

Thermomagnetic device circuit breaker - CB TM1 4A SFB P - 2800839

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Thermomagnetic device circuit breaker, 1-pos., tripping characteristic SFB, 1 PDT contact, plug for base element.

Your advantages

- ✓ Compact design with precise nominal current levels
- ✓ Modular expansion possible thanks to the uniform, plug-in housing concept
- ✓ Sophisticated remote signaling concept enables monitoring from any location
- ✓ Maximum overcurrent protection across long cable paths via SFB trigger characteristic
- ✓ Supply/remote signaling can be bridged with CLIPLINE complete accessories



Key Commercial Data

| | |
|--------------|---------------|
| Packing unit | 1 pc |
| GTIN | |
| GTIN | 4046356689908 |

Technical data

Dimensions

| | |
|------------------------|---------|
| Height | 45 mm |
| Width | 12.3 mm |
| Depth | 52 mm |
| Complete module height | 90 mm |
| Complete module width | 12.3 mm |
| Complete module depth | 77.3 mm |

Ambient conditions

| | |
|---|-------------------------------|
| Ambient temperature (operation) | -30 °C ... 60 °C |
| Ambient temperature (storage/transport) | -40 °C ... 80 °C |
| Humidity test | 240 h, 95 % RH, 40 °C |
| Shock (operation) | 30g (IEC 60068-2-27, Test Ea) |

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Ambient conditions

| | |
|-----------------------|-----------------------------|
| Vibration (operation) | 8g (IEC 60068-2-6, Test Fc) |
| Degree of protection | IP30 (Actuation area) |

General

| | |
|--|---|
| Installation instructions | When mounted in rows, the nominal device current can be limited to just 80% or must be oversized accordingly. |
| Flammability rating according to UL 94 | V-0 |
| Mounting type | on base element |
| Color | gray |
| Number of positions | 1 |
| Insulating material group | II |
| Degree of pollution | 2 |
| Type | Male |

Electrical data

| | |
|---|---|
| Fuse type | SFB |
| Rated surge voltage | 2.5 kV (Increased insulation in actuation area) |
| Rated voltage | 50 V DC (IEC 60934) |
| | 50 V DC (UL 1077) |
| | 50 V DC (UL 508 - with plug-in base) |
| Rated current I_N | 4 A (IEC 60934) |
| | 4 A DC (low-induction load according to UL 1077) |
| | 4 A DC (low-induction load according to UL 508 - with plug-in base) |
| Rated insulation voltage U_i | 277 V AC (UL 1077) |
| | 250 V AC (IEC 60934) |
| Power dissipation | 1.44 W (in nominal operation per channel) |
| Device resistance | 90 mΩ |
| Insulation resistance R_{iso} | > 100 MΩ (500 V DC) |
| Type of actuation | S type |
| Tripping method | TM (thermomagnetic) |
| Tripping level | Trip-free mechanism (positive) |
| Rated short-circuit switching capacity I_{cn} | 600 A (50 V DC) |
| Required backup fuse | 16 A ($I > I_{cn}$) |
| Short-circuit switching capacity | 1000 A AC (277 V AC) |
| | 1000 A DC (50 V DC) |
| Dielectric strength | 3000 V AC (Actuation area) |
| | 1500 V AC (Main to auxiliary circuit) |
| | 1500 V AC (Open main circuit) |
| | 1000 V AC (Open auxiliary circuit) |
| Voltage drop | 0.34 V (at $1 \times I_n$) |
| Switching cycles, max. | 6000 (at $1 \times I_n$) |
| Auxiliary circuit | 277 V AC / 0.5 A (Low-induction) |

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Technical data

Electrical data

| | |
|---|--|
| | 277 V AC / 1 A (Low-induction, maximum of 2000 cycles) |
| | 50 V DC / 1 A (Low-induction) |
| Minimum auxiliary contact operating voltage | 10 V |
| Maximum auxiliary contact operating voltage | 240 V |
| | 240 V |
| Minimum auxiliary contact operating current | 10 mA |
| Maximum auxiliary contact operating current | 1 A |

Standards and Regulations

| | |
|--------------------------|----------|
| Standards/specifications | EN 60934 |
|--------------------------|----------|

Conformance/approvals

| | |
|----------------|------------------------------|
| Designation | UL approval |
| Identification | UL Listed UL 508 |
| | UL/C-UL Recognized UL 1077 |
| Designation | CSA |
| Identification | CSA CAN/CSA-C22.2 No. 235-04 |
| Designation | Shipbuilding approval |
| Identification | DNV GL |

