

## Thermomagnetic device circuit breaker - CB TM2 4A M1 P - 2800883

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Thermomagnetic device circuit breaker, 2-pos., tripping characteristic M1 (medium-blow), 2 PDT contacts, plug for base element.

### Product Description

Thermomagnetic device circuit breaker



### Key Commercial Data

|              |                                                                                                         |
|--------------|---------------------------------------------------------------------------------------------------------|
| Packing unit | 1 pc                                                                                                    |
| GTIN         | <br>4 046356 690447 |
| GTIN         | 4046356690447                                                                                           |

### Technical data

#### Dimensions

|        |         |
|--------|---------|
| Height | 45 mm   |
| Width  | 24.6 mm |
| Depth  | 52 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) |
| 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                                                                                               |

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## Technical data

### General

|                           |      |
|---------------------------|------|
| Color                     | gray |
| Number of positions       | 2    |
| Insulating material group | II   |
| Degree of pollution       | 2    |
| Type                      | Male |

### Electrical data

|                                                 |                                                                     |
|-------------------------------------------------|---------------------------------------------------------------------|
| Fuse type                                       | M1 (normal blow)                                                    |
| Rated surge voltage                             | 2.5 kV (Increased insulation in actuation area)                     |
| Rated voltage                                   | 80 V DC (IEC 60934)                                                 |
|                                                 | 80 V DC (UL 1077)                                                   |
|                                                 | 80 V DC (UL 508 - with plug-in base)                                |
|                                                 | 240 V AC (Ue according to IEC 60934)                                |
|                                                 | 277 V AC (UL 1077)                                                  |
|                                                 | 277 V AC (UL 508 - with plug-in base)                               |
| Rated current $I_N$                             | 4 A (IEC 60934)                                                     |
|                                                 | 4 A AC (inductive load according to UL 1077)                        |
|                                                 | 4 A DC (low-induction load according to UL 1077)                    |
|                                                 | 4 A AC (inductive load according to UL 508 - with plug-in base)     |
|                                                 | 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 $I_{cn}$ | 400 A (240 V AC)                                                    |
|                                                 | 600 A (80 V DC)                                                     |
| Required backup fuse                            | $\geq 16 A (I > I_{cn})$                                            |
| 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)                                  |
|                                                 | 1500 V AC (Position to position)                                    |
| Voltage drop                                    | 0.34 V (at $1 \times I_n$ )                                         |
| Switching cycles, max.                          | 6000 (240 V AC/1 $\times I_n$ )                                     |
|                                                 | 3000 (80 V DC/1 $\times I_n$ )                                      |

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## Technical data

### Electrical data

|                                             |                                                        |
|---------------------------------------------|--------------------------------------------------------|
| Auxiliary circuit                           | 277 V AC / 0.5 A (Low-induction)                       |
|                                             | 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                       |

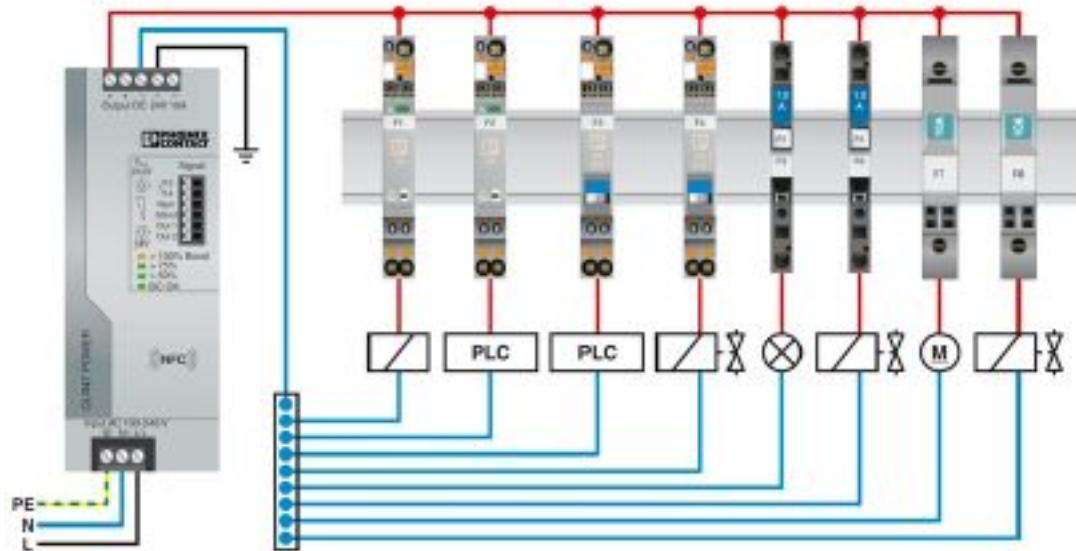
### Environmental Product Compliance

|            |                                                                                                     |
|------------|-----------------------------------------------------------------------------------------------------|
| 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

