

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

package_quantity	1
GTIN	4046356766746

Technical data

Dimensions

Height	109.3 mm
Width	17.7 mm
Depth	77.5 mm
Pitch unit	1 Div.

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

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Technical data

General

Standards for air and creepage distances	IEC 60664-1
Mounting type	DIN rail: 35 mm
Design	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
IEC test classification	C2
IEC test classification	C3
IEC test classification	D1
Nominal voltage U_N	12 V DC
Maximum continuous operating voltage U_C	15 V DC
Maximum continuous operating voltage U_C	10 V AC
Nominal current I_N	600 mA (up to 40 °C)
Operating effective current I_C at U_C	$\leq 100 \mu A$ (per system)
Residual current I_{PE}	$\leq 100 \mu A$ (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)	$\leq 90 V$ (C1 - 1 kV/500 A)
Voltage protection level U_P (Core-Core)	$\leq 40 V$ (C3 - 25 A)
Voltage protection level U_P (Core-Core)	$\leq 40 V$ (C3 - 50 A)
Voltage protection level U_P (Core-Core)	$\leq 145 V$ (C2 - 10 kV / 5 kA)
Voltage protection level U_P (Core-Earth)	$\leq 90 V$ (C1 - 1 kV/500 A)
Voltage protection level U_P (Core-Earth)	$\leq 145 V$ (C2 - 10 kV / 5 kA)
Voltage protection level U_P (Core-Earth)	$\leq 40 V$ (C3 - 25 A)
Voltage protection level U_P (Core-Earth)	$\leq 40 V$ (C3 - 50 A)
Voltage protection level U_P static (core-core)	$\leq 55 V$ (C1 - 1 kV/500 A)
Voltage protection level U_P static (core-ground)	$\leq 55 V$ (C1 - 1 kV/500 A)
Response time t_A (Core-Core)	$\leq 1 ns$
Response time t_A (Core-Earth)	$\leq 1 ns$
Input attenuation a_E , sym.	typ. 0.3 dB ($\leq 10 MHz/150 \Omega$)
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 $\Omega \pm 5 \%$
Message: Surge protection fault	Optical, multi-stage
Max. required back-up fuse	0.6 A (FF)

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Technical data

Protective circuit

Surge carrying capacity in acc. with IEC 61643-21 (Core-Core)	C1 (1 kV/500 A)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Core)	C2 (10 kV/5 kA)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Core)	C2 (10 kA)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Core)	C3 (25 A)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Core)	C3 (50 A)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C1 (1 kV / 500 A)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C2 (10 kV / 5 kA)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C2 (10 kA)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C3 (25 A)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C3 (50 A)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	D1 (2.5 kA)
Surge carrying capacity in acc. with IEC 61643-21 (Core-GND)	C1 (1 kV/500 A)
Surge carrying capacity in acc. with IEC 61643-21 (Core-GND)	C2 (10 kV/5 kA)
Surge carrying capacity in acc. with IEC 61643-21 (Core-GND)	C2 (10 kA)
Surge carrying capacity in acc. with IEC 61643-21 (Core-GND)	C3 (25 A)
Surge carrying capacity in acc. with IEC 61643-21 (Core-GND)	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
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

