

# Thermomagnetic device circuit breaker - CB TM2 8A M1 P - 2800886

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

## Product Description

Thermomagnetic device circuit breaker



## Key Commercial Data

|                                      |   |
|--------------------------------------|---|
| Packing unit                         | 1 pc  |
| GTIN                                 | <br>4 046356 690461 |
| GTIN                                 | 4046356690461   |
| Weight per Piece (excluding packing) | 50.000 g  |
| Custom tariff number                 | 85362010  |
| Country of origin                    | Indonesia   |

## 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) |

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## Technical data

### Ambient conditions

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

### General

|  |   |
|--|---|
| Assembly note                          | When mounted in rows, the nominal device current can be limited to just 80% or must be overdimensioned accordingly. |
| Flammability rating according to UL 94 | V-0   |
| Mounting type                          | on base element   |
| 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 (U <sub>e</sub> according to IEC 60934)                    |
|  | 277 V AC (UL 1077)  |
|  | 277 V AC (UL 508 - with plug-in base)                               |
| Rated current I <sub>N</sub>                           | 8 A (IEC 60934)   |
|  | 8 A AC (inductive load according to UL 1077)                        |
|  | 8 A DC (low-induction load according to UL 1077)                    |
|  | 8 A AC (inductive load according to UL 508 - with plug-in base)     |
|  | 8 A DC (low-induction load according to UL 508 - with plug-in base) |
| Rated insulation voltage U <sub>i</sub>                | 277 V AC (UL 1077)  |
|  | 250 V AC (IEC 60934)  |
| Power dissipation                                      | 1.28 W (in nominal operation per channel)                           |
| Device resistance                                      | 18 mΩ   |
| Insulation resistance R <sub>iso</sub>                 | > 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 <sub>cn</sub> | 400 A (240 V AC)  |
|  | 600 A (80 V DC)   |

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## Technical data

### Electrical data

|   |  |
|---|--|
| Required backup fuse                        | $\geq 32 \text{ A (I > I_{cn})}$                       |
| 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                                | 0.14 V (at $1 \times I_n$ )                            |
| Switching cycles, max.                      | 6000 (240 V AC / $1 \times I_n$ )                      |
|   | 3000 (80 V DC / $1 \times I_n$ )                       |
| 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                       |

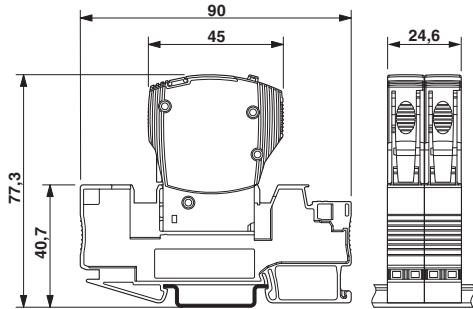
### Environmental Product Compliance

|            |   |
|------------|---|
| REACH SVHC | Lead 7439-92-1  |
| China RoHS | Environmentally Friendly Use Period = 25;   |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

