

PT-IQ-4X1+F-24DC-UT - Surge protection device



2800983

<https://www.phoenixcontact.com/us/products/2800983>

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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. Indirect grounding via gas-filled surge arrester.

Your advantages

- Predictive monitoring with 3-stage LED display
- Integration of the status message into the system controller via group remote signaling
- Install quickly and error-free with DIN rail connectors
- Maximum ease of maintenance, thanks to the 2-piece design
- Maximum protection for MCR applications with high discharge capacity

Commercial data

| | |
|--------------------------------------|---------------------|
| Item number | 2800983 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | CL22 |
| Product key | CL2151 |
| Catalog page | Page 133 (C-4-2019) |
| GTIN | 4046356664165 |
| Weight per piece (including packing) | 127 g |
| Weight per piece (excluding packing) | 122 g |
| Customs tariff number | 85363010 |
| Country of origin | DE |

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Technical data

Notes

General

| | |
|------|---|
| Note | Remote signaling as well as the power supply of the DIN rail connector are established by snapping the module into place on the DIN rail connector. |
|------|---|

Product properties

| | |
|--------------------------------|---|
| IEC test classification | C1 C2 C3 D1 |
| Type | DIN rail module, two-section, divisible |
| Product type | Surge protection for MCR technology |
| Product family | PLUGTRAB IQ |
| Surge protection fault message | Optical, multi-stage |

Insulation characteristics

| | |
|----------------------|-----|
| Overvoltage category | III |
| Pollution degree | 2 |

Electrical properties

| | |
|-----------------------|---------|
| Nominal voltage U_N | 24 V DC |
|-----------------------|---------|

Connection data

| | |
|----------------------------------|---|
| Connection method | Screw connection |
| Screw thread | M3 |
| Tightening torque | 0.5 Nm |
| Conductor cross section flexible | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross section rigid | 0.2 mm ² ... 4 mm ² |
| Conductor cross section AWG | 24 ... 12 |

Dimensions

| | |
|---------------------|---------------------------------|
| Dimensional drawing | |
| Width | 17.7 mm |
| Height | 91.1 mm |
| Depth | 77.5 mm (incl. DIN rail 7.5 mm) |
| Horizontal pitch | 1 Div. |

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Material specifications

| | |
|--|------------------|
| Color | black (RAL 9005) |
| | black (RAL 9005) |
| Flammability rating according to UL 94 | V-0 |
| Housing material | PA 6.6 |

Mechanical properties

Mechanical data

| | |
|-----------------|----|
| Open side panel | No |
|-----------------|----|

Protective circuit

| | |
|--|--|
| Direction of action | Line-Line & Line-Signal Ground/Shield & optional Signal Ground/Shield-Earth Ground |
| Maximum continuous voltage U_C | 30 V DC 21 V AC |
| Rated current | 700 mA (50 °C) |
| Operating effective current I_C at U_C | ≤ 1 mA (per path) |
| Residual current I_{PE} | ≤ 1 μ A |
| Nominal discharge current I_n (8/20) μ s (line-ground) | 10 kA |
| Pulse discharge current I_{imp} (10/350) μ s (line-earth) | 2.5 kA |
| Total discharge current I_{total} (8/20) μ s | 20 kA |
| Voltage protection level U_p (line-earth) | ≤ 800 V (C1 - 1 kV / 500 A) ≤ 950 V (C2 - 10 kV / 5 kA) ≤ 650 V (C2 - 10 kA) ≤ 780 V (C3 - 25 A) |
| Voltage protection level U_p (line-signalground) | ≤ 75 V (C1 - 1 kV / 500 A) ≤ 135 V (C2 - 10 kV / 5 kA) ≤ 180 V (C2 - 10 kA) ≤ 55 V (C3 - 25 A) ≤ 60 V (C3 - 50 A) |
| Voltage protection level U_p static (line-earth) | ≤ 80 V (C2 - 10 kV / 5 kA) ≤ 230 V (C2 - 10 kA) |
| Response time t_A (line-earth) | ≤ 100 ns |
| Response time t_A (line-signalground) | ≤ 1 ns |
| Input attenuation aE, asym. | typ. 0.3 dB (≤ 300 kHz / 150 Ω) |
| Cut-off frequency f_g (3 dB), asym. (signal ground) in 150 Ω system | typ. 1.1 MHz |
| Capacity (Core-Earth) | typ. 2 nF |
| Resistance per path | 1.2 Ω ± 5 % |
| Surge protection fault message | Optical, multi-stage |
| Max. required back-up fuse | 800 mA (FF) |
| Impulse durability (line-earth) | C1 - 1 kV / 500 A C2 - 10 kV / 5 kA |

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| | |
|--|-------------------|
| | C2 - 10 kA |
| | C3 - 50 A |
| | D1 - 2.5 kA |
| Impulse durability (line-signalground) | C1 - 1 kV / 500 A |
| | C2 - 10 kV / 5 kA |
| | C2 - 10 kA |
| | C3 - 50 A |
| | D1 - 2,5 kA |
| Pulse reset time (line-earth) | ≤ 30 ms |
| Pulse reset time (line-signalground) | ≤ 350 ms |

Environmental and real-life conditions

Ambient conditions

| | |
|---|------------------|
| Degree of protection | IP20 |
| Ambient temperature (operation) | -40 °C ... 70 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Altitude | ≤ 4000 m (amsl) |

Standards and regulations

| | |
|--------------------------|--------------------------|
| Standards/specifications | IEC 61643-21 |
| Note | 2000 + A1:2008, modified |
| Standards/specifications | EN 61643-21 |
| Note | 2001 + A1:2009 |
| Standards/specifications | EN 61000-6-3 |
| Note | 2007 + A1:2011 |
| Standards/specifications | EN 61000-6-2 |
| Note | 2005 |

Mounting

| | |
|---------------|-----------------|
| Mounting type | DIN rail: 35 mm |
|---------------|-----------------|

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-11.0 | 27130807 |
| ECLASS-13.0 | 27171501 |

ETIM

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| ETIM 9.0 | EC001625 |
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UNSPSC

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| UNSPSC 21.0 | 39121600 |
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Environmental product compliance

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|------------|--|
| REACH SVHC | Lead 7439-92-1 |
| China RoHS | Environmentally Friendly Use Period = 50 years |
| | For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads" |

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