

LIT 2-24 - Surge protection device



2804665

<https://www.phoenixcontact.com/us/products/2804665>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Surge protection in one-piece 6.2 mm wide DIN rail module for two floating signal wires. Tested in acc. with the protection types in Ex areas: Ex ia IIC / Ex iaD.

Your advantages

- Space saving with a narrow overall width of just 6 mm
- Install quickly and error-free with DIN rail connectors
- No signal interference with reliable attenuation

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 2804665 |
| Packing unit | 10 pc |
| Minimum order quantity | 1 pc |
| Sales key | CL02 |
| Product key | CL2211 |
| GTIN | 4046356428323 |
| Weight per piece (including packing) | 64.68 g |
| Weight per piece (excluding packing) | 52 g |
| Customs tariff number | 85363010 |
| Country of origin | DE |

LIT 2-24 - Surge protection device

2804665

<https://www.phoenixcontact.com/us/products/2804665>

Technical data

Product properties

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

Insulation characteristics

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

Electrical properties

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

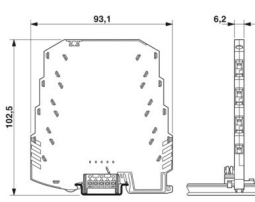
Connection data

| | |
|----------------------------------|---|
| Connection method | Screw connection |
| Screw thread | M3 |
| Tightening torque | 0.8 Nm |
| Conductor cross-section flexible | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross-section rigid | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross-section AWG | 24 ... 14 |

Ex data

| | |
|---|--|
| Maximum inner capacitance C_i | typ. 1.3 nF |
| Max. internal inductance L_i | < 1 μ H |
| Max. input current I_i | 500 mA ($T_4 / \leq 80^\circ\text{C}$) |
| | 500 mA ($T_5 / \leq 50^\circ\text{C}$) |
| | 500 mA ($T_6 / \leq 40^\circ\text{C}$) |
| Max. input voltage U_i | 36 V DC |
| max. input power P_i | 635.00 mW |
| Maximum inner time factor (R_i/L_i) | 10 μ s |

Dimensions

| | |
|---------------------|--|
| Dimensional drawing |  |
| Width | 6.2 mm |

LIT 2-24 - Surge protection device



2804665

<https://www.phoenixcontact.com/us/products/2804665>

| | |
|--------|----------------------------------|
| Height | 93.1 mm |
| Depth | 102.5 mm (incl. DIN rail 7.5 mm) |

Material specifications

| | |
|--|----------------------------|
| Color | anthracite gray (RAL 7016) |
| Flammability rating according to UL 94 | V-0 |
| Insulating material | PBT |
| Housing material | PBT |

Mechanical properties

Mechanical data

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

Protective circuit

| | |
|--|-----------------------------------|
| Direction of action | Line-Line & Line-Earth Ground |
| Nominal voltage U_N | 24 V DC |
| Maximum continuous operating voltage U_C | 36 V DC |
| | 25 V AC |
| Rated current | 500 mA (40 °C) |
| Operating effective current I_C at U_C | $\leq 2 \mu A$ |
| Protective conductor current I_{PE} | $\leq 2 \mu A$ |
| Nominal discharge current I_n (8/20) μs (line-line) | 250 A |
| Nominal discharge current I_n (8/20) μs (line-ground) | 5 kA |
| Pulse discharge current I_{imp} (10/350) μs (line-earth) | 500 A |
| | 1 kA (in total) |
| Total discharge current I_{Total} (8/20) μs | 10 kA |
| | 20 kA (1x) |
| Max. discharge current I_{max} (8/20) μs maximum (line-line) | 250 A |
| Max. discharge current I_{max} (8/20) μs maximum (line-earth) | 10 kA |
| | 20 kA (in total) |
| Nominal pulse current I_{an} (10/1000) μs (line-line) | 50 A |
| Nominal pulse current I_{an} (10/1000) μs (line-earth) | 50 A |
| | 100 A (in total) |
| Output voltage limitation at 1 kV/ μs (line-line) spike | $\leq 60 V$ |
| Output voltage limitation at 1 kV/ μs (line-earth) spike | $\leq 650 V$ |
| Residual voltage at I_n (conductor-conductor) | $\leq 60 V$ |
| Residual voltage with I_{an} (10/1000) μs (line-line) | $\leq 60 V$ |
| Voltage protection level U_p (line-line) | $\leq 60 V$ (C1 - 500 V / 250 A) |
| | $\leq 55 V$ (C3 - 10 A) |
| | $\leq 55 V$ (C3 - 50 A) |
| Voltage protection level U_p (line-earth) | $\leq 650 V$ (C1 - 500 V / 250 A) |
| | $\leq 650 V$ (C2 - 10 kV / 5 kA) |
| | $\leq 650 V$ (C3 - 10 A) |
| | $\leq 700 V$ (C3 - 50 A) |

