

# Surge protection device - PT-IQ-4X1-48DC-UT - 2801219

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Surge protection, consisting of protective plug and base element, with integrated multi-stage status indicator on the module for four signal wires with common reference potential.

The figure shows the PT-IQ-2x2-24DC-UT version



## Key Commercial Data

|                                      |   |
|--------------------------------------|---|
| Packing unit                         | 1 pc  |
| GTIN                                 | <br>4 046356 745093 |
| Weight per Piece (excluding packing) | 145.4 g   |
| Custom tariff number                 | 85363010  |
| Country of origin                    | Germany   |
| Note                                 | Made to Order (non-returnable)  |

## 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 |
| Degree of protection                    | IP20             |

### General

|   |        |
|---|--------|
| Housing material                        | PA 6.6 |
| Inflammability class according to UL 94 | V-0    |

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## Technical data

### General

|                     |  |
|---------------------|--|
| Color               | jet black RAL 9005   |
| 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 |

### Protective circuit

|   |   |
|---|---|
| IEC test classification   | C1  |
|   | C2  |
|   | C3  |
|   | D1  |
| Nominal voltage $U_N$   | 48 V DC   |
| Maximum continuous voltage $U_C$  | 53 V DC   |
|   | 37 V AC   |
| Nominal current $I_N$   | 300 mA  |
| Operating effective current $I_C$ at $U_C$                              | $\leq 6 \mu\text{A}$ (per path)                   |
| Residual current $I_{PE}$   | $\leq 6 \mu\text{A}$ (per path)                   |
| 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-ground)                            | $\leq 105 \text{ V}$ (C1 - 1 kV/500 A)            |
|   | $\leq 160 \text{ V}$ (C2 - 10 kV / 5 kA)          |
|   | $\leq 90 \text{ V}$ (C3 - 25 A)                   |
| Response time $t_A$ (Core-Earth)  | $\leq 1 \text{ ns}$                               |
| Input attenuation $a_E$ , asym.   | typ. 0.3 dB ( $\leq 530 \text{ kHz}/150 \Omega$ ) |
| Cut-off frequency $f_g$ (3 dB), asym. (PE) in 150 Ohm system            | typ. 1.9 MHz                                      |
| Capacity (Core-GND)   | typ. 1.5 nF                                       |
| Resistance in series  | 1.2 $\Omega \pm 5 \%$                             |
| Max. required back-up fuse  | 315 mA (FF)                                       |
| Impulse durability (conductor-ground)                                   | C1 - 1 kV/500 A                                   |
|   | C2 - 10 kV/5 kA                                   |
|   | C2 - 10 kA  |
|   | C3 - 25 A   |
|   | D1 - 2,5 kA                                       |
| Pulse reset time (conductor-ground)                                     | $\leq 1500 \text{ ms}$                            |

### 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                |

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## Technical data

### Connection data

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

## 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 | 27141116 |

### ETIM

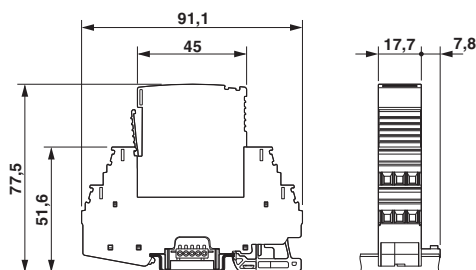
|          |          |
|----------|----------|
| ETIM 3.0 | EC000943 |
| ETIM 4.0 | EC000899 |
| ETIM 5.0 | EC000943 |

### UNSPSC

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

## Drawings

Dimensional drawing



Circuit diagram