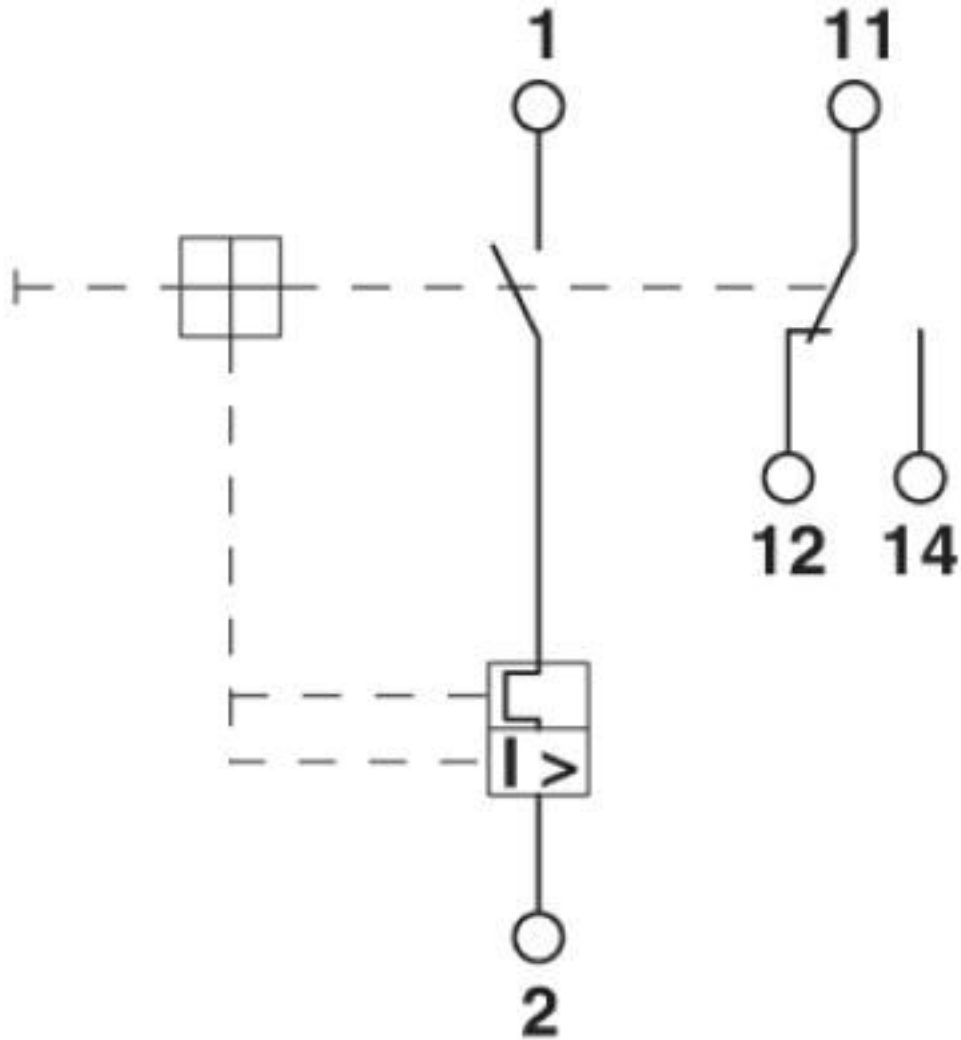
Environmental Product Compliance

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

Drawings

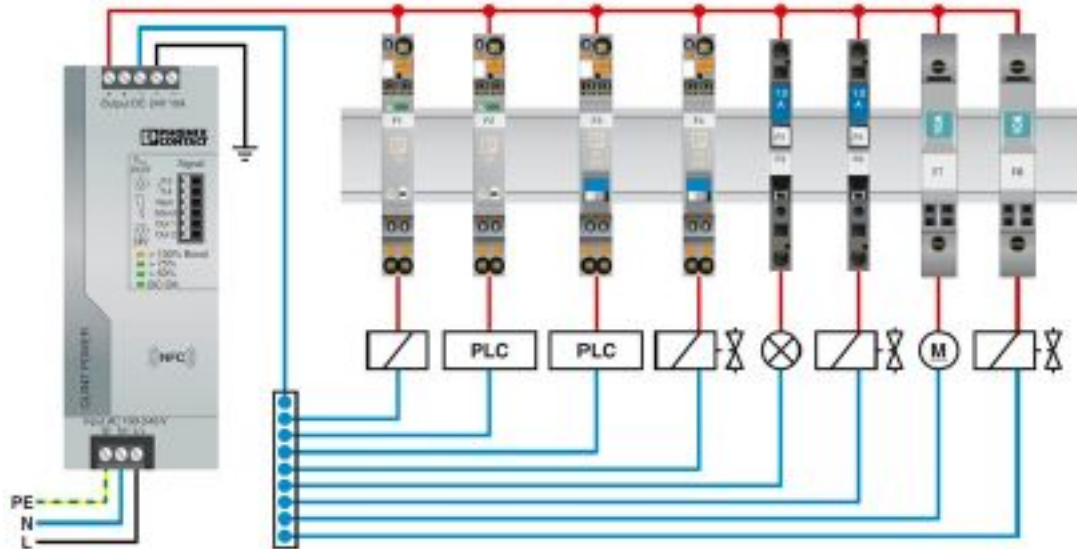
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Circuit diagram

