

2801291

<https://www.phoenixcontact.com/us/products/2801291>

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Surge protection, consisting of protective plug and base element, with integrated multi-stage status indicator on the module for five signal wires. For HF applications and telecommunications interfaces without supply voltage (up to 90 Mbps).

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	2801291
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL22
Product key	CL2153
Catalog page	Page 172 (C-4-2019)
GTIN	4046356766722
Weight per piece (including packing)	126.3 g
Weight per piece (excluding packing)	121.2 g
Customs tariff number	85363010
Country of origin	DE

PT-IQ-5-HF-5DC-PT - Surge protection device



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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

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

Insulation characteristics

Overvoltage category	III
Pollution degree	2

Electrical properties

Nominal voltage U_N	5 V DC
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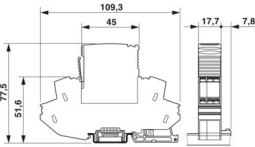
Connection data

Connection method	Push-in connection
Conductor cross section flexible	0.2 mm² ... 2.5 mm²
Conductor cross section rigid	0.2 mm² ... 4 mm²
Conductor cross section AWG	24 ... 12

Interfaces

Transmission speed	90 Mbps
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Dimensions

Dimensional drawing	
Width	17.7 mm
Height	109.3 mm
Depth	77.5 mm (incl. DIN rail 7.5 mm)
Horizontal pitch	1 Div.

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Material specifications

Color	black (RAL 9005)
	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	6 V DC
	4 V AC
Rated current	600 mA (40 °C)
Operating effective current I_C at U_C	$\leq 800 \mu A$ (per path)
Residual current I_{PE}	$\leq 800 \mu A$ (per path)
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)	2.5 kA
Total discharge current I_{total} (8/20) μs	20 kA
Voltage protection level U_p (line-line)	$\leq 90 V$ (C1 - 1 kV / 500 A)
	$\leq 30 V$ (C3 - 25 A)
	$\leq 30 V$ (C3 - 50 A)
	$\leq 140 V$ (C2 - 10 kV / 5 kA)
Voltage protection level U_p (line-earth)	$\leq 90 V$ (C1 - 1 kV / 500 A)
	$\leq 140 V$ (C2 - 10 kV / 5 kA)
	$\leq 30 V$ (C3 - 25 A)
	$\leq 30 V$ (C3 - 50 A)
Voltage protection level U_p static (line-line)	$\leq 45 V$ (C1 - 1 kV / 500 A)
Voltage protection level U_p static (line-earth)	$\leq 45 V$ (C1 - 1 kV / 500 A)
Response time t_A (line-line)	$\leq 1 ns$
Response time t_A (line-earth)	$\leq 1 ns$
Input attenuation aE, sym.	typ. 0.3 dB ($\leq 10 MHz/150 \Omega$)
Input attenuation aE, asym.	typ. 0.3 dB ($\leq 10 MHz/150 \Omega$)
Cut-off frequency f_g (3 dB), sym. in 150 Ω system	typ. 60 MHz
Cut-off frequency f_g (3 dB), asym. (signal ground) in 150 Ω system	typ. 60 MHz
Capacity (Core-Core)	typ. 30 pF
Capacity (line-signalground)	typ. 30 pF
Resistance per path	1.2 $\Omega \pm 5 \%$
Surge protection fault message	Optical, multi-stage

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Max. required back-up fuse	600 mA (FF)
Impulse durability (line-line)	C1 - 1 kV / 500 A
	C2 - 10 kV / 5 kA
	C2 - 10 kA
	C3 - 25 A
	C3 - 50 A
Impulse durability (line-earth)	C1 - 1 kV / 500 A
	C2 - 10 kV / 5 kA
	C2 - 10 kA
	C3 - 25 A
	C3 - 50 A
Impulse durability (line-signalground)	D1 - 2.5 kA
	C1 - 1 kV / 500 A
	C2 - 10 kV / 5 kA
	C2 - 10 kA
	C3 - 25 A
Pulse reset time (line-line)	C3 - 50 A
	≤ 10 ms
Pulse reset time (line-signalground)	≤ 10 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	≤ 4000 m (amsl)