LIT 2-24 - Surge protection device



2804665

<https://www.phoenixcontact.com/us/products/2804665>

| | |
|--|-------------------------------|
| | ≤ 700 V (D1 - 500 A) |
| Response time t_A (line-line) | ≤ 1 ns |
| Response time t_A (line-earth) | ≤ 100 ns |
| Input attenuation aE, sym. | typ. 0.3 dB (2.4 MHz/50 Ω) |
| | typ. 0.3 dB (700 kHz / 150 Ω) |
| Cut-off frequency f_g (3 dB), sym. in 50 Ω system | typ. 7.7 MHz |
| Cut-off frequency f_g (3 dB), sym. in 150 Ω system | typ. 2.5 MHz |
| Capacity | ≤ 1.3 nF (per path) |
| Resistance per path | 0 Ω |
| Surge protection fault message | none |
| Max. required back-up fuse | 500 mA (T) |
| Impulse durability (line-line) | C1 - 500 V / 250 A |
| | C3 - 50 A |
| Impulse durability (line-earth) | C1 - 500 V / 250 A |
| | C2 - 10 kV / 5 kA |
| | C3 - 50 A |
| | D1 - 500 A |
| Alternating current carrying capacity (line-earth) | 5 A - 1 s |

Environmental and real-life conditions

Ambient conditions

| | |
|---|------------------|
| Degree of protection | IP20 |
| Ambient temperature (operation) | -40 °C ... 80 °C |
| Ambient temperature (storage/transport) | -40 °C ... 80 °C |
| Altitude | ≤ 2000 m (amsl) |

Approvals

Conformity/Approvals

| | |
|-------|------------------------------------|
| ATEX | ⊕ II 1 G Ex ia IIC T4...T6 |
| | ⊕ II 1 D Ex iaD 20 T85 °C...135 °C |
| IECEX | Ga Ex ia IIC T4...T6 |
| | Ex iaD 20 T85 °C...T135 °C |

Standards and regulations

| | |
|--------------------------|--------------|
| Standards/specifications | EN 61643-21 |
| Note | A2:2013 |
| Standards/specifications | EN 60079-0 |
| Note | 2018 |
| Standards/specifications | EN 60079-11 |
| Note | 2012 |
| Standards/specifications | IEC 60079-0 |
| Note | 2017 |
| Standards/specifications | IEC 60079-11 |

LIT 2-24 - Surge protection device



2804665

<https://www.phoenixcontact.com/us/products/2804665>

| | |
|--------------------------|-------------|
| Note | 2011 |
| Standards/specifications | GB/T 3836.1 |
| Note | 2021 |
| Standards/specifications | GB/T 3836.4 |
| Note | 2021 |

