

Surge protection device - TTC-6P-3-HF-F-M-24DC-UT-I - 2906787

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Surge protection, consisting of protective plug and base element, with integrated status indicator and knife disconnection for three signal wires with common reference potential. For HF applications and telecommunications interfaces without supply voltage. Indirect grounding via gas-filled surge arrester.

Your advantages

- ✔ Space-saving installation due to the narrow overall width of 6.2 mm
- ✔ Signaling without additional auxiliary power, thanks to the mechanical status indicator
- ✔ Optional remote signaling module monitors up to 40 items, without additional wiring
- ✔ The signal is not influenced during maintenance work, thanks to the impedance-neutral insertion and removal of protective plugs
- ✔ Error-free replacement of protective plugs, thanks to coding
- ✔ Signal circuits easily interrupted for maintenance work, thanks to vertical knife disconnection
- ✔ Safe behavior in the event of overload, thanks to the integrated disconnect device
- ✔ Grounded or insulated shield grounding, thanks to the third terminal point on the surge protective device
- ✔ Simple testing and documentation with CHECKMASTER 2, thanks to pluggable protective modules



Key Commercial Data

| | |
|--------------------------------------|---|
| Packing unit | 1 pc |
| GTIN |  4 055626 135441 |
| GTIN | 4055626135441 |
| Weight per Piece (excluding packing) | 47.400 g |
| Custom tariff number | 85363010 |
| Country of origin | Germany |

Technical data

Dimensions

| | |
|--------|--------------------------------|
| Height | 105.8 mm |
| Width | 6.2 mm +0.1 mm |
| Depth | 100 mm (incl. DIN rail 7.5 mm) |

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Technical data

Ambient conditions

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

General

| | |
|--|--|
| Housing material | PBT |
| Flammability rating according to UL 94 | V-0 |
| Color | traffic grey A RAL 7042 |
| | light grey RAL 7035 |
| Mounting type | DIN rail: TH 35 - 7.5 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 | 24 V DC |
| Maximum continuous voltage U_C | 30 V DC |
| | 21 V AC |
| Rated current | 600 mA (56 °C) |
| Operating effective current I_C at U_C | ≤ 5 μA |
| Residual current I_{PE} | ≤ 1 μA |
| Nominal discharge current I_n (8/20) μs (line-line) | 5 kA |
| Nominal discharge current I_n (8/20) μs (line-earth) | 5 kA |
| Nominal discharge current I_n (8/20) μs (line-signal ground) | 5 kA |
| Pulse discharge current I_{imp} (10/350) μs (line-line) | 0.5 kA |
| Pulse discharge current I_{imp} (10/350) μs (line-earth) | 0.5 kA |
| Pulse discharge current I_{imp} (10/350) μs (line-signalground) | 0.5 kA |
| Total discharge current I_{total} (8/20) μs | 10 kA |
| Voltage protection level U_p (line-line) | ≤ 150 V (C1 - 1 kV/500 A) |
| | ≤ 275 V (C2 - 10 kV / 5 kA) |
| | ≤ 45 V (C3 - 25 A) |
| | ≤ 55 V (C3 - 100 A) |
| Voltage protection level U_p (line-earth) | ≤ 750 V (C1 - 1 kV/500 A) |
| | ≤ 750 V (C2 - 10 kV / 5 kA) |
| | ≤ 1.1 kV (C3 - 25 A) |
| | ≤ 1.2 kV (C3 - 100 A) |