Standards and regulations

Air clearances and creepage distances

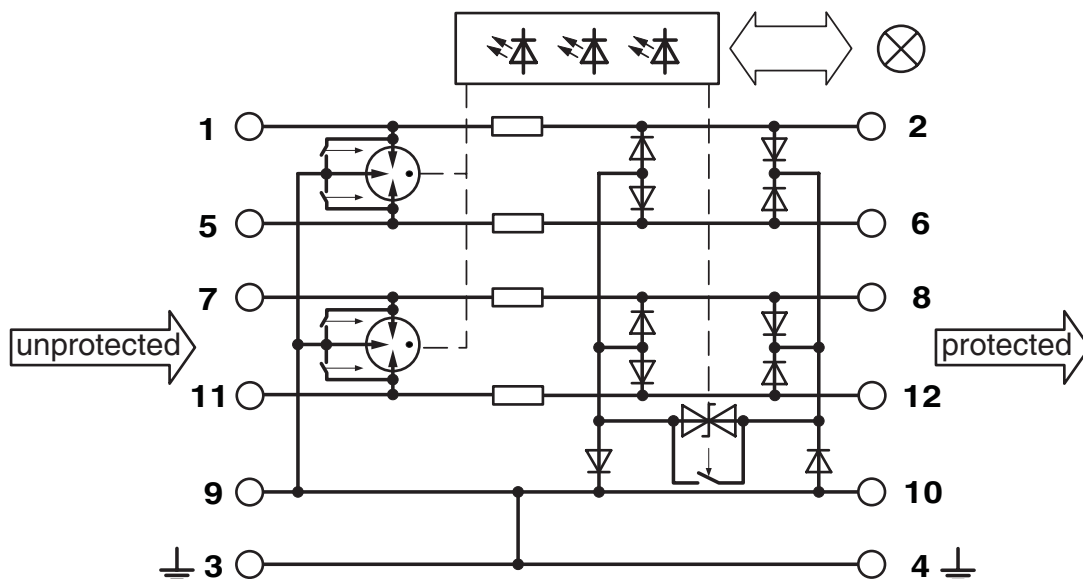
Standards/regulations	IEC 60664-1
Standards/specifications	IEC 61643-21
Note	2000 + A1:2008 + A2:2012
Standards/specifications	EN 61643-21
Note	2001 + A1:2009 + A2:2013
Standards/specifications	EN 61000-6-2
Note	2005
Standards/specifications	EN 61000-6-3
Note	2007 + A1:2011

Mounting

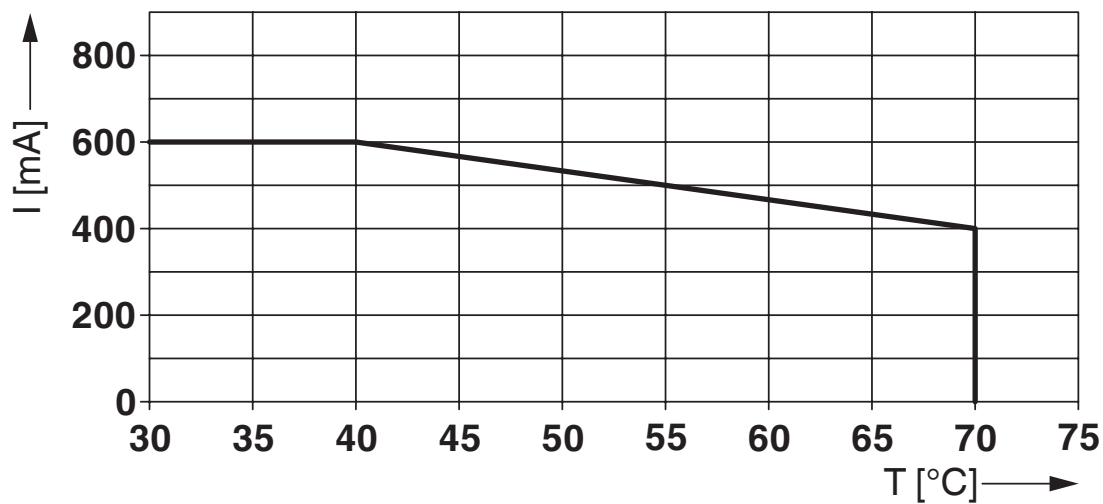
Mounting type	DIN rail: 35 mm
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Drawings