Mounting

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

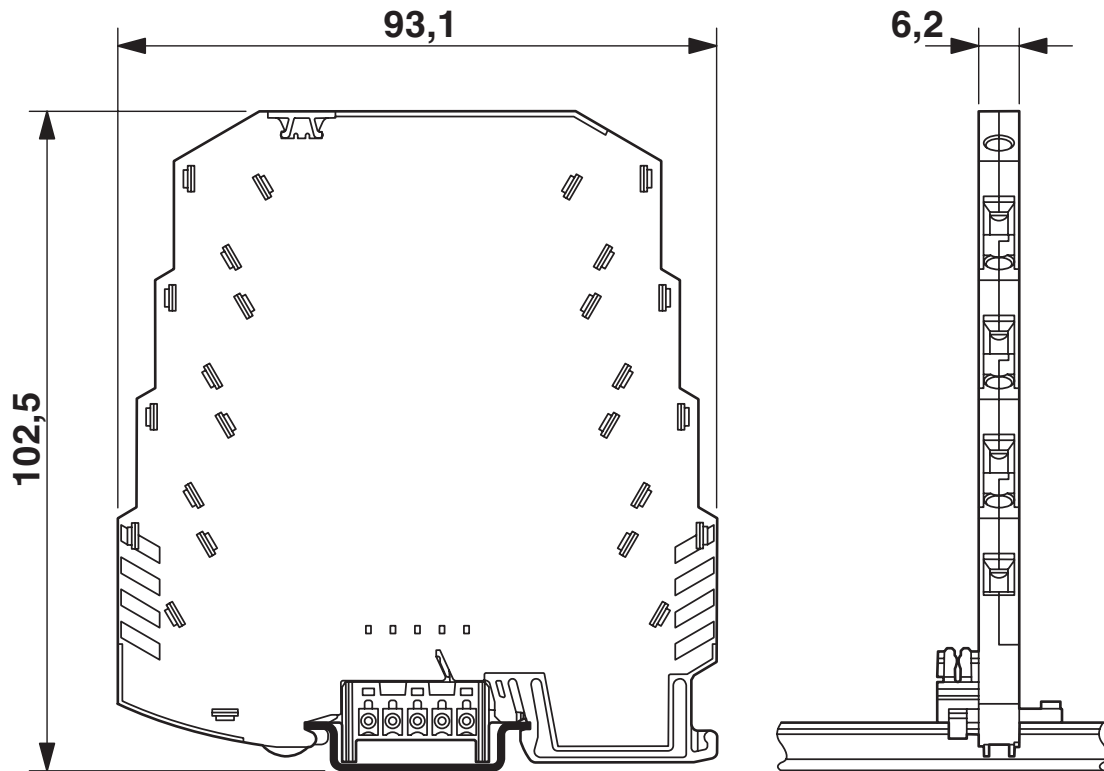
LIT 2-24 - Surge protection device

2804665

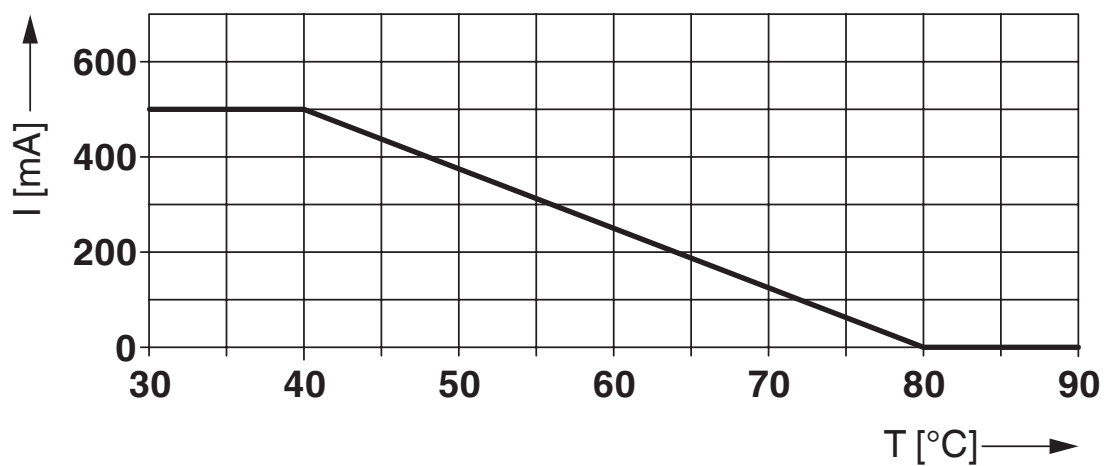
<https://www.phoenixcontact.com/us/products/2804665>

