

# CB TM2 0.5A F1 P - Thermal-magnetic device circuit breaker



2800890

<https://www.phoenixcontact.com/us/products/2800890>

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Thermal-magnetic device circuit breaker, 2-pos., tripping characteristic F1 (fast-blow), 2 changeover contacts, plug for base element.

## Product description

Thermal-magnetic device circuit breaker

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 2800890       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | CL04          |
| Product key                          | CLA124        |
| GTIN                                 | 4046356690515 |
| Weight per piece (including packing) | 74.1 g        |
| Weight per piece (excluding packing) | 74.1 g        |
| Customs tariff number                | 85362010      |
| Country of origin                    | ID            |

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## Technical data

### Product properties

|                     |  |
|---------------------|--|
| Product type        | Thermomagnetic device circuit breakers |
| Product family      | CB TM                                  |
| Type                | Male                                   |
| Number of positions | 2                                      |
| No. of channels     | 1                                      |

### Insulation characteristics

|                     |   |
|---------------------|---|
| Degree of pollution | 2 |
|---------------------|---|

### Electrical properties

|           |                  |
|-----------|------------------|
| Fuse type | Automatic device |
|-----------|------------------|

### General

|   |   |
|---|---|
| Rated voltage                                   | 80 V DC (IEC 60934)   |
|   | 80 V DC (UL 1077)   |
|   | 80 V DC (UL 508 - with plug-in base)                                  |
| Rated insulation voltage $U_i$                  | 277 V AC (UL 1077)  |
|   | 250 V AC (IEC 60934)  |
| Rated current $I_N$                             | 0.5 A (IEC 60934)   |
|   | inductive load according to UL 1077                                   |
|   | 0.5 A DC (low-induction load according to UL 1077)                    |
|   | 0.5 A DC (inductive load according to UL 508 - with plug-in base)     |
| Rated surge voltage                             | 0.5 A DC (low-induction load according to UL 508 - with plug-in base) |
|   | 2.5 kV (Increased insulation in actuation area)                       |
| Insulation resistance $R_{iso}$                 | > 100 M $\Omega$ (500 V DC)   |
| 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)   |
| Type of actuation                               | S type  |
| Tripping method                                 | TM (thermal-magnetic)   |
| Tripping level                                  | Trip-free mechanism (positive)  |
| Device resistance                               | 4.9 $\Omega$  |
| Required backup fuse                            | $\geq 15$ A ( $I > I_{cn}$ )  |
| Rated short-circuit switching capacity $I_{cn}$ | 600 A (80 V DC)   |
| 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)                                    |

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|                        |   |
|------------------------|---|
|                        | 1500 V AC (Position to position)  |
| Switching cycles, max. | 6000 (240 V AC / 1 x I <sub>n</sub> )<br>3000 (80 V DC/1 x I <sub>n</sub> ) |
| Fuse                   | F1 (fast blow)  |
| Power dissipation      | 1.25 W (in nominal operation per channel)                                   |
| Voltage drop           | 2.5 V (at 1 x I <sub>n</sub> )  |
| Contact switching type | 2 changeover contacts   |

## Auxiliary contact

|   |       |
|---|-------|
| Minimum operating voltage U <sub>min</sub> DC | 10 V  |
| Maximum operating voltage U <sub>max</sub> DC | 240 V |
| Maximum operating voltage U <sub>max</sub> AC | 240 V |
| Minimum operating current I <sub>min</sub>    | 10 mA |
| Max. operating current I <sub>max</sub>       | 1 A   |

## Connection data

|                   |           |
|-------------------|-----------|
| Connection method | pluggable |
| Connection method | pluggable |

## Dimensions

|                     |  |
|---------------------|--|
| Dimensional drawing |  |
| Width               | 24.6 mm  |
| Height              | 45 mm  |
| Depth               | 52 mm  |

## Material specifications

|  |                                     |
|--|-------------------------------------|
| Color                                  | gray (RAL 7042)<br>black (RAL 9005) |
| Flammability rating according to UL 94 | V-0                                 |
| Insulating material group              | II                                  |

## Mechanical properties

### Mechanical data

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

## Environmental and real-life conditions

### Ambient conditions

|                                 |                       |
|---------------------------------|-----------------------|
| Degree of protection            | IP30 (Actuation area) |
| Ambient temperature (operation) | -30 °C ... 60 °C      |

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|   |                               |
|---|-------------------------------|
| Ambient temperature (storage/transport) | -40 °C ... 80 °C              |
| Humidity test                           | 240 h, 95 % RH, 40 °C         |
| Shock (operation)                       | 15g (IEC 60068-2-27, Test Ea) |
| Vibration (operation)                   | 5g (IEC 60068-2-6, Test Fc)   |

