

PT-IQ-2X1+F-24DC-UT - Surge protection device



2800788

<https://www.phoenixcontact.com/pc/products/2800788>

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

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	2800788
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	CL2151
Catalog page	Page 133 (C-4-2019)
GTIN	4046356645201
Weight per piece (including packing)	112 g
Weight per piece (excluding packing)	107 g
Customs tariff number	85363010
Country of origin	DE

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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

IEC test classification	C1
	C2
	C3
	D1
Type	DIN rail module, two-section, divisible
Product type	Surge protection for MCR technology
Product family	PLUGTRAB IQ
Surge protection fault message	Optical, multi-stage

Insulation characteristics

Overvoltage category	III
Pollution degree	2

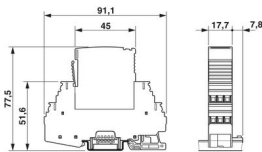
Electrical properties

Nominal voltage U_N	24 V DC
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Connection data

Connection method	Screw connection
Screw thread	M3
Tightening torque	0.5 Nm
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

Dimensions

Dimensional drawing	
Width	17.7 mm
Height	91.1 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)
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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	30 V DC
	21 V AC
Rated current	1000 mA (40 °C)
Operating effective current I_C at U_C	≤ 1 mA (per path)
Residual current I_{PE}	≤ 1 μ A
Nominal discharge current I_n (8/20) μ s (line-ground)	10 kA
Pulse discharge current I_{imp} (10/350) μ s (line-earth)	2.5 kA
Total discharge current I_{total} (8/20) μ s	20 kA
Voltage protection level U_p (line-earth)	≤ 800 V (C1 - 1 kV / 500 A)
	≤ 950 V (C2 - 10 kV / 5 kA)
	≤ 780 V (C3 - 25 A)
	≤ 950 V (C3 - 50 A)
Voltage protection level U_p (line-signalground)	≤ 75 V (C1 - 1 kV / 500 A)
	≤ 135 V (C2 - 10 kV / 5 kA)
	≤ 55 V (C3 - 25 A)
	≤ 60 V (C3 - 50 A)
Voltage protection level U_p static (line-earth)	≤ 90 V (C3 - 25 A)
	≤ 90 V (C3 - 50 A)
Response time t_A (line-earth)	≤ 100 ns
Response time t_A (line-signalground)	≤ 1 ns
Input attenuation aE, asym.	typ. 0.3 dB (≤ 300 kHz / 150 Ω)
Cut-off frequency f_g (3 dB), asym. (signal ground) 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	1 A (FF)
Impulse durability (line-earth)	C1 - 1 kV / 500 A
	C2 - 10 kV / 5 kA
	C2 - 10 kA

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Impulse durability (line-signalground)	C3 - 50 A
	D1 - 2.5 kA
	C1 - 1 kV / 500 A
	C2 - 10 kV / 5 kA
	C2 - 10 kA
	C3 - 50 A
	D1 - 2,5 kA
Pulse reset time (line-earth)	≤ 30 ms
Pulse reset time (line-signalground)	≤ 350 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)
Permissible humidity (operation)	5 % ... 95 %

