

Surge protection device - PT-IQ-5-HF+F-12DC-PT - 2801295

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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
Weight per Piece (excluding packing)	140.0 GRM
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
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}	$\leq 10 \mu\text{A}$
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)	$\leq 730 \text{ V}$ (C1 - 1 kV/500 A)
	$\leq 900 \text{ V}$ (C2 - 10 kV / 5 kA)
	$\leq 900 \text{ V}$ (C3 - 25 A)
	$\leq 900 \text{ V}$ (C3 - 50 A)
Voltage protection level U_p (Core-GND)	$\leq 90 \text{ V}$ (C1 - 1 kV/500 A)

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Protective circuit

	$\leq 40 \text{ V (C3 - 25 A)}$
	$\leq 40 \text{ V (C3 - 50 A)}$
	$\leq 145 \text{ V (C2 - 10 kV / 5 kA)}$
Voltage protection level U_p static (core-core)	$\leq 55 \text{ V (C1 - 1 kV/500 A)}$
Voltage protection level U_p static (core-GND)	$\leq 55 \text{ V (C1 - 1 kV/500 A)}$
Response time t_A (Core-Core)	$\leq 1 \text{ ns}$
Response time t_A (Core-Earth)	$\leq 1 \text{ ns}$
	$\leq 100 \text{ ns}$
Input attenuation a_E , sym.	typ. 0.3 dB ($\leq 10 \text{ MHz/150 } \Omega$)
Cut-off frequency f_g (3 dB), sym. in 150 Ohm system	$> 60 \text{ MHz}$
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)	$\leq 15 \text{ ms}$
Pulse reset time t_r in acc. with IEC 61643-21 (Core-Earth)	$\leq 15 \text{ ms}$
Pulse reset time t_r in acc. with IEC 61643-21 (Core-GND)	$\leq 15 \text{ ms}$
Overload failure mode as per IEC 61643-21 (plug)	Mode 2

Connection data

Connection method	Push-in connection
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Connection data

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
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

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Approvals

Approvals

UL Listed

Ex Approvals

Approvals submitted

Approval details



Drawings

Circuit diagram

