

## Surge protection device - PT-IQ-3-HF+F-12DC-PT - 2801289

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



Surge protection, consisting of protective plug and base element, with integrated multi-stage status indicator on the module for three signal wires with common reference potential. For HF applications and telecommunications interfaces without supply voltage (up to 90 Mbps).

The figure shows the PT-IQ-1x2-24DC-PT version



### 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.   |

#### 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 |

# Surge protection device - PT-IQ-3-HF+F-12DC-PT - 2801289

## Technical data

### General

|                     |                                                                                    |
|---------------------|------------------------------------------------------------------------------------|
| 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 system)      |
| Residual current $I_{PE}$                                               | $\leq 10 \mu\text{A}$                    |
| 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                                   |
| Total surge current (8/20) $\mu\text{s}$                                | 20 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)    |
|                                                                         | $\leq 40 \text{ V}$ (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-ground)                            | $\leq 730 \text{ V}$ (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)    |
|                                                                         | $\leq 40 \text{ V}$ (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)                                        | $\leq 1 \text{ ns}$                      |

# Surge protection device - PT-IQ-3-HF+F-12DC-PT - 2801289

## Technical data

### Protective circuit

|                                                        |                                                          |
|--------------------------------------------------------|----------------------------------------------------------|
|                                                        | $\leq 100 \text{ ns}$                                    |
| Input attenuation aE, sym.                             | typ. 0.3 dB ( $\leq 10 \text{ MHz}/150 \text{ }\Omega$ ) |
| 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                                   | $1.2 \text{ }\Omega \pm 5 \%$                            |
| Surge protection fault message                         | Optical, multi-stage                                     |
| Max. required back-up fuse                             | 0.6 A (FF)                                               |
| Impulse durability (conductor-conductor)               | C1 (1 kV/500 A)                                          |
|                                                        | C2 (10 kV/5 kA)                                          |
|                                                        | C2 (10 kA)                                               |
|                                                        | C3 (25 A)                                                |
|                                                        | C3 (50 A)                                                |
| Impulse durability (conductor-ground)                  | C1 (1 kV / 500 A)                                        |
|                                                        | C2 (10 kV / 5 kA)                                        |
|                                                        | C2 (10 kA)                                               |
|                                                        | C3 (25 A)                                                |
|                                                        | 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 - 25 A                                                |
|                                                        | C3 - 50 A                                                |
| Pulse reset time (conductor-conductor)                 | $\leq 15 \text{ ms}$                                     |
| Pulse reset time (conductor-ground)                    | $\leq 15 \text{ ms}$                                     |
| Pulse reset time (conductor-GND)                       | $\leq 15 \text{ ms}$                                     |
| Overload failure mode (connector)                      | 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 flexible min. | $0.2 \text{ mm}^2$ |
| Conductor cross section flexible max. | $2.5 \text{ mm}^2$ |
| Conductor cross section solid min.    | $0.2 \text{ mm}^2$ |
| Conductor cross section solid max.    | $4 \text{ mm}^2$   |

## Surge protection device - PT-IQ-3-HF+F-12DC-PT - 2801289

### Technical data

#### Connection data

|                                  |    |
|----------------------------------|----|
| 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 |
|-------------------|---------------------------------------------|

### 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 |

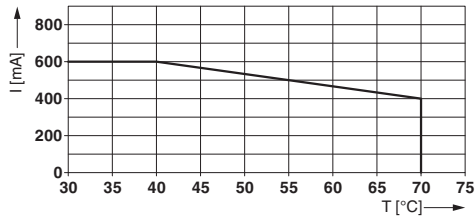
#### UNSPSC

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

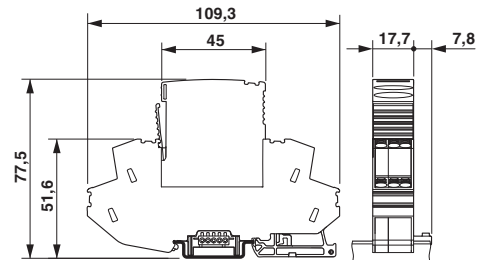
### Drawings

## Surge protection device - PT-IQ-3-HF+F-12DC-PT - 2801289

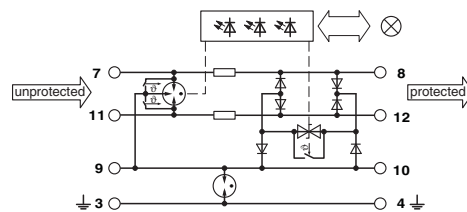
Diagram



Dimensional drawing



Circuit diagram



单击下面可查看定价，库存，交付和生命周期等信息

[>>Phoenix Contact\(菲尼克斯\)](#)