Standards and regulations

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

Mounting

Mounting type	DIN rail: 35 mm
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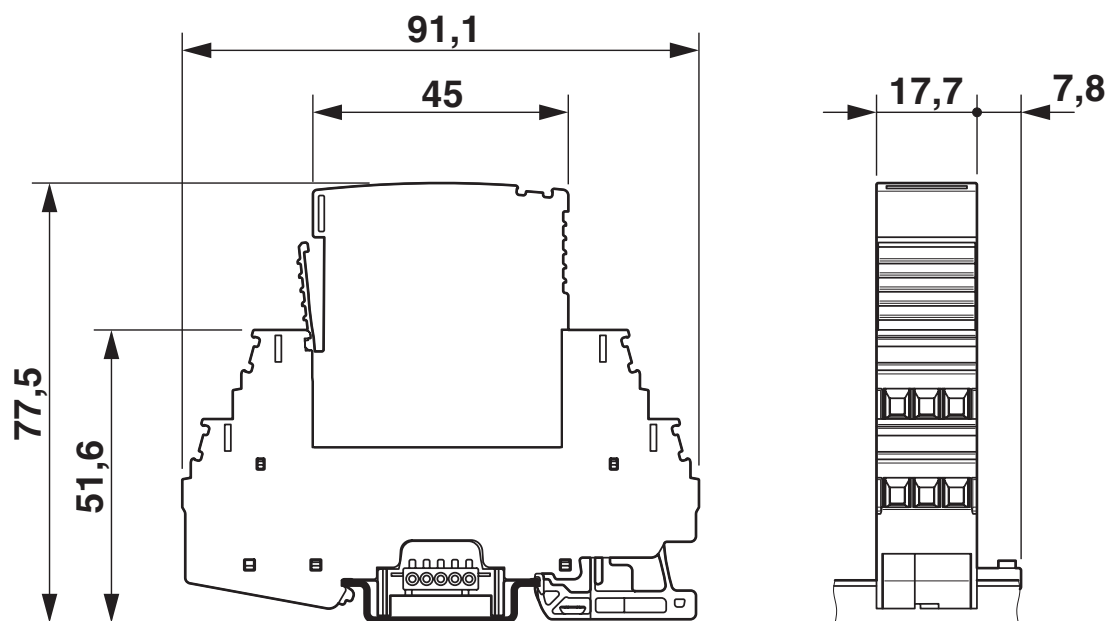
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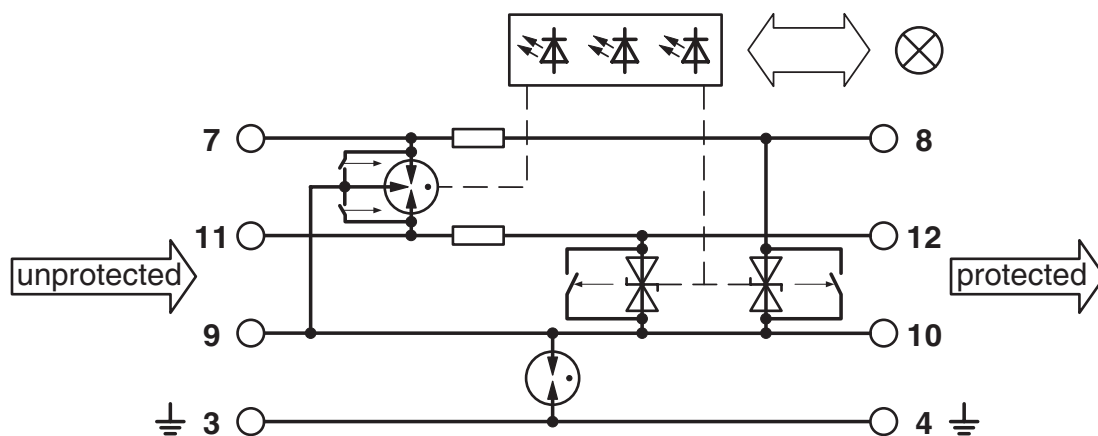
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Drawings

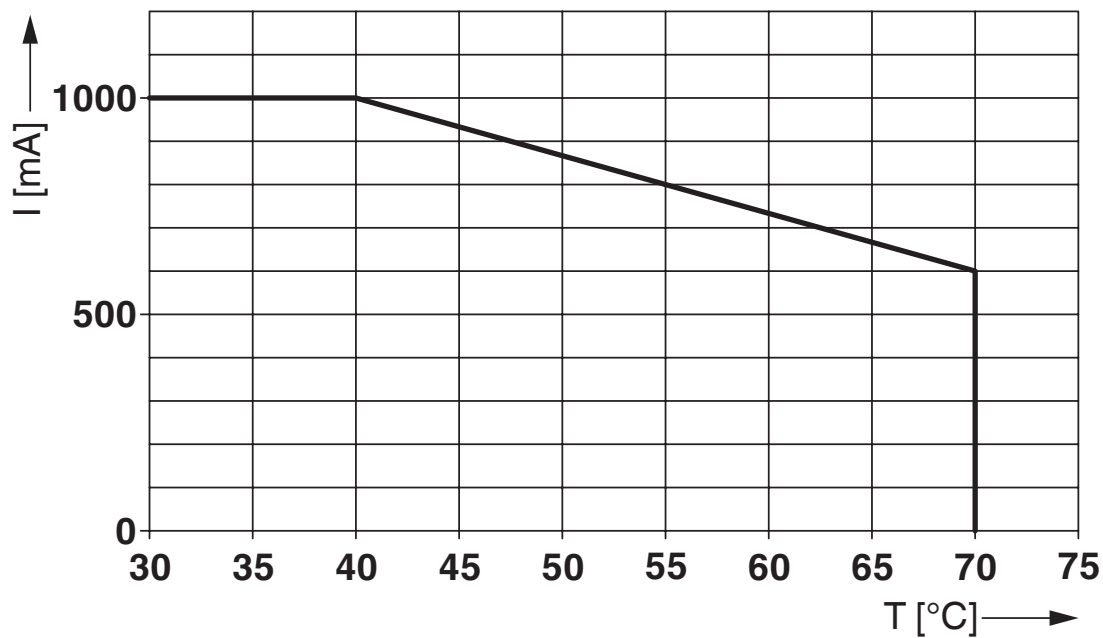
Dimensional drawing



Circuit diagram



Diagram



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/pc/products/2800788>



CSA

Approval ID: 2761632



EAC

Approval ID: EAC-Zulassung



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	27171501

ETIM

ETIM 9.0	EC001625
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UNSPSC

UNSPSC 21.0	39121600
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Environmental product compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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