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Technical data

Protective circuit

| | |
|---|--|
| Voltage protection level U_p (line-signalground) | ≤ 80 V (C1 - 1 kV/500 A) |
| | ≤ 125 V (C2 - 10 kV / 5 kA) |
| | ≤ 45 V (C3 - 25 A) |
| | ≤ 55 V (C3 - 100 A) |
| Voltage protection level U_p static (line-line) | ≤ 75 V (C1 - 1 kV/500 A) |
| | ≤ 120 V (C2 - 10 kV / 5 kA) |
| Voltage protection level U_p static (line-earth) | ≤ 75 V (C1 - 1 kV/500 A) |
| | ≤ 120 V (C2 - 10 kV / 5 kA) |
| Voltage protection level U_p static (line-signalground) | ≤ 750 V (C1 - 1 kV/500 A) |
| | ≤ 750 V (C2 - 10 kV / 5 kA) |
| Response time t_A (line-line) | ≤ 1 ns |
| Response time t_A (line-signalground) | ≤ 1 ns |
| Response time t_A (line-earth) | ≤ 100 ns |
| Input attenuation aE, sym. | typ. 0.3 dB (≤ 8.7 MHz / 150 Ω) |
| Input attenuation aE, asym. | typ. 0.3 dB (≤ 10.5 MHz / 150 Ω) |
| Cut-off frequency f_g (3 dB), sym. in 150 Ohm system | typ. 60 MHz |
| Cut-off frequency f_g (3 dB), asym. (GND) in 150 Ohm system | typ. 60 MHz |
| Capacity (line-line) | typ. 32 pF |
| Capacity (line-signalground) | typ. 32 pF |
| Resistance per path | 1.65 Ω ± 20 % |
| 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 |
| | D1 - 500 A |
| Impulse durability (line-signalground) | C1 - 1 kV / 500 A |
| | C2 - 10 kV / 5 kA |
| | C3 - 100 A |
| | D1 - 500 A |
| Pulse reset time (line-line) | ≤ 600 ms |
| Pulse reset time (line-earth) | ≤ 30 ms |
| Pulse reset time (line-signalground) | ≤ 600 ms |

Additional technical data

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

Connection data

| | |
|-------------------|------------------|
| Connection method | Screw connection |
|-------------------|------------------|

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Technical data

Connection data

| | |
|----------------------------------|---|
| Screw thread | M3 |
| Tightening torque | 0.5 Nm ... 0.6 Nm |
| Stripping length | 8 mm |
| Conductor cross section flexible | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross section solid | 0.2 mm ² ... 4 mm ² |
| Conductor cross section AWG | 24 ... 12 |

Standards and Regulations

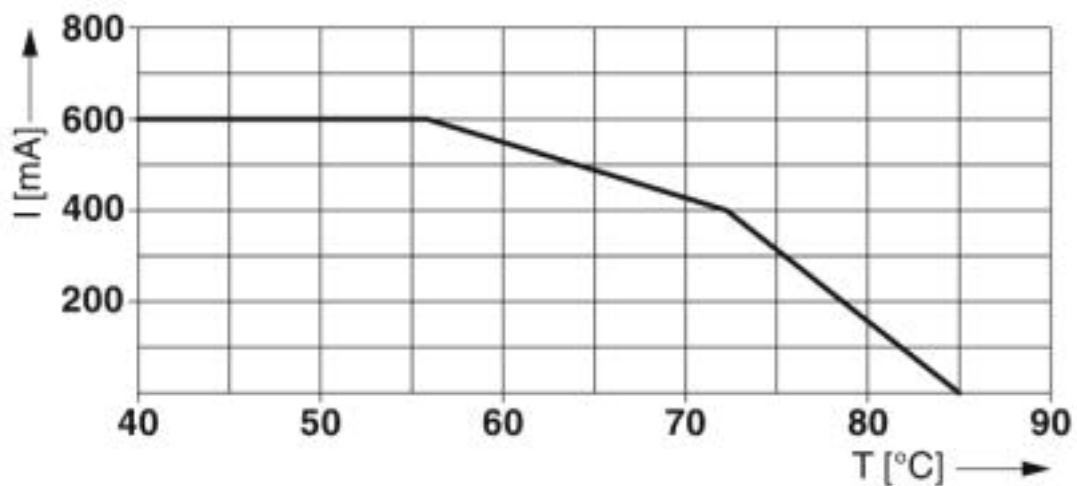
| | |
|--------------------------|--|
| Standards/specifications | IEC 61643-21 2000 + corrigendum 2001 + A1:2008, modified + A2:2012 |
| | EN 61643-21 2001 + A1:2009 + A2:2013 |

Environmental Product Compliance

| | |
|------------|---|
| REACH SVHC | Lead 7439-92-1 |
| China RoHS | Environmentally Friendly Use Period = 50 |
| | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