Circuit diagram



Diagram



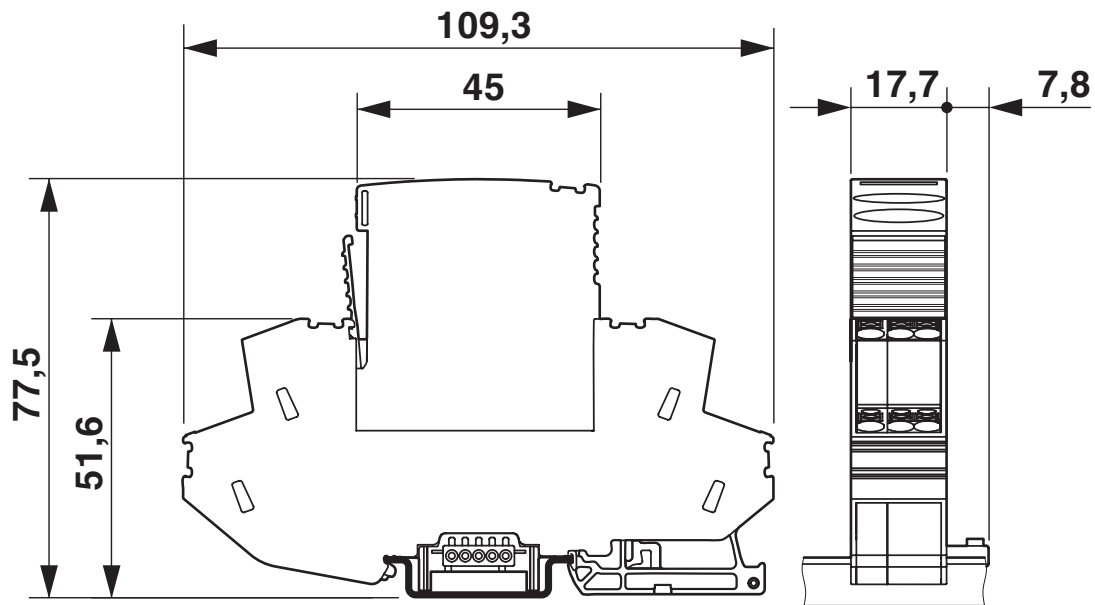
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Dimensional drawing



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2801291>



CSA

Approval ID: 2761632



EAC

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



UL Listed

Approval ID: FILE E 138168



CSAus

Approval ID: 2761632

Functional Safety

Approval ID: 13-04-032 R017 V4R0

cCSAus

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Classifications

ECLASS

ECLASS-11.0	27130807
ECLASS-13.0	27171503

ETIM

ETIM 9.0	EC001466
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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	774aa595-6320-40c4-bbfd-8d63f1a9121a

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Mandatory accessories

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

2801296

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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/us/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/us/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/us/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/us/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/us/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/us/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/us/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

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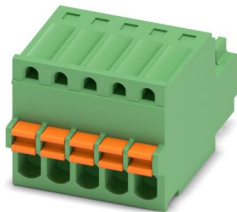


End clamp, stable construction for DIN rail bus connector

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

1881354

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PCB connector, nominal cross section: 0.5 mm², color: green, nominal current: 4 A, rated voltage (III/2): 160 V, contact surface: Tin, contact connection type: 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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ZBN 18 CUS - Zack marker strip

0825059

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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

SSA 3-6 - Shield connection

2839295

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

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SSA 5-10 - Shield connection

2839512

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

X-PEN 0,35 - Marker pen

0811228

<https://www.phoenixcontact.com/us/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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PT-IQ-5-HF-5DC-P - Surge protection plug

2800795

<https://www.phoenixcontact.com/us/products/2800795>

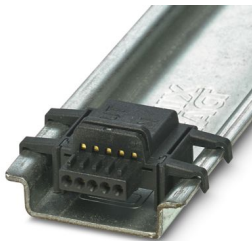


Surge protection plug with integrated multi-stage status indicator on the module for five signal wires. For HF applications. Nominal voltage: 5 V DC

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

2906878

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