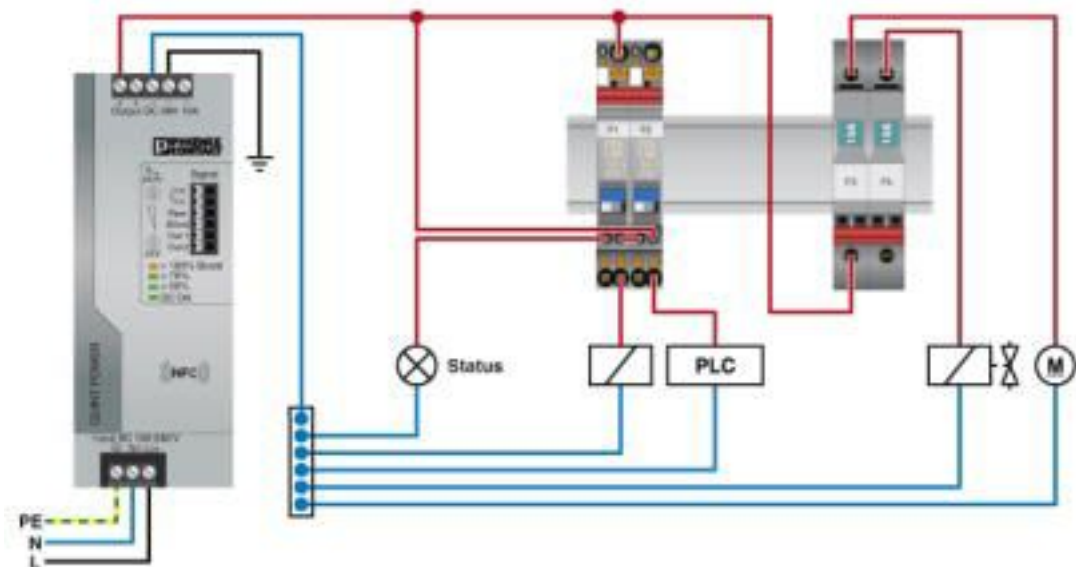
## Thermomagnetic device circuit breaker - CB TM2 4A M1 P - 2800883

Application drawing



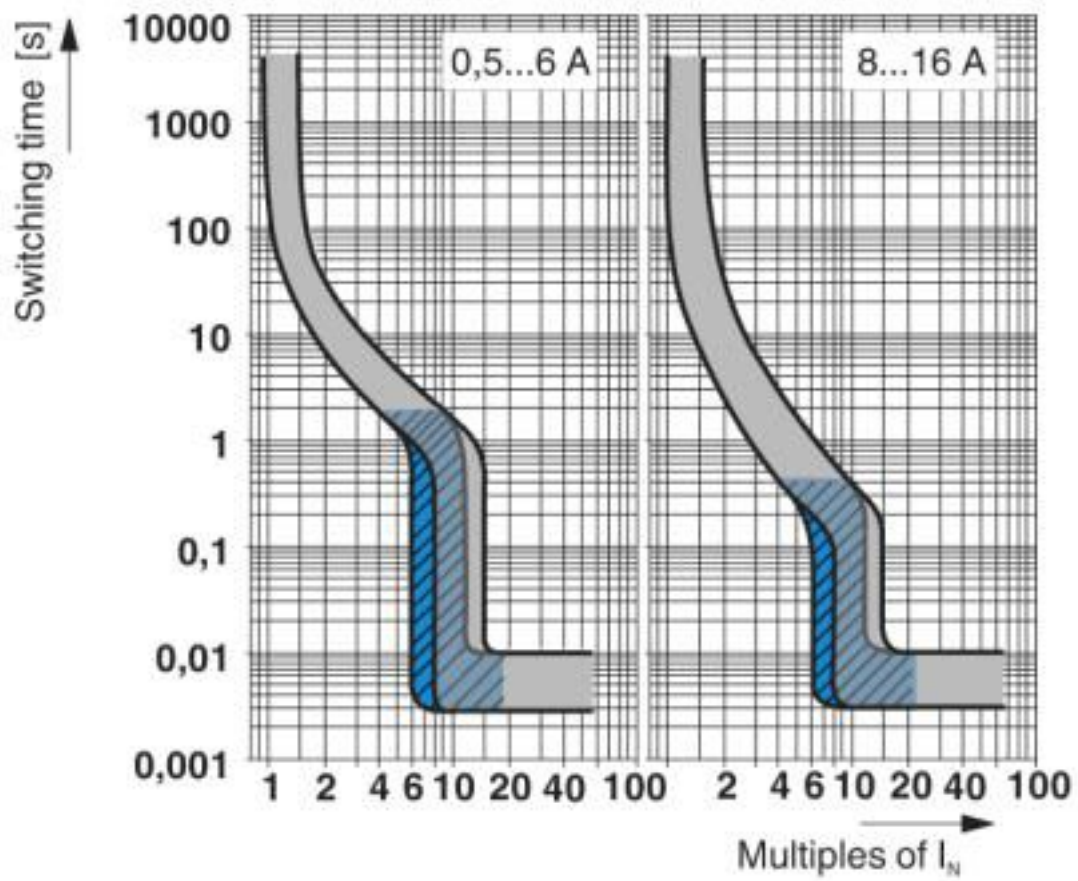
The figure shows the single-position versions

