

Surge protection device - PT-IQ-5-HF-12DC-PT - 2801293

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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).

The figure shows the PT-IQ-5-HF +F-5DC-PT version

Product Features

- Surge protection system
- Multi-level state monitoring
- Collective message about supply and remote module
- System supplied via DIN rail bus
- Up to 28 protection modules per supply module
- For HF applications, thanks to high transmission speeds
- Maximum ease of maintenance thanks to the two-piece design
- Codable plug
- Impedance-neutral disconnection of plug for maintenance purposes
- Base element remains an integral part of the installation



Key commercial data

Packing unit	1 pc
Custom tariff number	85363010
Country of origin	Germany

Technical data

Dimensions

Height	109.3 mm
Width	17.7 mm
Depth	77.5 mm
Horizontal pitch	1 Div.

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Technical data

Ambient conditions

Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Degree of protection	IP20

General

Housing material	PA 6.6
Inflammability class according to UL 94	V0
Color	black
Standards for air and creepage distances	IEC 60664-1
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
Transmission speed	90 MBit/s

Protective circuit

IEC test classification	C1
	C2
	C3
	D1
Nominal voltage U_N	12 V DC
Maximum continuous operating voltage U_C	15 V DC
	10 V AC
Nominal current I_N	600 mA (up to 40 °C)
Operating effective current I_C at U_C	$\leq 100 \mu\text{A}$ (per system)
Residual current I_{PE}	$\leq 100 \mu\text{A}$ (per system)
Nominal discharge current I_n (8/20) μs (Core-Core)	10 kA
Nominal discharge current I_n (8/20) μs (Core-Earth)	10 kA
Total surge current (8/20) μs	20 kA
Impulse discharge current (10/350) μs , peak value I_{imp}	2.5 kA
Voltage protection level U_P (Core-Core)	$\leq 90 \text{ V}$ (C1 - 1 kV/500 A)
	$\leq 40 \text{ V}$ (C3 - 25 A)
	$\leq 40 \text{ V}$ (C3 - 50 A)
	$\leq 145 \text{ V}$ (C2 - 10 kV / 5 kA)
Voltage protection level U_P (Core-Earth)	$\leq 90 \text{ V}$ (C1 - 1 kV/500 A)
	$\leq 145 \text{ V}$ (C2 - 10 kV / 5 kA)
	$\leq 40 \text{ V}$ (C3 - 25 A)
	$\leq 40 \text{ V}$ (C3 - 50 A)

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Protective circuit

Voltage protection level U_p static (core-core)	≤ 55 V (C1 - 1 kV/500 A)
Voltage protection level U_p static (core-ground)	≤ 55 V (C1 - 1 kV/500 A)
Response time t_A (Core-Core)	≤ 1 ns
Response time t_A (Core-Earth)	≤ 1 ns
Input attenuation a_E , sym.	typ. 0.3 dB (≤ 10 MHz/150 Ω)
Cut-off frequency f_g (3 dB), sym. in 150 Ohm system	> 60 MHz
Capacity (Core-Core)	typ. 30 pF
Capacity (Core-GND)	typ. 30 pF
Resistance in series	1.2 $\Omega \pm 5$ %
Surge protection fault message	Optical, multi-stage
Max. required back-up fuse	0.6 A (FF)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Core)	C1 (1 kV/500 A)
	C2 (10 kV/5 kA)
	C2 (10 kA)
	C3 (25 A)
	C3 (50 A)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C1 (1 kV / 500 A)
	C2 (10 kV / 5 kA)
	C2 (10 kA)
	C3 (25 A)
	C3 (50 A)
	D1 - 2,5 kA
Surge carrying capacity in acc. with IEC 61643-21 (Core-GND)	C1 (1 kV/500 A)
	C2 (10 kV/5 kA)
	C2 (10 kA)
	C3 (25 A)
	C3 (50 A)
Pulse reset time t_r in acc. with IEC 61643-21 (Core-Core)	≤ 15 ms
Pulse reset time t_r in acc. with IEC 61643-21 (Core-GND)	≤ 15 ms
Overload failure mode as per IEC 61643-21 (plug)	Mode 2

Connection data

Connection method	Push-in connection
Connection type IN	Push-in connection
Connection type OUT	Push-in connection
Stripping length	10 mm
Conductor cross section stranded min.	0.2 mm ²
Conductor cross section stranded max.	2.5 mm ²

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Connection data

Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	4 mm ²
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	12

Connection, equipotential bonding

Connection method	NS 35 DIN rail or connection terminal block
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Classifications

eCl@ss

eCl@ss 4.0	27140201
eCl@ss 4.1	27130801
eCl@ss 5.0	27130801
eCl@ss 5.1	27130801
eCl@ss 6.0	27130807
eCl@ss 7.0	27130807
eCl@ss 8.0	27130807

ETIM

ETIM 3.0	EC000943
ETIM 4.0	EC000943
ETIM 5.0	EC000943

UNSPSC

UNSPSC 6.01	30212010
UNSPSC 7.0901	39121610
UNSPSC 11	39121610
UNSPSC 12.01	39121610
UNSPSC 13.2	39121620

Approvals

Approvals

Approvals

UL Listed

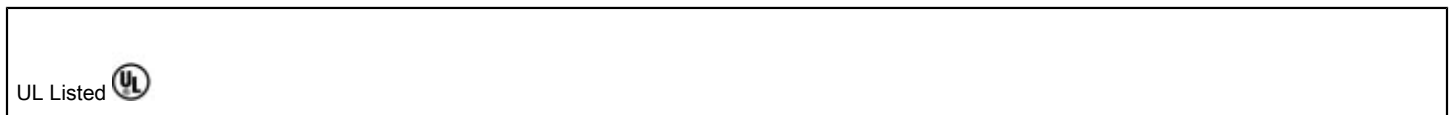
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Approvals

Ex Approvals

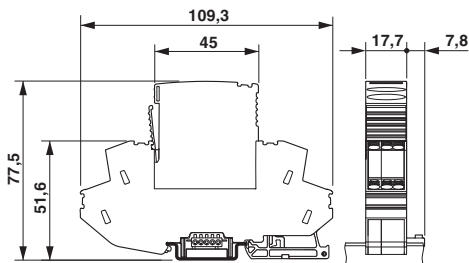
Approvals submitted

Approval details

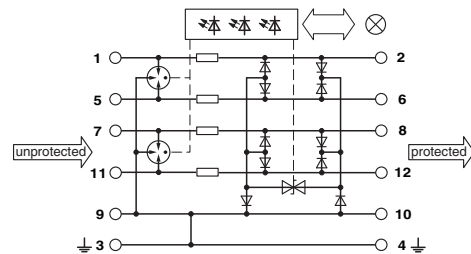


Drawings

Dimensioned drawing



Circuit diagram



Application drawing

