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## Surge protection device - PT-IQ-5-HF-12DC-UT - 2800799

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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).

### Why buy this product

- 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 STK
GTIN	 4 046356 665216

### Technical data

#### Dimensions

Height	91 mm
Width	17.7 mm
Depth	77.5 mm
Horizontal pitch	1 Div.

#### Ambient conditions

Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

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## Technical data

### Ambient conditions

Degree of protection	IP20
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### General

Housing material	PA 6.6
Flammability rating according to UL 94	V-0
Color	jet black RAL 9005
Standards for clearances 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 voltage $U_C$	15 V DC
	10 V AC
Nominal current $I_N$	600 mA (40°C)
Operating effective current $I_C$ at $U_C$	$\leq 100 \mu\text{A}$ (per path)
Residual current $I_{PE}$	$\leq 100 \mu\text{A}$ (per path)
Nominal discharge current $I_n$ (8/20) $\mu\text{s}$ (Core-Core)	10 kA
Nominal discharge current $I_n$ (8/20) $\mu\text{s}$ (Core-Earth)	10 kA
Pulse discharge current $I_{imp}$ (10/350) $\mu\text{s}$ (core-ground)	2.5 kA
Impulse discharge current (10/350) $\mu\text{s}$ , peak value $I_{imp}$	2.5 kA
Voltage protection level $U_p$ (core-core)	$\leq 90 \text{ V}$ (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)
Voltage protection level $U_p$ (core-ground)	$\leq 90 \text{ V}$ (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)
Voltage protection level $U_p$ static (core-core)	$\leq 55 \text{ V}$ (C1 - 1 kV/500 A)
Voltage protection level $U_p$ static (core-ground)	$\leq 55 \text{ V}$ (C1 - 1 kV/500 A)
Response time $t_A$ (Core-Core)	$\leq 1 \text{ ns}$
Response time $t_A$ (Core-Earth)	$\leq 1 \text{ ns}$
Input attenuation aE, sym.	typ. 0.3 dB ( $\leq 10 \text{ MHz}/150 \Omega$ )

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## Technical data

### Protective circuit

Input attenuation aE, asym.	typ. 0.3 dB ( $\leq 10$ MHz/150 $\Omega$ )
Cut-off frequency fg (3 dB), sym. in 150 Ohm system	typ. 60 MHz
Cut-off frequency fg (3 dB), asym. (GND) in 150 Ohm system	typ. 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	600 mA (FF)
Impulse durability (conductor-conductor)	C1 - 1 kV/500 A C2 - 10 kV/5 kA C2 - 10 kA C3 - 50 A
Impulse durability (conductor-ground)	C1 - 1 kV/500 A C2 - 10 kV/5 kA C2 - 10 kA C3 - 50 A D1 - 2,5 kA
Impulse durability (conductor-GND)	C1 - 1 kV/500 A C2 - 10 kV/5 kA C2 - 10 kA C3 - 50 A
Pulse reset time (conductor-conductor)	$\leq 15$ ms
Pulse reset time (conductor-ground)	$\leq 15$ ms

### Connection data

Connection method	Screw connection
Connection type IN	Screw terminal blocks
Connection type OUT	Screw terminal blocks
Screw thread	M3
Tightening torque	0.5 Nm
Stripping length	8 mm
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	4 mm <sup>2</sup>
Conductor cross section AWG min.	24
Conductor cross section AWG 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
eCl@ss 9.0	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

UL Listed / EAC / EAC / CSA / CSAus / cCSAus

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#### Ex Approvals

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Approvals submitted

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### Approval details

UL Listed
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EAC
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# Surge protection device - PT-IQ-5-HF-12DC-UT - 2800799

## Approvals

EAC

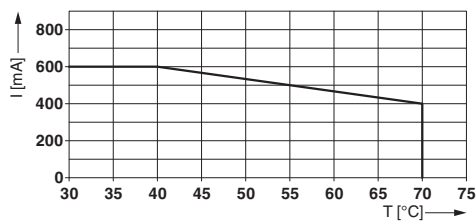
CSA

CSAus

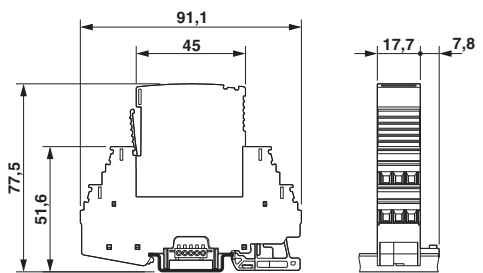
cCSAus

## Drawings

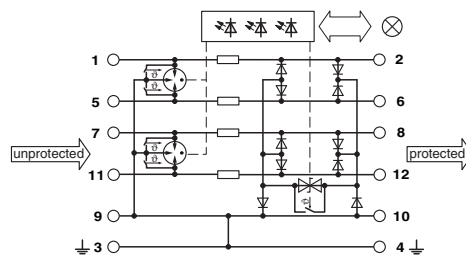
Diagram



Dimensional drawing

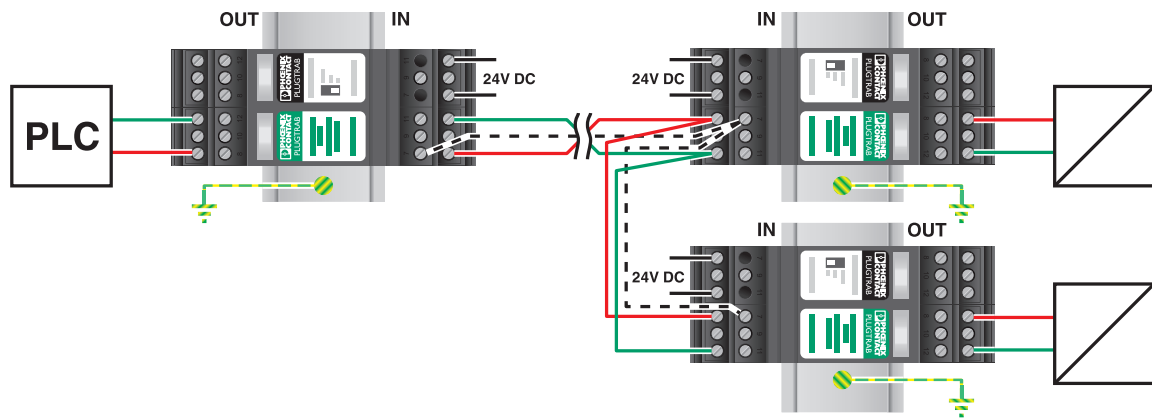


Circuit diagram



## Surge protection device - PT-IQ-5-HF-12DC-UT - 2800799

Application drawing



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Product	Code	Reference	Product link
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