

1109689

<https://www.phoenixcontact.com/us/products/1109689>

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Medium surge protection with integrated status indicator for one 2-wire floating signal circuit. Can be used in safety-related circuits up to SIL 3.

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

Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1109689       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | CL23          |
| Product key                          | CL2265        |
| GTIN                                 | 4063151020170 |
| Weight per piece (including packing) | 27.568 g      |
| Weight per piece (excluding packing) | 22.648 g      |
| Customs tariff number                | 85363010      |
| Country of origin                    | DE            |

# TTC-6-MOV-D-120AC-PT-I - Surge protection device



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## Technical data

### Product properties

|                         |                                     |
|-------------------------|-------------------------------------|
| Product type            | Surge protection for MCR technology |
| Product family          | TERMITRAB complete                  |
| IEC test classification | C1                                  |
|                         | C2                                  |
|                         | C3                                  |
| Type                    | DIN rail module, one-piece          |
| Wire pairs per module   | 1                                   |

### Data management status

|                  |    |
|------------------|----|
| Article revision | 04 |
|------------------|----|

### Insulation characteristics

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

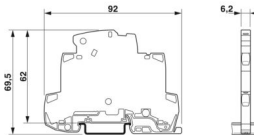
### Electrical properties

|                       |          |
|-----------------------|----------|
| Nominal voltage $U_N$ | 120 V AC |
|-----------------------|----------|

### Connection data

|                                  |                                             |
|----------------------------------|---------------------------------------------|
| Connection method                | Push-in connection                          |
| Conductor cross section flexible | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Conductor cross section rigid    | 0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>   |
| Conductor cross section AWG      | 24 ... 12                                   |

### Dimensions

|                     |                                                                                      |
|---------------------|--------------------------------------------------------------------------------------|
| Dimensional drawing |  |
| Width               | 6.2 mm                                                                               |
| Height              | 92 mm                                                                                |
| Depth               | 69.5 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 | Yes |
|-----------------|-----|

## Protective circuit

|                                                             |                                             |
|-------------------------------------------------------------|---------------------------------------------|
| Direction of action                                         | Line-Line                                   |
| Maximum continuous voltage $U_C$                            | 150 V DC                                    |
|                                                             | 150 V AC                                    |
| Rated current                                               | 10 A (60 °C)                                |
| Operating effective current $I_C$ at $U_C$                  | $\leq 100 \mu A$                            |
| Residual current $I_{PE}$                                   | $\leq 100 \mu A$                            |
| Nominal discharge current $I_n$ (8/20) $\mu s$ (line-line)  | 2.5 kA                                      |
| Voltage protection level $U_p$ (line-line)                  | $\leq 200 V$ (C1 - 800 A)                   |
|                                                             | $\leq 500 V$ (C2 - 5 kV)                    |
|                                                             | $\leq 380 V$ (C3 - 25 A)                    |
|                                                             | $\leq 380 V$ (C3 - 35 A)                    |
| Response time $t_A$ (line-line)                             | $\leq 25 ns$                                |
| Input attenuation aE, sym.                                  | typ. 0.3 dB ( $\leq 300 kHz / 150 \Omega$ ) |
| Cut-off frequency $f_g$ (3 dB), sym. in 150 $\Omega$ system | typ. 1 MHz                                  |
| Capacity (Core-Core)                                        | 5 nF                                        |
| Resistance per path                                         | $\leq 100 m\Omega$                          |
| Surge protection fault message                              | optical                                     |
| Impulse durability (line-line)                              | C1 - 800 A                                  |
|                                                             | C2 - 2,5 kA                                 |
|                                                             | C3 - 35 A                                   |

## Environmental and real-life conditions

### Ambient conditions

|                                         |                       |
|-----------------------------------------|-----------------------|
| Degree of protection                    | IP20 (with end cover) |
| Ambient temperature (operation)         | -40 °C ... 85 °C      |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C      |
| Altitude                                | $\leq 2000 m$ (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: 35 mm |
|---------------|-----------------|

