 10 kA)
	$\leq 1.3 kV$ (C3 - 100 A)
Response time t_A (line-line)	$\leq 1 ns$
Response time t_A (line-earth)	$\leq 100 ns$

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Input attenuation aE, sym.	typ. 0.3 dB (≤ 300 kHz / 150 Ω)
Cut-off frequency f_g (3 dB), sym. in 150 Ω 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	350 mA (F)
Impulse durability (line-line)	C1 - 1 kV / 500 A
	C2 - 10 kA
	C3 - 100 A
Impulse durability (line-earth)	C2 - 10 kA
	D1 - 2 kA
Pulse reset time (line-line)	≤ 30 ms
Pulse reset time (line-earth)	≤ 30 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
Altitude	≤ 2000 m (amsl)

Approvals

Conformity/Approvals

UL, USA / Canada	Class I, Div. 2, Groups A, B, C, D T5
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Standards and regulations

Standards/specifications	EN 61643-21
Note	A2:2013
Standards/specifications	IEC 61643-21
Note	A2:2012
Standards/specifications	EN 61000-6-2
Note	2005
Standards/specifications	EN 61000-6-3
Note	A1:2011
Standards/specifications	EN 60079-0
Note	2018
Standards/specifications	EN 60079-11
Note	2012
Standards/specifications	EN 60079-15
Note	2010
Standards/specifications	IEC 60079-0
Note	2017
Standards/specifications	IEC 60079-11

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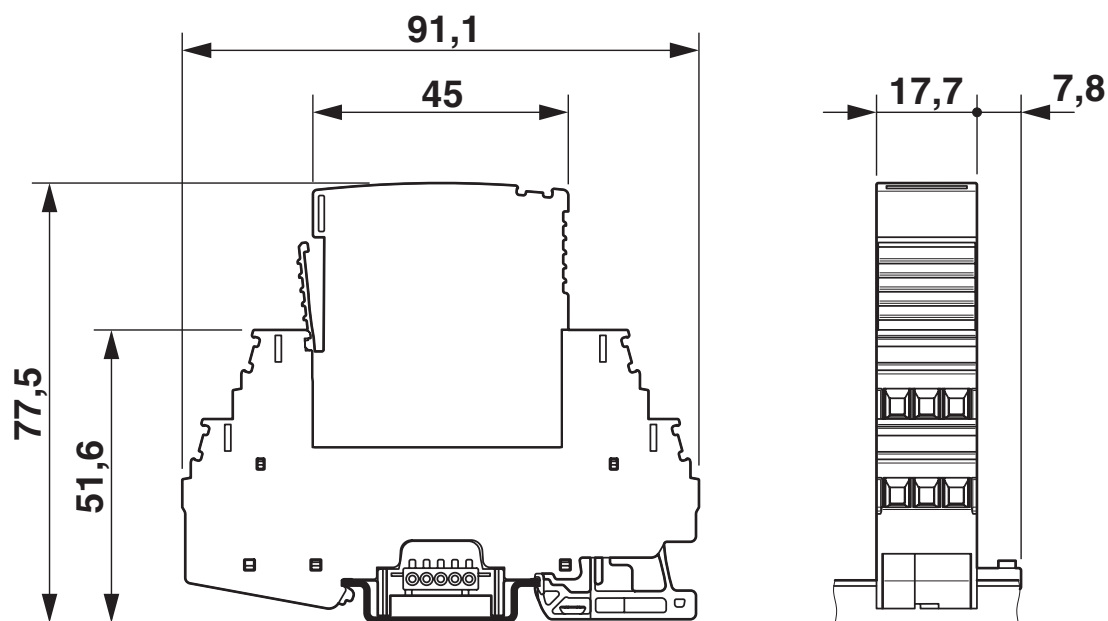
Note	2011
Standards/specifications	IEC 60079-15
Note	2010

Mounting

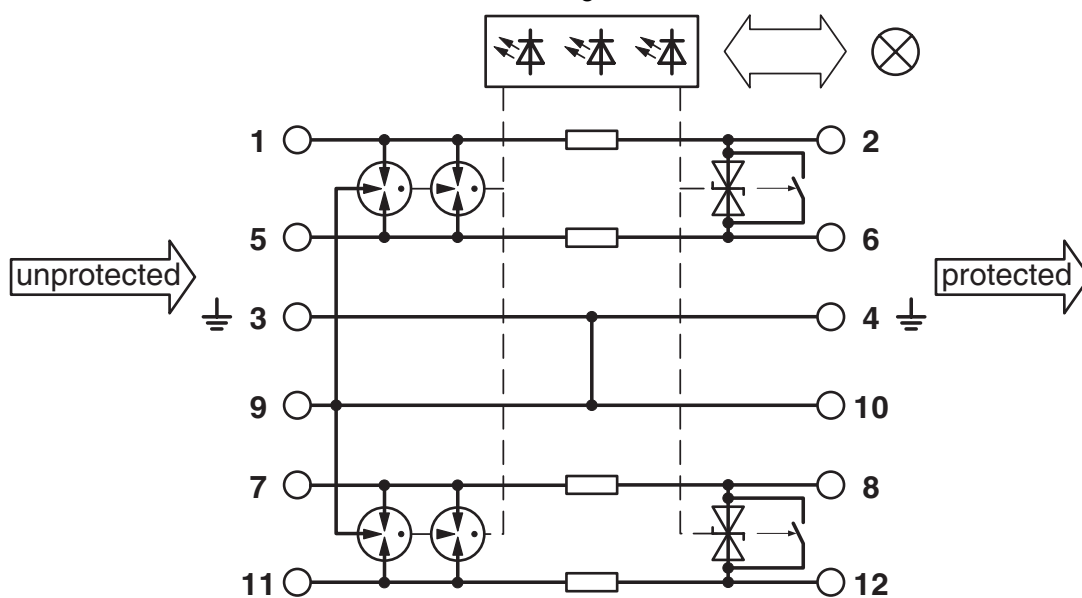
Mounting type	DIN rail: 35 mm
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Drawings