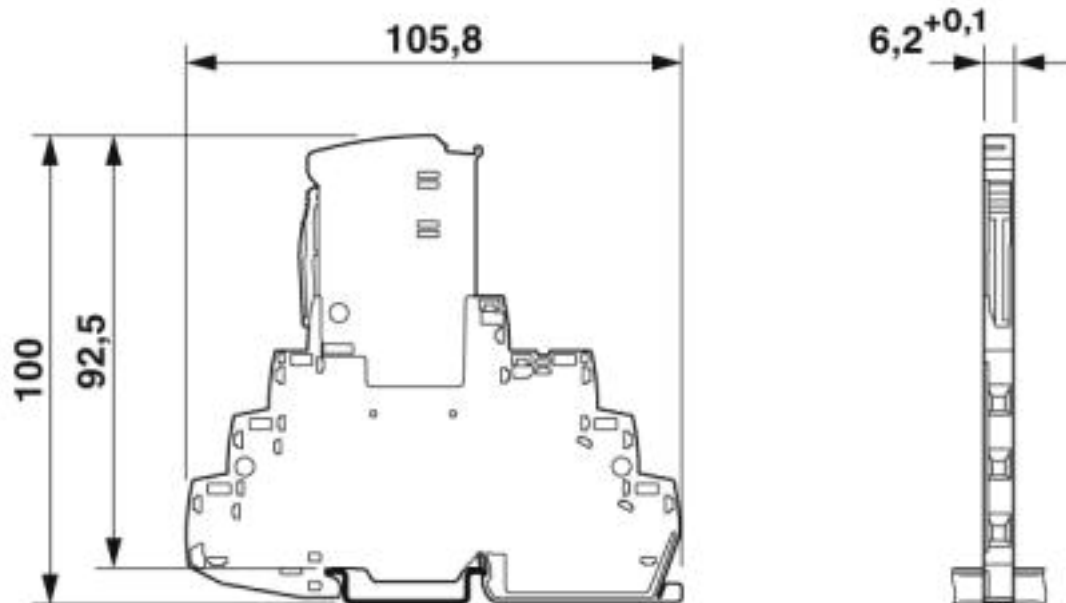
Drawings

Diagram

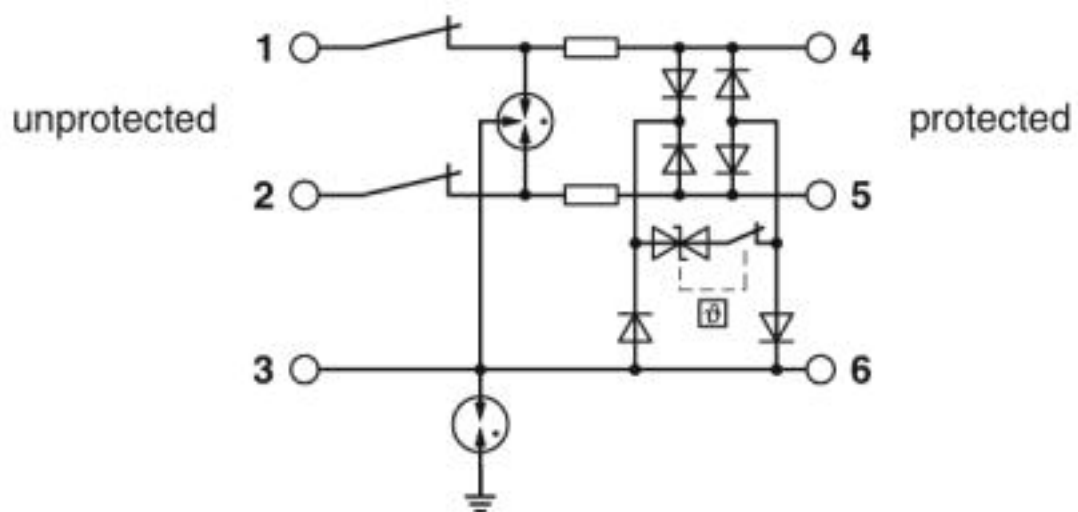


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Dimensional drawing



Circuit diagram



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 | 27130800 |
| eCl@ss 7.0 | 27130807 |

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Classifications

eCl@ss

| | |
|------------|----------|
| eCl@ss 8.0 | 27130807 |
| eCl@ss 9.0 | 27130807 |