Application drawing



## Thermomagnetic device circuit breaker - CB TM2 4A M1 P - 2800883

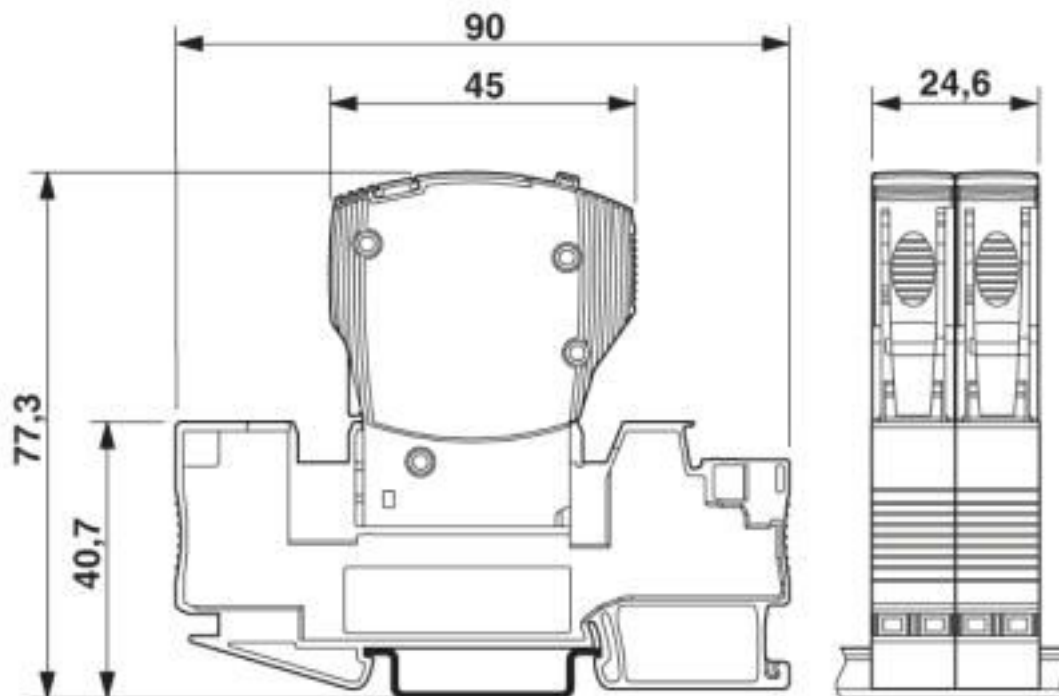
Diagram



Trigger characteristic  
Gray: DC range, blue: AC range

## Thermomagnetic device circuit breaker - CB TM2 4A M1 P - 2800883

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 |

#### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 6.01 | 30211812 |
|-------------|----------|

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## Classifications

### UNSPSC

|               |          |
|---------------|----------|
| 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 Recognized / cUL Recognized / VDE Zeichengenehmigung / EAC / KC / DNV GL / CCC / cULus Recognized

#### Ex Approvals

### Approval details

|                        |                                                                                     |                                                                                                                                                                                                           |                         |
|------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| CSA                    |  | <a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a>                                                                   | 2786957                 |
| UL Recognized          |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>                                                     | FILE E 140459           |
| cUL Recognized         |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>                                                     | FILE E 140459           |
| VDE Zeichengenehmigung |  | <a href="http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx">http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx</a> | 40034683                |
| EAC                    |  |                                                                                                                                                                                                           | RU C-<br>DE.*09.B.00169 |

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### Approvals

|                  |                                                                                   |                                                                                         |                  |
|------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|------------------|
| KC               |  | <a href="http://eng.kcc.go.kr/user/ehpMain.do">http://eng.kcc.go.kr/user/ehpMain.do</a> | SW05012-15005    |
| DNV GL           |  | <a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a>       | TAE00003C7       |
| CCC              |  |                                                                                         | 2019010307158887 |
| cULus Recognized |  |                                                                                         |                  |

### Accessories

#### Accessories

#### Bridge

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



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## Accessories

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### 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

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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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Plug-in bridge - FBS 4-6 - 3030255



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

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Plug-in bridge - FBS 5-6 - 3030349



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

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Plug-in bridge - FBS 10-6 - 3030271



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

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## Accessories

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

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

## Thermomagnetic device circuit breaker - CB TM2 4A M1 P - 2800883

### Accessories

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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