

Surge protection device - LIT 4-24 - 2804678

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Surge protection in one-piece 6.2 mm wide DIN rail module for four floating signal wires.

Product Features

- ✔ Complete normal mode voltage protection between all wires
- ✔ Cross-arrester bridging of the reference potential with ME 6,2 TBUS



Key commercial data

| | |
|--------------------------------------|----------|
| Packing unit | 1 pc |
| Weight per Piece (excluding packing) | 72.0 GRM |
| Custom tariff number | 85363010 |
| Country of origin | Germany |

Technical data

Dimensions

| | |
|--------|----------|
| Height | 93 mm |
| Width | 6.2 mm |
| Depth | 102.5 mm |

Ambient conditions

| | |
|---|------------------|
| Ambient temperature (operation) | -40 °C ... 80 °C |
| Ambient temperature (storage/transport) | -40 °C ... 80 °C |
| Degree of protection | IP20 |

General

| | |
|------------------|-----|
| Housing material | PBT |
|------------------|-----|

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Technical data

General

| | |
|--|----------------------------------|
| Inflammability class according to UL 94 | V-0 |
| Color | black |
| Standards for air and creepage distances | IEC 60664-1 |
| | EN 60079-11 |
| Mounting type | DIN rail: 35 mm |
| Type | Rail-mountable module, one-piece |
| Direction of action | Line-Line & Line-Earth Ground |

Protective circuit

| | |
|--|--|
| IEC test classification | C1 |
| | C2 |
| | C3 |
| | D1 |
| Nominal voltage U_N | 24 V DC |
| Maximum continuous operating voltage U_C | 25 V AC |
| | 36 V DC |
| Nominal current I_N | 500 mA (40°C) |
| Operating effective current I_C at U_C | $\leq 2 \mu\text{A}$ (per path) |
| Residual current I_{PE} | $\leq 4 \mu\text{A}$ |
| Nominal discharge current I_n (8/20) μs (Core-Core) | 250 A |
| Nominal discharge current I_n (8/20) μs (Core-Earth) | 5 kA |
| | 20 kA (Total) |
| Total surge current (8/20) μs | 20 kA |
| Total surge current (10/350) μs | 2 kA |
| Max. discharge current I_{max} (8/20) μs maximum (Core-Core) | 250 A |
| Max. discharge current I_{max} (8/20) μs maximum (Core-Earth) | 10 kA |
| | 20 kA (Total) |
| Nominal pulse current I_{an} (10/1000) μs (Core-Core) | 50 A |
| Nominal pulse current I_{an} (10/1000) μs (Core-Earth) | 50 A |
| | 200 A (Total) |
| Impulse discharge current (10/350) μs , peak value I_{imp} | 500 A |
| Output voltage limitation at 1 kV/ μs (Core-Core) spike | $\leq 60 \text{ V}$ |
| Output voltage limitation at 1 kV/ μs (Core-Earth) spike | $\leq 650 \text{ V}$ |
| Residual voltage at I_n , (conductor-conductor) | $\leq 60 \text{ V}$ |
| Residual voltage with I_{an} (10/1000) μs (conductor-conductor) | $\leq 60 \text{ V}$ |
| Voltage protection level U_p (Core-Core) | $\leq 60 \text{ V}$ (C1 - 500 V / 250 A) |
| | $\leq 60 \text{ V}$ (C3 - 10 A) |

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Technical data

Protective circuit

| | |
|--|---------------------------------------|
| Voltage protection level U_p (Core-Earth) | ≤ 650 V (C1 - 500 V / 250 A) |
| | ≤ 650 V (C2 - 10 kV / 5 kA) |
| | ≤ 700 V (D1 - 500 A) |
| Response time t_A (Core-Core) | ≤ 1 ns |
| Response time t_A (Core-Earth) | ≤ 100 ns |
| Input attenuation a_E , sym. | typ. 0.1 dB (1 MHz / 50 Ω) |
| | typ. 0.1 dB (450 kHz / 150 Ω) |
| Cut-off frequency f_g (3 dB), asym. (GND) in 50 Ohm system | typ. 7.5 MHz |
| Cut-off frequency f_g (3 dB), asym. (GND) in 100 Ohm system | typ. 2.5 MHz |
| Capacity | ≤ 1.3 nF (per path) |
| Resistance in series | 0 Ω |
| Max. required back-up fuse | 500 mA |
| Surge carrying capacity in acc. with IEC 61643-21 (Core-Core) | C1 (500 V / 250 A) |
| | C3 (25 A) |
| Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth) | C2 (10 kV/5 kA) |
| | C3 (25 A) |
| | D1 (500 A) |
| Alternating current carrying capacity in acc. with IEC 61643-21 (Core-Earth) | 5 A - 1 s |