# TTC-6-MOV-D-120AC-PT-I - Surge protection device

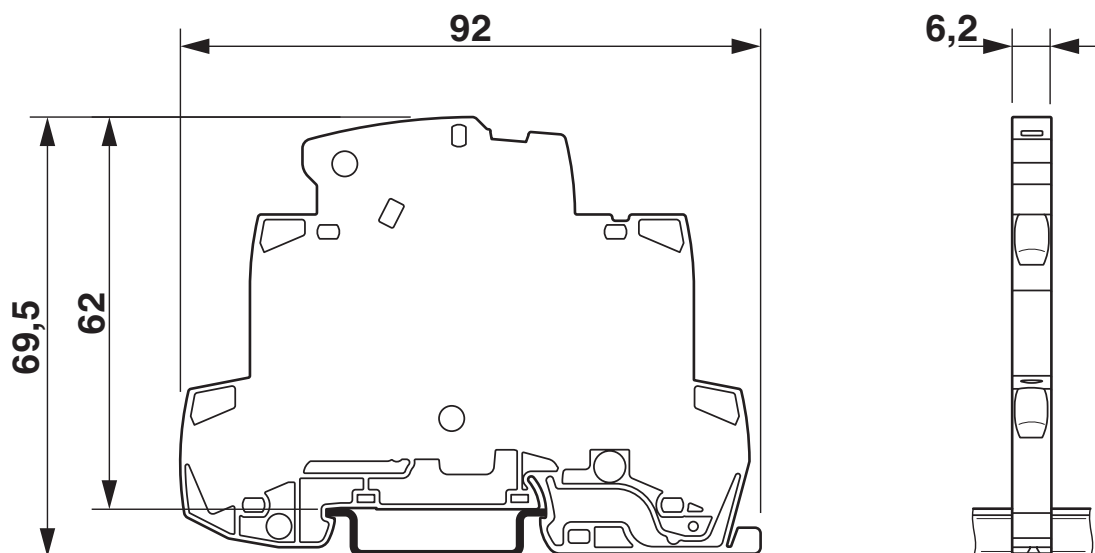


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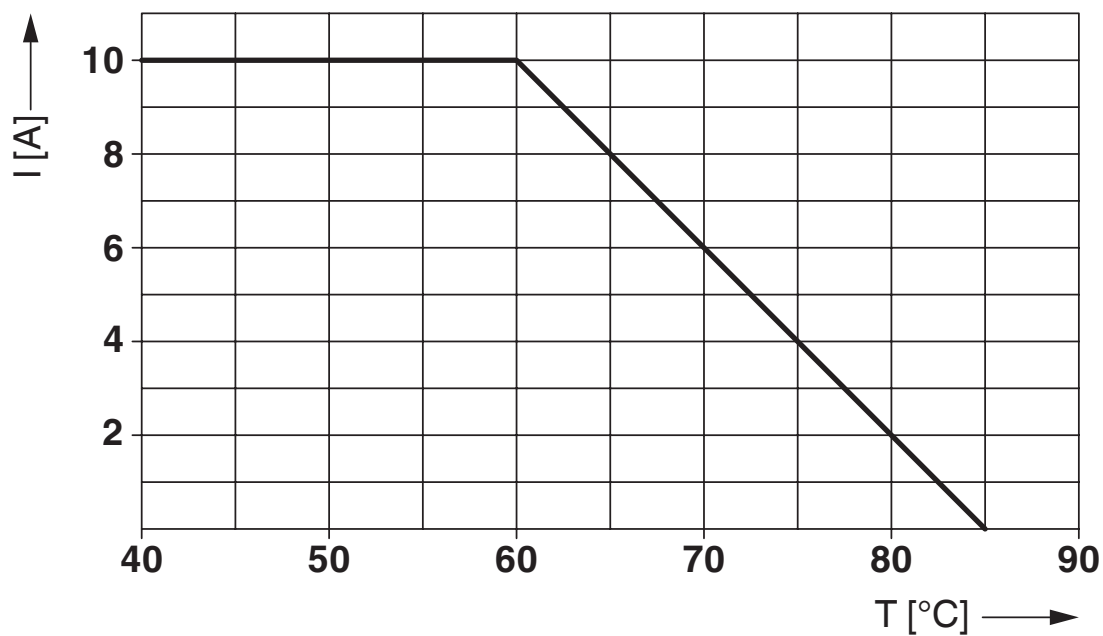
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## Drawings