ETIM

| | |
|----------|----------|
| ETIM 2.0 | EC000943 |
| ETIM 3.0 | EC000943 |
| ETIM 4.0 | EC000943 |
| ETIM 5.0 | EC000943 |
| ETIM 6.0 | EC000943 |
| ETIM 7.0 | EC000943 |

UNSPSC

| | |
|---------------|----------|
| UNSPSC 6.01 | 30212010 |
| UNSPSC 7.0901 | 39121610 |
| UNSPSC 11 | 39121610 |
| UNSPSC 12.01 | 39121610 |
| UNSPSC 13.2 | 39121620 |
| UNSPSC 18.0 | 39121620 |
| UNSPSC 19.0 | 39121620 |
| UNSPSC 20.0 | 39121620 |
| UNSPSC 21.0 | 39121620 |

Approvals

Approvals

Approvals

DNV GL / CSA / UL Listed / CSAus / cCSAus

Ex Approvals

Approval details

| | | | |
|--------|--|---|------------|
| DNV GL | | https://approvalfinder.dnvgl.com/ | TAE000027G |
|--------|--|---|------------|

| | | | |
|-----|--|---|----------|
| CSA | | http://www.csagroup.org/services-industries/product-listing/ | 70136717 |
|-----|--|---|----------|

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Approvals

| | | | |
|-----------|--|---|---------------|
| UL Listed | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 138168 |
|-----------|--|---|---------------|

| | | | |
|-------|--|---|----------|
| CSAus | | http://www.csagroup.org/services-industries/product-listing/ | 70136717 |
|-------|--|---|----------|

| | | | |
|--------|--|--|--|
| cCSAus | | | |
|--------|--|--|--|

Accessories

Accessories

End block

End clamp - CLIPFIX 35-5 - 3022276



Quick mounting end clamp for NS 35/7,5 DIN rail or NS 35/15 DIN rail, with marking option, with parking option for FBS...5, FBS...6, KSS 5, KSS 6, width: 5.15 mm, color: gray

Labeled terminal marker

Zack Marker strip, flat - ZBF 6 CUS - 0825027



Zack Marker strip, flat, Strip, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into flat marker groove, for terminal block width: 6.2 mm, lettering field size: 5.15 x 6.15 mm, Number of individual labels: 10

Zack Marker strip, flat - ZBF 6,QR:FORTL.ZAHLEN - 0808765



Zack Marker strip, flat, Strip, white, labeled, Printed vertically: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 100, mounting type: snap into flat marker groove, for terminal block width: 6.2 mm, lettering field size: 5.15 x 6.15 mm, Number of individual labels: 10

Marker pen

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Accessories

Marker pen - X-PEN 0,35 - 0811228



Marker pen without ink cartridge, for manual labeling of markers, labeling extremely wipe-proof, line thickness 0.35 mm

Terminal marking

Zack Marker strip, flat - ZBF 6:UNBEDRUCKT - 0808710



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into flat marker groove, for terminal block width: 6.2 mm, lettering field size: 5.15 x 6.15 mm, Number of individual labels: 10

Zack Marker strip, flat - ZBF 6/WH-100:UNBEDRUCKT - 0808736



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into flat marker groove, for terminal block width: 6.2 mm, lettering field size: 5.15 x 6.15 mm, Number of individual labels: 10

Additional products

Remote signaling set - TTC-6-FMRS-UT - 2907810



Module set for the optical monitoring and floating remote signaling of neighboring surge protective devices of the TERMITRAB complete product range.

Fuse holder - TTC-6-FC-UT - 1054762



Fuse carrier for surge protective devices of the TERMITRAB complete product range with screw connection technology. Multi-level connection on TTC-6 housings possible. For conventional 5x20 mm miniature fuses.

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Accessories

Shield connection - SSA 3-6 - 2839295



Shield fast connection for 3 ... 6 mm cable diameter. Potential connecting cable: 200 mm, 1 mm², color: black

Shield connection - SSA 5-10 - 2839512



Shield fast connection for 5 ... 10 mm cable diameter. Potential connecting cable: 200 mm, 1 mm², color: black

Spare parts

Surge protection plug - TTC-6P-3-HF-24DC-I-P - 2907847



Surge protection plug with integrated status indicator on the module for three signal wires. For HF applications.
Nominal voltage: 24 V DC