Connection data

| | |
|--|-----------------------|
| Connection method | Screw connection |
| Connection type IN | Screw terminal blocks |
| Connection type OUT | Screw terminal blocks |
| Screw thread | M3 |
| Conductor cross section stranded min. | 0.2 mm ² |
| Conductor cross section stranded max. | 2.5 mm ² |
| Conductor cross section solid min. | 0.14 mm ² |
| Conductor cross section solid max. | 2.5 mm ² |
| Conductor cross section AWG/kcmil min. | 26 |
| Conductor cross section AWG/kcmil max | 12 |

Connection, equipotential bonding

| | |
|-------------------|---------------|
| Connection method | DIN rail NS35 |
|-------------------|---------------|

Standards and Regulations

| | |
|-----------------------|-----------------|
| Standards/regulations | IEC 61643-21 |
| | DIN EN 61643-21 |

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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 2.0 | EC000943 |
| 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 |

Approvals

Approvals

Approvals

UL Listed / GL

Ex Approvals

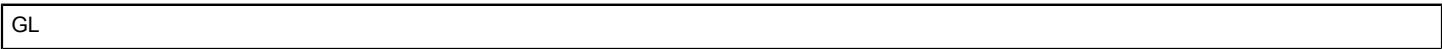
IECEx / ATEX / INMETRO

Approvals submitted

Approval details

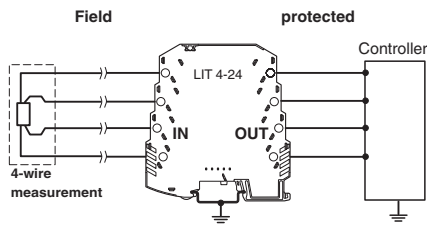
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Approvals

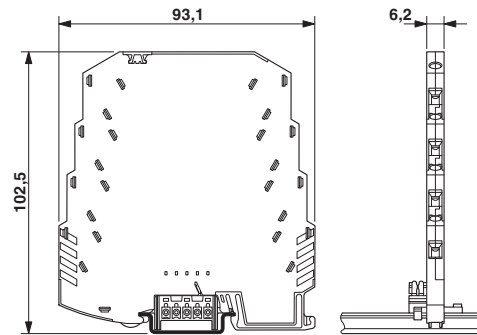


Drawings

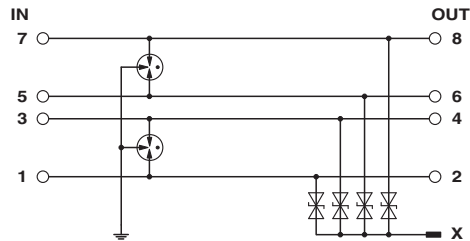
Application drawing



Dimensioned drawing

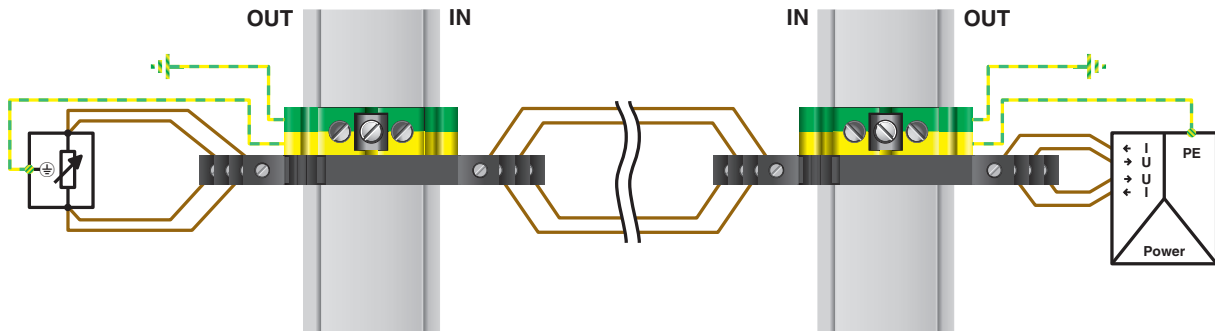


Circuit diagram



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Application drawing



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