Dimensional drawing



Diagram



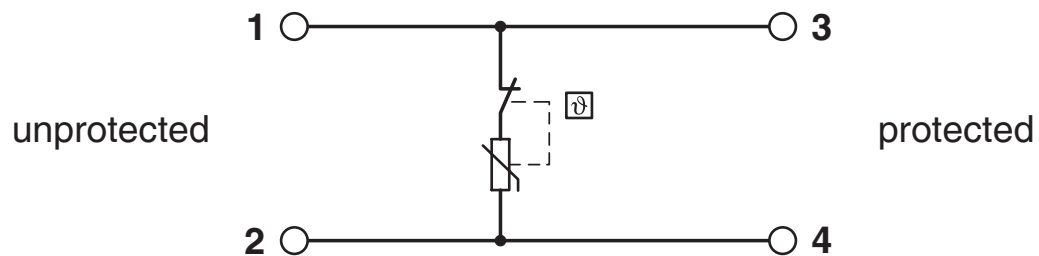
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Circuit diagram



# TTC-6-MOV-D-120AC-PT-I - Surge protection device



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1109689>



**CSA**

Approval ID: 70136717



**DNV GL**

Approval ID: TAE000027G



**UL Listed**

Approval ID: FILE E 138168



**CSAus**

Approval ID: 70136717

**UAE-RoHS**

Approval ID: 22-06-16192

**cCSAus**

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## Classifications

### ECLASS

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

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC001625 |
|----------|----------|

### UNSPSC

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

Environmental product compliance

|                                         |                                          |
|-----------------------------------------|------------------------------------------|
| EU RoHS                                 |                                          |
| Fulfills EU RoHS substance requirements | Yes, No exemptions                       |
| China RoHS                              |                                          |
| Environment friendly use period (EFUP)  | EFUP-E                                   |
|                                         | No hazardous substances above the limits |
| EU REACH SVHC                           |                                          |
| REACH candidate substance (CAS No.)     | No substance above 0.1 wt%               |

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## Accessories

### ZBF 6 CUS - Zack Marker strip, flat

0825027

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

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

0808710

<https://www.phoenixcontact.com/us/products/0808710>



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

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

0808736

<https://www.phoenixcontact.com/us/products/0808736>



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 6.2 mm, lettering field size: 5.15 x 6.15 mm, Number of individual labels: 1000

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

0808765

<https://www.phoenixcontact.com/us/products/0808765>



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

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## CLIPFIX 35-5 - End bracket

3022276

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

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

2907810

<https://www.phoenixcontact.com/us/products/2907810>



Module set for the optical monitoring and floating remote signaling of adjacent surge protective devices in the TERMITRAB complete or CLIXTRAB product family. Suitable for directly grounded DIN rails.

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## TTC-6-LCP - Cover

2908729

<https://www.phoenixcontact.com/us/products/2908729>



End cover for terminating a row of TERMITRAB complete TTC-6... terminal blocks

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## SSA 3-6 - Shield connection

2839295

<https://www.phoenixcontact.com/us/products/2839295>



Shield fast connection for 3 ... 6 mm cable diameter. Potential connecting cable: 200 mm, 1 mm<sup>2</sup>, color: black

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## SSA 5-10 - Shield connection

2839512

<https://www.phoenixcontact.com/us/products/2839512>



Shield fast connection for 5 ... 10 mm cable diameter. Potential connecting cable:  
200 mm, 1 mm<sup>2</sup>, color: black

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## X-PEN 0,35 - Marker pen

0811228

<https://www.phoenixcontact.com/us/products/0811228>



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

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