## Approvals

### UL approval

|                |                            |
|----------------|----------------------------|
| Identification | UL Listed UL 508           |
|                | UL/C-UL Recognized UL 1077 |

### CSA

|                |                              |
|----------------|------------------------------|
| Identification | CSA CAN/CSA-C22.2 No. 235-04 |
|----------------|------------------------------|

### Shipbuilding approval

|                |        |
|----------------|--------|
| Identification | DNV GL |
|----------------|--------|

## Standards and regulations

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

## Mounting

|               |                 |
|---------------|-----------------|
| Mounting type | on base element |
|---------------|-----------------|

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## Drawings

Dimensional drawing



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

Application drawing



The figure shows the single-position versions

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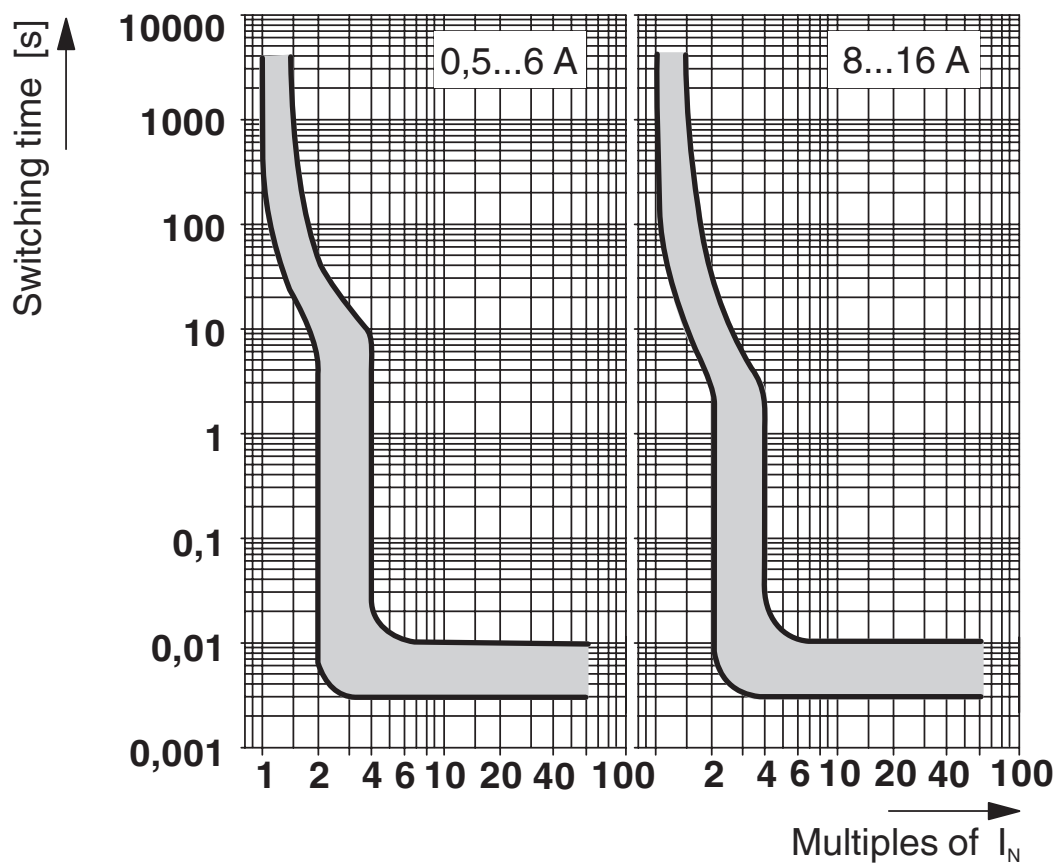
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Application drawing



Diagram



Trigger characteristic in the DC range

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Circuit diagram



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## Approvals

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**cUL Recognized**  
Approval ID: FILE E 140459



**UL Recognized**  
Approval ID: FILE E 140459



**DNV GL**  
Approval ID: TAE00003C7



**VDE Zeichengenehmigung**  
Approval ID: 40034683



**CCC**  
Approval ID: 2025010307749779



**CSA**  
Approval ID: 2786957



**KC**  
Approval ID: SW05012-15006

**UAE-RoHS**

Approval ID: 22-09-50937

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27140401 |
| ECLASS-15.0 | 27140401 |

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | EC003538 |
|-----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39121400 |
|-------------|----------|

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## 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% |
|-------------------------------------|----------------------------|

### EF3.1 Climate Change

|         |               |
|---------|---------------|
| CO2e kg | 8.993 kg CO2e |
|---------|---------------|

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