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classifications

eCl@ss

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

accessories

Marker pen

X-PEN 0,35 - 0811228



Terminal marking

ZBF 5:UNBEDRUCKT - 0808642



ZBF 5/WH-100:UNBEDRUCKT - 0808668



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accessories

Labeled terminal marker

ZBF 5,LGS:FORTL.ZAHLEN - 0808671



ZBF 5,LGS:GERADE ZAHLEN - 0810821



ZBF 5,LGS:UNGERADE ZAHLEN - 0810863



ZBF 5,QR:FORTL.ZAHLEN - 0808697



Device marking

ZBN 18:UNBEDRUCKT - 2809128



Mounting material

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accessories

E/ME TBUS NS35 GY - 2713780



PCB plug

FK-MC 0,5/ 5-ST-2,5 - 1881354



accessories

ZBF 15:SO/CMS - 0814717



ZBF 5:SO/CMS - 0808707



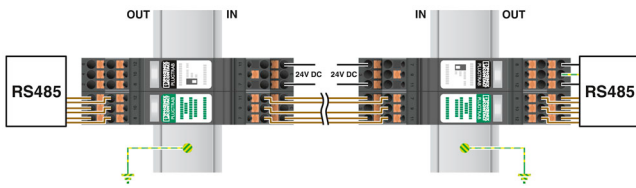
ZBN 18:SO/CMS - 0800763



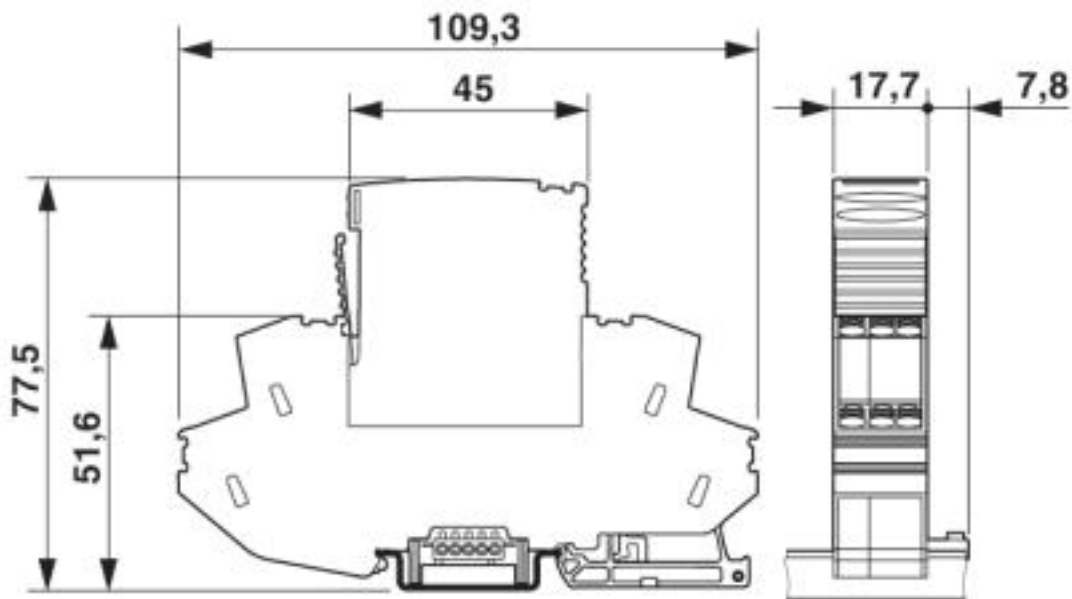
Drawings

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Application drawing

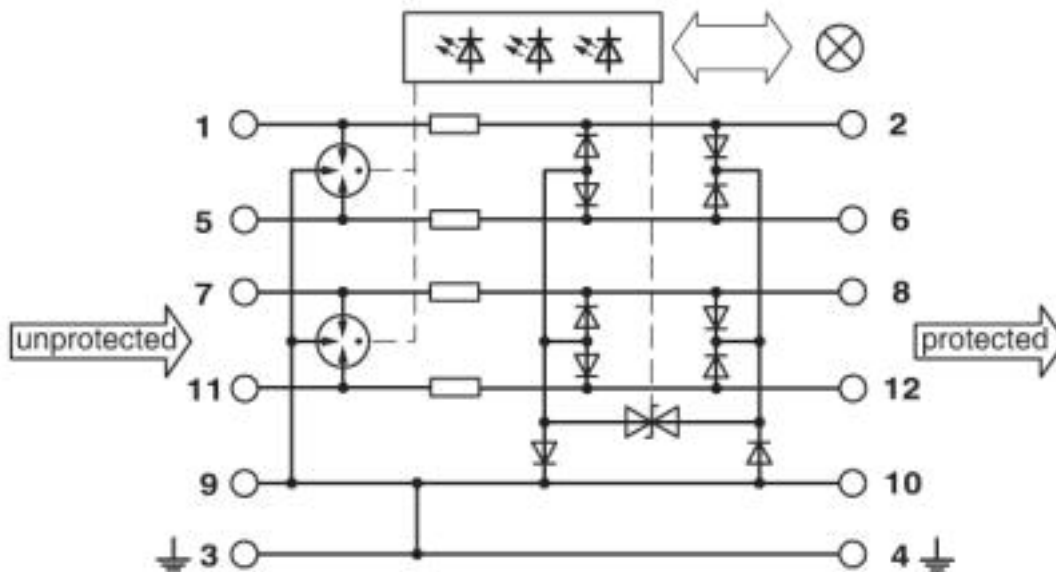


Dimensioned drawing



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Circuit diagram



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