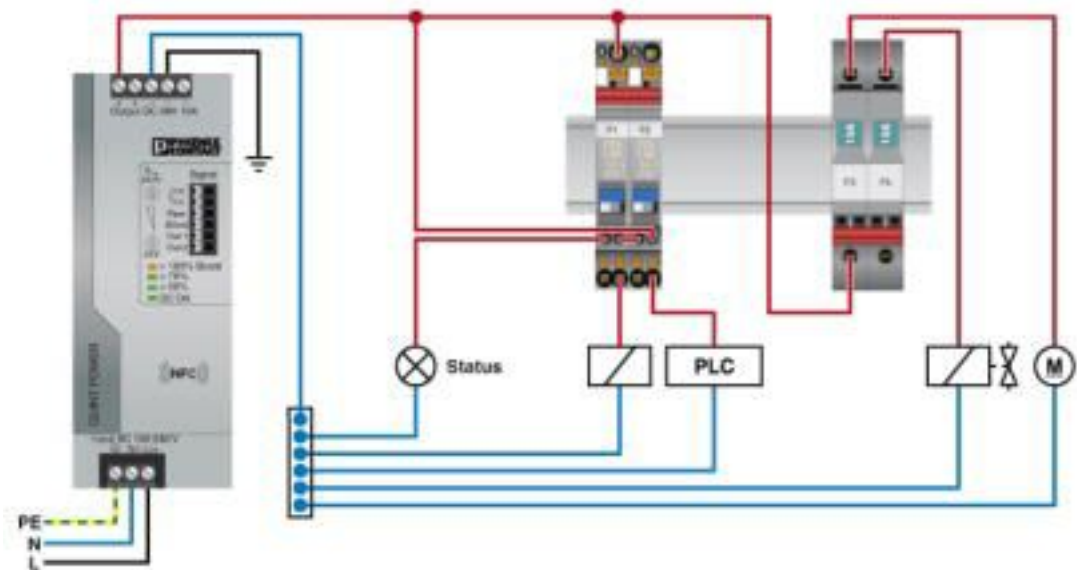


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Application drawing

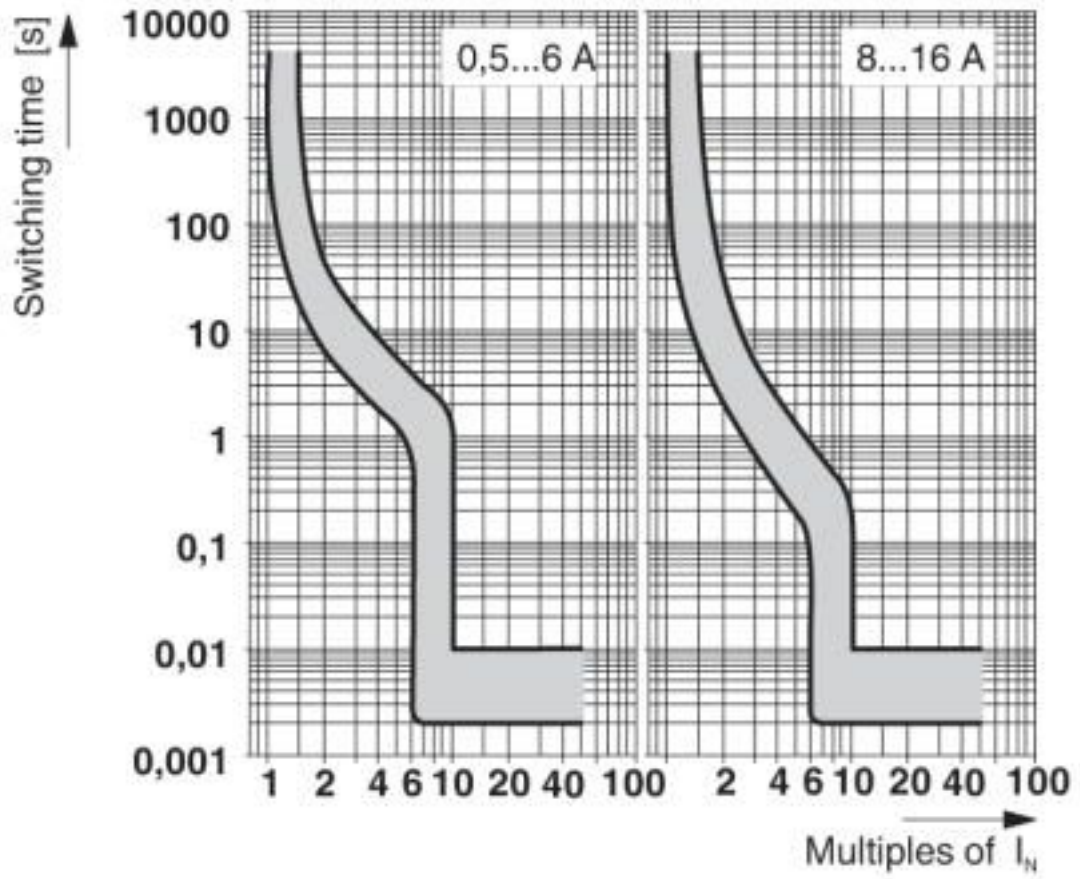


Application drawing



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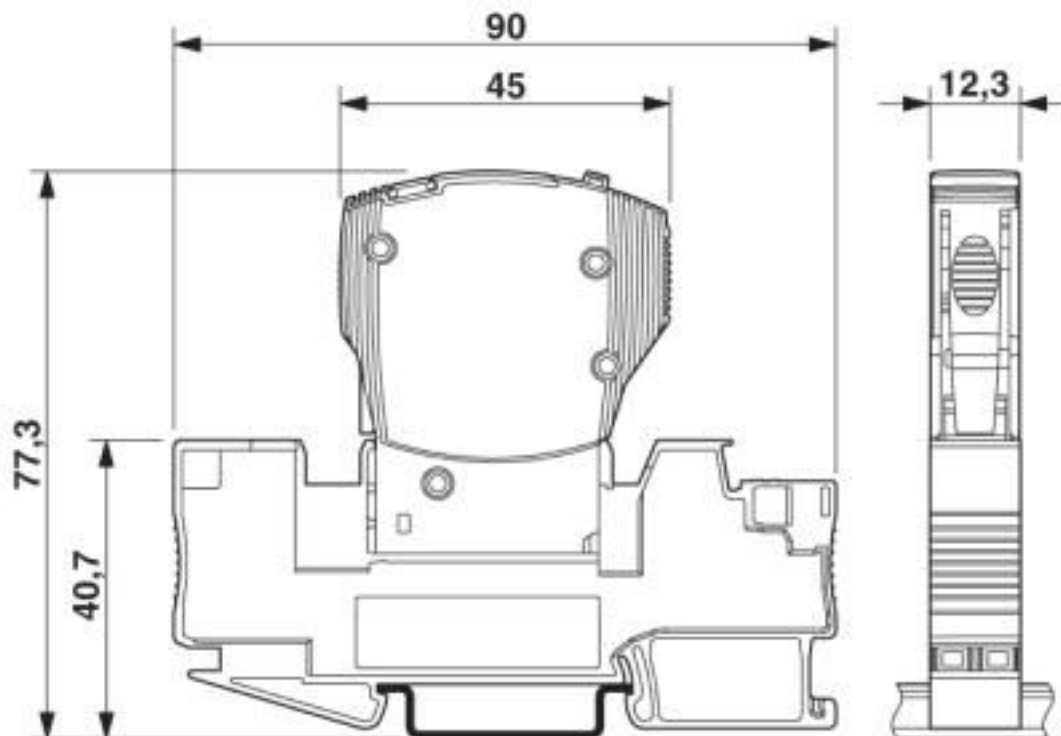
Diagram



Trigger characteristic in the DC range

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Dimensional drawing



The figure shows the complete module consisting of a base element and connector

Classifications

eCl@ss

| | |
|---------------|----------|
| eCl@ss 10.0.1 | 27141116 |
| eCl@ss 4.0 | 27141100 |
| eCl@ss 4.1 | 27141100 |
| eCl@ss 5.0 | 27141100 |
| eCl@ss 5.1 | 27141100 |
| eCl@ss 6.0 | 27141100 |
| eCl@ss 7.0 | 27141116 |
| eCl@ss 8.0 | 27141116 |
| eCl@ss 9.0 | 27141116 |