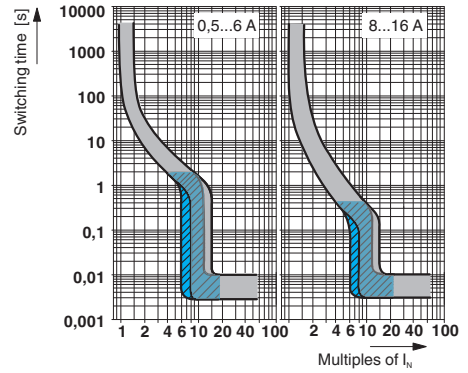
## Drawings

# Thermomagnetic device circuit breaker - CB TM2 8A M1 P - 2800886

Dimensional drawing



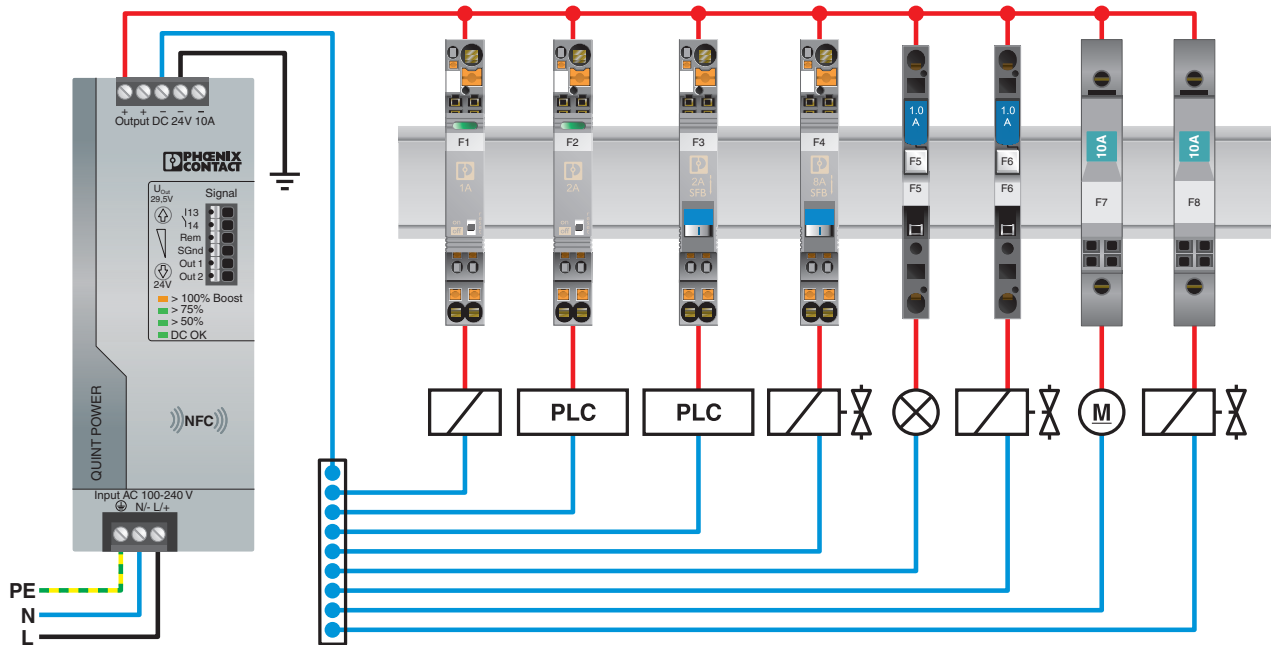
Diagram



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

Trigger characteristic  
Gray: DC range, blue: AC range

Application drawing



The figure shows the single-position versions

# Thermomagnetic device circuit breaker - CB TM2 8A M1 P - 2800886

Application drawing



## Classifications

### eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27141116 |
| eCl@ss 11.0   | 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 9.0    | 27141116 |

### ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC000899 |
| ETIM 4.0 | EC000899 |

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## Classifications

### ETIM

|          |          |
|----------|----------|
| ETIM 6.0 | EC000899 |
| ETIM 7.0 | EC000899 |

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

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## Approvals

|     |  |  |                         |
|-----|--|--|-------------------------|
| EAC |  |  | RU C-<br>DE.*09.B.00169 |
|-----|--|--|-------------------------|

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

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

|                  |  |  |  |
|------------------|--|--|--|
| cULus Recognized |  |  |  |
|------------------|--|--|--|

## Accessories

### Accessories

#### Bridge

Bridge - CB PT BRIDGE - 2801014



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

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## Accessories

Bridge - CB RC BRIDGE - 2801616



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

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## 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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## Jumper

Plug-in bridge - FBS 2-6 - 3030336



Plug-in bridge, pitch: 6.2 mm, color: red

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Plug-in bridge - FBS 3-6 - 3030242



Plug-in bridge, pitch: 6.2 mm, color: red

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Plug-in bridge - FBS 4-6 - 3030255



Plug-in bridge, pitch: 6.2 mm, color: red

## Thermomagnetic device circuit breaker - CB TM2 8A M1 P - 2800886

### Accessories

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Plug-in bridge - FBS 5-6 - 3030349



Plug-in bridge, pitch: 6.2 mm, color: red

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Plug-in bridge - FBS 10-6 - 3030271



Plug-in bridge, pitch: 6.2 mm, color: red

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Plug-in bridge - FBS 20-6 - 3030365



Plug-in bridge, pitch: 6.2 mm, color: red

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Plug-in bridge - FBS 50-6 - 3032224



Plug-in bridge, pitch: 6.2 mm, color: red

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### 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

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### Accessories

#### 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

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### 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

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



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