Dimensional drawing



Circuit diagram



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/pc/products/2801513>



UL Listed

Approval ID: FILE E 138168

Functional Safety

Approval ID: 13-04-032 R017 V4R0



EAC Ex

Approval ID: RU C-DE.**87.B.00420



IECEx

Approval ID: IECEx BVS 14.0017X



cUL Listed

Approval ID: FILE E 333250



UL Listed

Approval ID: FILE E 333250



ATEX

Approval ID: BVS 14 ATEX E 020 X



NEPSI-EX

Approval ID: GYJ20.1158X



CCC

Approval ID: 2020322316001010



UKCA-EX

Approval ID: DEKRA 23UKEX0111X

cULus Listed

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Classifications

ECLASS

ECLASS-11.0	27130807
ECLASS-13.0	27171502

ETIM

ETIM 9.0	EC000943
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UNSPSC

UNSPSC 21.0	39121600
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Environmental product compliance

EU RoHS	
Fulfills EU RoHS substance requirements	Yes
Exemption	6(c), 7(a), 7(c)-I
China RoHS	
Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.
EU REACH SVHC	
REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	c84fb623-0e44-4a64-a5a7-27add653788

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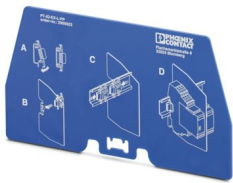
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Mandatory accessories

PT-IQ-EX-L-PP - Separating plate

2905023

<https://www.phoenixcontact.com/pc/products/2905023>

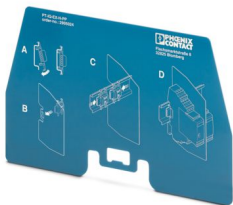


Partition plate for NS-35/7,5 DIN rails to ensure a clearance of 50 mm between the controller and surge protection for PT-IQ-EX systems.

PT-IQ-EX-H-PP - Separating plate

2905024

<https://www.phoenixcontact.com/pc/products/2905024>



Partition plate for NS-35/7,5 isolated DIN rails (DIN rail is isolated using the AB/NS support bracket) to ensure a clearance of 50 mm between the controller and surge protection for PT-IQ-EX systems.

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

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

Accessories

ZBF 5:UNBEDRUCKT - Zack Marker strip, flat

0808642

<https://www.phoenixcontact.com/pc/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/pc/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

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

0808671

<https://www.phoenixcontact.com/pc/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/pc/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

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

0810863

<https://www.phoenixcontact.com/pc/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/pc/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

ZBN 18:UNBEDRUCKT - Zack marker strip

2809128

<https://www.phoenixcontact.com/pc/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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E/ME TBUS NS35 GY - End bracket

2713780

<https://www.phoenixcontact.com/pc/products/2713780>



End clamp, stable construction for DIN rail bus connector

ZBN 18 CUS - Zack marker strip

0825059

<https://www.phoenixcontact.com/pc/products/0825059>



Zack marker strip, can be ordered: Strip, white, labeled according to customer specifications, 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

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SSA 3-6 - Shield connection

2839295

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

Shield fast connection for 3 ... 6 mm cable diameter. Potential connecting cable:
200 mm, 1 mm², color: black



SSA 5-10 - Shield connection

2839512

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

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



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X-PEN 0,35 - Marker pen

0811228

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



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

SZS 0,6X3,5 VDE - Screwdriver

1212602

<https://www.phoenixcontact.com/pc/products/1212602>



Screwdriver, slot-headed, VDE insulated, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

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PT-IQ-2X2-EX-24DC-P - Surge protection plug

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<https://www.phoenixcontact.com/pc/products/2801515>



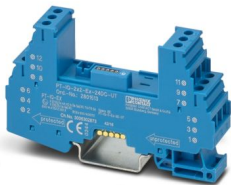
Surge protection plug with integrated multi-stage status indicator on the module for two 2-wire floating Ex-i signal circuits. Nominal voltage: 24 V DC

PT-IQ-5-EX-BE-UT - Surge protection base-element

2905497

<https://www.phoenixcontact.com/pc/products/2905497>

Base element for protective plug PLUGTRAB PT-IQ-2X2-EX



PT-IQ-2X2-EX-24DC-UT - Surge protection device



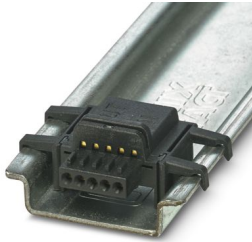
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PT-IQ-17,5-TBUS-5-2.0 - DIN rail bus connectors

2906878

<https://www.phoenixcontact.com/pc/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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