

TTC-6-3-HF-M-12DC-UT-I - Surge protection device



2906721

<https://www.phoenixcontact.com/us/products/2906721>

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Surge protection with integrated status indicator and knife disconnection for three signal wires with common reference potential. For HF applications and telecommunications interfaces without supply voltage (up to 90 Mbps).

Your advantages

- Space-saving and cost-saving with a narrow overall width of just 6 mm
- Continuous monitoring of protective devices, plus mechanical status indicator with optional remote signaling
- Finding the right product for all possible requirements in MCR applications is easy, thanks to the complete range of products with customized features
- Signal circuits easily interrupted for maintenance work, thanks to vertical knife disconnection

Commercial data

| | |
|--------------------------------------|---------------------|
| Item number | 2906721 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | CL23 |
| Product key | CL2261 |
| Catalog page | Page 170 (C-4-2019) |
| GTIN | 4055626134529 |
| Weight per piece (including packing) | 42.7 g |
| Weight per piece (excluding packing) | 33.07 g |
| Customs tariff number | 85363010 |
| Country of origin | DE |

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Technical data

Product properties

| | |
|-------------------------|---|
| IEC test classification | C1 |
| | C2 |
| | C3 |
| | D1 |
| Type | DIN rail module, one-piece |
| Product type | Surge protection for information technology |
| Product family | TERMITRAB complete |

Insulation characteristics

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

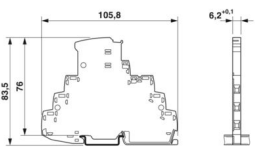
Electrical properties

| | |
|-----------------------|---------|
| Nominal voltage U_N | 12 V DC |
|-----------------------|---------|

Connection data

| | |
|----------------------------------|---|
| Connection method | Screw connection |
| Screw thread | M3 |
| Tightening torque | 0.5 Nm ... 0.6 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 | 6.2 mm +0.1 mm |
| Height | 105.8 mm |
| Depth | 83.5 mm (incl. DIN rail 7.5 mm) |

Material specifications

| | |
|--|-----------------|
| Color | gray (RAL 7042) |
| Flammability rating according to UL 94 | V-0 |
| Insulating material | PBT |
| Housing material | PBT |

Mechanical properties

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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 | 15 V DC |
| | 10 V AC |
| Rated current | 600 mA (40 °C) |
| Operating effective current I_C at U_C | $\leq 100 \mu\text{A}$ |
| Residual current I_{PE} | $\leq 200 \mu\text{A}$ |
| Nominal discharge current I_n (8/20) μs (line-line) | 5 kA |
| Nominal discharge current I_n (8/20) μs (line-ground) | 5 kA |
| Pulse discharge current I_{imp} (10/350) μs (line-earth) | 0.5 kA |
| Total discharge current I_{total} (8/20) μs | 10 kA |
| Voltage protection level U_p (line-line) | $\leq 145 \text{ V}$ (C1 - 1 kV / 500 A) |
| | $\leq 120 \text{ V}$ (C2 - 10 kV / 5 kA) |
| | $\leq 25 \text{ V}$ (C3 - 25 A) |
| | $\leq 30 \text{ V}$ (C3 - 100 A) |
| Voltage protection level U_p (line-earth) | $\leq 80 \text{ V}$ (C1 - 1 kV / 500 A) |
| | $\leq 80 \text{ V}$ (C2 - 10 kV / 5 kA) |
| | $\leq 25 \text{ V}$ (C3 - 25 A) |
| | $\leq 30 \text{ V}$ (C3 - 100 A) |
| Voltage protection level U_p static (line-line) | $\leq 40 \text{ V}$ (C1 - 1 kV / 500 A) |
| | $\leq 95 \text{ V}$ (C2 - 10 kV / 5 kA) |
| Voltage protection level U_p static (line-earth) | $\leq 40 \text{ V}$ (C1 - 1 kV / 500 A) |
| | $\leq 95 \text{ V}$ (C2 - 10 kV / 5 kA) |
| Response time t_A (line-line) | $\leq 1 \text{ ns}$ |
| Response time t_A (line-earth) | $\leq 1 \text{ ns}$ |
| Input attenuation aE, sym. | typ. 0.3 dB ($\leq 8.7 \text{ MHz} / 150 \Omega$) |
| Input attenuation aE, asym. | typ. 0.3 dB ($\leq 10.5 \text{ MHz} / 150 \Omega$) |
| Cut-off frequency f_g (3 dB), sym. in 150 Ω system | typ. 60 MHz |
| Cut-off frequency f_g (3 dB), asym. (PE) in 150 Ω system | typ. 60 MHz |
| Capacity (Core-Core) | typ. 32 pF |
| Capacity (Core-Earth) | typ. 32 pF |
| Resistance per path | 1.65 $\Omega \pm 20 \%$ |
| Surge protection fault message | optical |
| Max. required back-up fuse | 630 mA (FF) |
| Impulse durability (line-line) | C1 - 1 kV / 500 A |
| | C2 - 10 kV / 5 kA |
| | C3 - 100 A |
| Impulse durability (line-earth) | C1 - 1 kV / 500 A |
| | C2 - 10 kV / 5 kA |
| | C3 - 100 A |

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| | |
|-------------------------------|------------|
| | D1 - 500 A |
| Pulse reset time (line-line) | ≤ 30 ms |
| Pulse reset time (line-earth) | ≤ 30 ms |

Additional technical data

| | |
|--|------------|
| Max. total discharge current $I_{\text{total max}} (8/20) \mu\text{s}$ | 20 kA (1x) |
|--|------------|

Environmental and real-life conditions

Ambient conditions

| | |
|---|------------------|
| Degree of protection | IP20 |
| Ambient temperature (operation) | -40 °C ... 85 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Altitude | ≤ 4000 m (amsl) |
| Permissible humidity (operation) | 5 % ... 95 % |

Standards and regulations

| | |
|--------------------------|---|
| Standards/specifications | IEC 61643-21 |
| Note | 2000 + corrigendum 2001 + A1:2008, modified + A2:2012 |

EN 61643-21

| | |
|--------------------------|--------------------------|
| Standards/specifications | EN 61643-21 |
| Note | 2001 + A1:2009 + A2:2013 |

Mounting

| | |
|---------------|--------------------------|
| Mounting type | DIN rail: TH 35 - 7.5 mm |
|---------------|--------------------------|

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-11.0 | 27130807 |
| ECLASS-13.0 | 27171503 |

ETIM

| | |
|----------|----------|
| ETIM 9.0 | EC001466 |
|----------|----------|

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 39121600 |
|-------------|----------|

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Environmental product compliance

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