Drawings

Dimensional drawing



Diagram



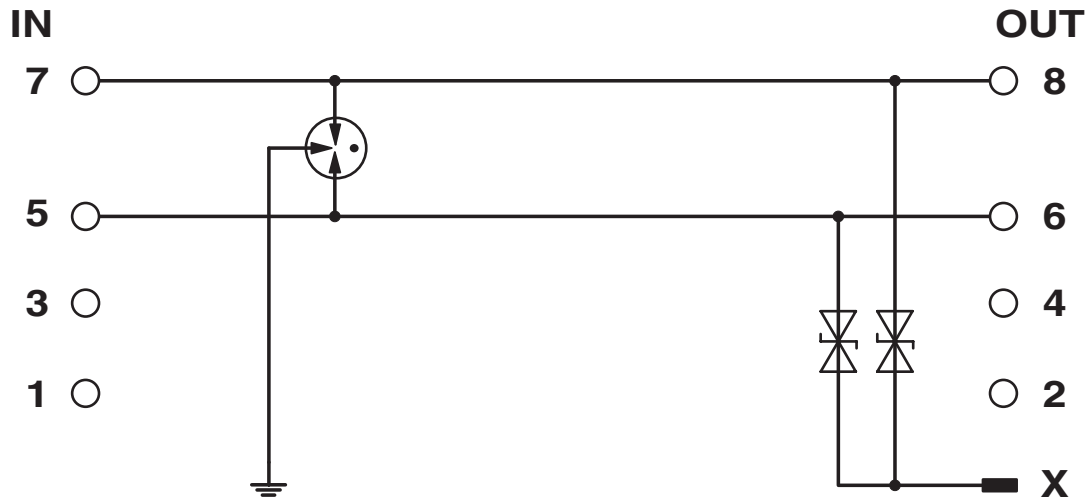
LIT 2-24 - Surge protection device

2804665

<https://www.phoenixcontact.com/us/products/2804665>



Circuit diagram



LIT 2-24 - Surge protection device



2804665

<https://www.phoenixcontact.com/us/products/2804665>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2804665>



DNV GL

Approval ID: TAE00001N8



UL Listed

Approval ID: FILE E 138168

UAE-RoHS

Approval ID: 23-10-88889



ATEX

Approval ID: KEMA 09ATEX0051 X



IECEx

Approval ID: IECEx KEM 09.0018X



CCC

Approval ID: 2025322304006665



NEPSI-EX

Approval ID: GYJ20.1176X



UKCA-EX

Approval ID: DEKRA 21UKEX0233 X



CCC

Approval ID: 2025322304006665

LIT 2-24 - Surge protection device



2804665

<https://www.phoenixcontact.com/us/products/2804665>

Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27171501 |
| ECLASS-15.0 | 27171501 |

ETIM

| | |
|-----------|----------|
| ETIM 10.0 | EC001466 |
|-----------|----------|

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 39121620 |
|-------------|----------|

LIT 2-24 - Surge protection device



2804665

<https://www.phoenixcontact.com/us/products/2804665>

Environmental product compliance

EU RoHS

| | |
|---|--------------|
| Fulfills EU RoHS substance requirements | Yes |
| Exemption | 7(a), 7(c)-I |

China RoHS

| | |
|--|---|
| Environment friendly use period (EFUP) | EFUP-50 |
| | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |

EU REACH SVHC

| | |
|-------------------------------------|--------------------------------------|
| REACH candidate substance (CAS No.) | Lead(CAS: 7439-92-1) |
| SCIP | 835f6a54-a3c6-47a8-b193-08426fbc479b |

Phoenix Contact 2026 © - all rights reserved

<https://www.phoenixcontact.com>

Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com