

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



2801248

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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	2801248
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL22
Product key	CL2153
Catalog page	Page 133 (C-4-2019)
GTIN	4046356766319
Weight per piece (including packing)	116 g
Weight per piece (excluding packing)	111.3 g
Customs tariff number	85363030
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.

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
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	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

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.

Material specifications

Color	black (RAL 9005)
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	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	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
Nominal discharge current I_n (8/20) μ s (line-signal 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 (line-signalground)	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
	C3 - 50 A
	D1 - 2.5 kA

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Impulse durability (line-signalground)	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)

Standards and regulations

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 61000-6-3
Note	2007 + A1:2011
Standards/specifications	EN 61000-6-2
Note	2005

Mounting

Mounting type	DIN rail: 35 mm
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