ETIM

| | |
|----------|----------|
| ETIM 3.0 | EC000899 |
| ETIM 4.0 | EC000899 |
| ETIM 5.0 | EC000899 |
| ETIM 6.0 | EC000899 |
| ETIM 7.0 | EC000899 |

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Classifications

UNSPSC

| | |
|---------------|----------|
| UNSPSC 6.01 | 30211812 |
| UNSPSC 7.0901 | 39121411 |
| UNSPSC 11 | 39121411 |
| UNSPSC 12.01 | 39121411 |
| UNSPSC 13.2 | 39121410 |
| UNSPSC 18.0 | 39121410 |
| UNSPSC 19.0 | 39121410 |
| UNSPSC 20.0 | 39121410 |
| UNSPSC 21.0 | 39121410 |

Approvals

Approvals


Approvals


CSA / UL Listed / UL Recognized / cUL Recognized / cUL Listed / VDE Zeichengenehmigung / EAC / KC / DNV GL / CCC / EAC / cULus Recognized / cULus Listed

Ex Approvals

Approval details

| | | | |
|-----|---|---|---------|
| CSA |  | http://www.csagroup.org/services-industries/product-listing/ | 2786957 |
|-----|---|---|---------|

| | | | |
|-----------|---|---|---------------|
| UL Listed |  | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 172140 |
|-----------|---|---|---------------|

| | | | |
|---------------|---|---|---------------|
| UL Recognized |  | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 140459 |
|---------------|---|---|---------------|

| | | | |
|----------------|---|---|---------------|
| cUL Recognized |  | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 140459 |
|----------------|---|---|---------------|

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Approvals

| | | | |
|------------------------|--|---|-------------------------|
| cUL Listed | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 172140 |
| VDE Zeichengenehmigung | | http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx | 40034683 |
| EAC | | | EAC-Zulassung |
| KC | | http://eng.kcc.go.kr/user/ehpMain.do | SW05012-15002 |
| DNV GL | | https://approvalfinder.dnvgl.com/ | TAE00003C7 |
| CCC | | | 2019010307158887 |
| EAC | | | RU C- DE.*09.B.00169 |
| cULus Recognized | | | |
| cULus Listed | | | |

Accessories

Accessories

Bridge

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Accessories

Jumper - CB PT BRIDGE - 2801014



Bridge plug for bridging contacts 1 to 2 for CB base elements

Jumper - CB RC BRIDGE - 2801616



Bridge plug for bridging contacts 11 to 14 for CB base elements

Cutting tools

Front cutter - CUTFOX-FBS - 1212124



Cutting tool, for separating individual jumper bars from FBS ... plug-in bridges and EB ... insertion bridges

Jumper

Plug-in bridge - FBS 2-6 - 3030336



Plug-in bridge, pitch: 6.2 mm, width: 10.7 mm, number of positions: 2, color: red

Plug-in bridge - FBS 3-6 - 3030242



Plug-in bridge, pitch: 6.2 mm, width: 16.9 mm, number of positions: 3, color: red

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Accessories

Plug-in bridge - FBS 4-6 - 3030255



Plug-in bridge, pitch: 6.2 mm, width: 23.1 mm, number of positions: 4, color: red

Plug-in bridge - FBS 5-6 - 3030349



Plug-in bridge, pitch: 6.2 mm, width: 29.3 mm, number of positions: 5, color: red

Plug-in bridge - FBS 10-6 - 3030271



Plug-in bridge, pitch: 6.2 mm, width: 60.3 mm, number of positions: 10, color: red

Plug-in bridge - FBS 20-6 - 3030365



Plug-in bridge, pitch: 6.2 mm, width: 122.3 mm, number of positions: 20, color: red

Plug-in bridge - FBS 50-6 - 3032224



Plug-in bridge, pitch: 6.2 mm, width: 308.3 mm, number of positions: 50, color: red

Labeled terminal marker

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Accessories

Zack Marker strip, flat - ZBF 12 CUS - 0825018



Zack Marker strip, flat, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into flat marker groove, for terminal block width: 12 mm, lettering field size: 5.15 x 12.15 mm, Number of individual labels: 5

Terminal marking

Zack Marker strip, flat - ZBF 12:UNBEDRUCKT - 0809735



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: 12 mm, lettering field size: 5.15 x 12.15 mm, Number of individual labels: 5

Necessary add-on products

Base element - CB 1/6-2/4 PT-BE - 2800929



Base element with push-in connection technology for CB ... device circuit breakers

Base element - CB 1/10-1/10 UT-BE - 2801305



Base element with screw connection technology for CB... device circuit breakers

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