

CB TM1 3A F1 P - Thermal-magnetic device circuit breaker



2800860

<https://www.phoenixcontact.com/us/products/2800860>

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Thermal-magnetic device circuit breaker, 1-pos., tripping characteristic F1 (fast-blow), 1 changeover contact, plug for base element.

Your advantages

- Individually adjustable with protective plugs
- Fast tripping in the event of an error with the aid of the F1 characteristic curve
- Protective plug with fixed nominal current value as protection against unintentional changes
- Increased safety with electrical isolation in the event of errors

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 2800860 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | CL04 |
| Product key | CLA124 |
| GTIN | 4046356690201 |
| Weight per piece (including packing) | 44.9 g |
| Weight per piece (excluding packing) | 42.4 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 | 1 |
| No. of channels | 1 |

Insulation characteristics

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

Electrical properties

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

General

| | |
|-------------------------------------------------|---------------------------------------------------------------------|
| Rated voltage | 50 V DC (IEC 60934) |
| | 50 V DC (UL 1077) |
| | 50 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 | 3 A (IEC 60934) |
| | inductive load according to UL 1077 |
| | 3 A DC (low-induction load according to UL 1077) |
| | 3 A DC (inductive load according to UL 508 - with plug-in base) |
| | 3 A DC (low-induction load according to UL 508 - with plug-in base) |
| Rated surge voltage | 2.5 kV (Increased insulation in actuation area) |
| Insulation resistance R_{iso} | > 100 M Ω (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 | 140 m Ω |
| Switch-on delay | typ. 2 ms |
| Required backup fuse | 15 A ($I > I_{cn}$) |
| Rated short-circuit switching capacity I_{cn} | 600 A (50 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) |

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| | |
|------------------------|-------------------------------------------|
| | 1000 V AC (Open auxiliary circuit) |
| Switching cycles, max. | 6000 (at 1 x I _n) |
| Fuse | F1 (fast blow) |
| Power dissipation | 1.26 W (in nominal operation per channel) |
| Voltage drop | 0.42 V (at 1 x I _n) |
| Contact switching type | 1 changeover contact |

Auxiliary contact

| | |
|-----------------------------------------------|-------|
| Minimum operating voltage U _{min} DC | 10 V |
| Maximum operating voltage U _{max} DC | 240 V |
| Maximum operating voltage U _{max} AC | 240 V |
| Minimum operating current I _{min} | 10 mA |
| Max. operating current I _{max} | 1 A |

Connection data

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

Dimensions

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

Material specifications

| | |
|----------------------------------------|------------------|
| Color | gray (RAL 7042) |
| | 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

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| | |
|-----------------------------------------|------------------------------------------------|
| Degree of protection | IP30 (Actuation area) |
| 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) | 15g (According to IEC 60068-2-27, Test Ea) |
| Vibration (operation) | 5g (in accordance with 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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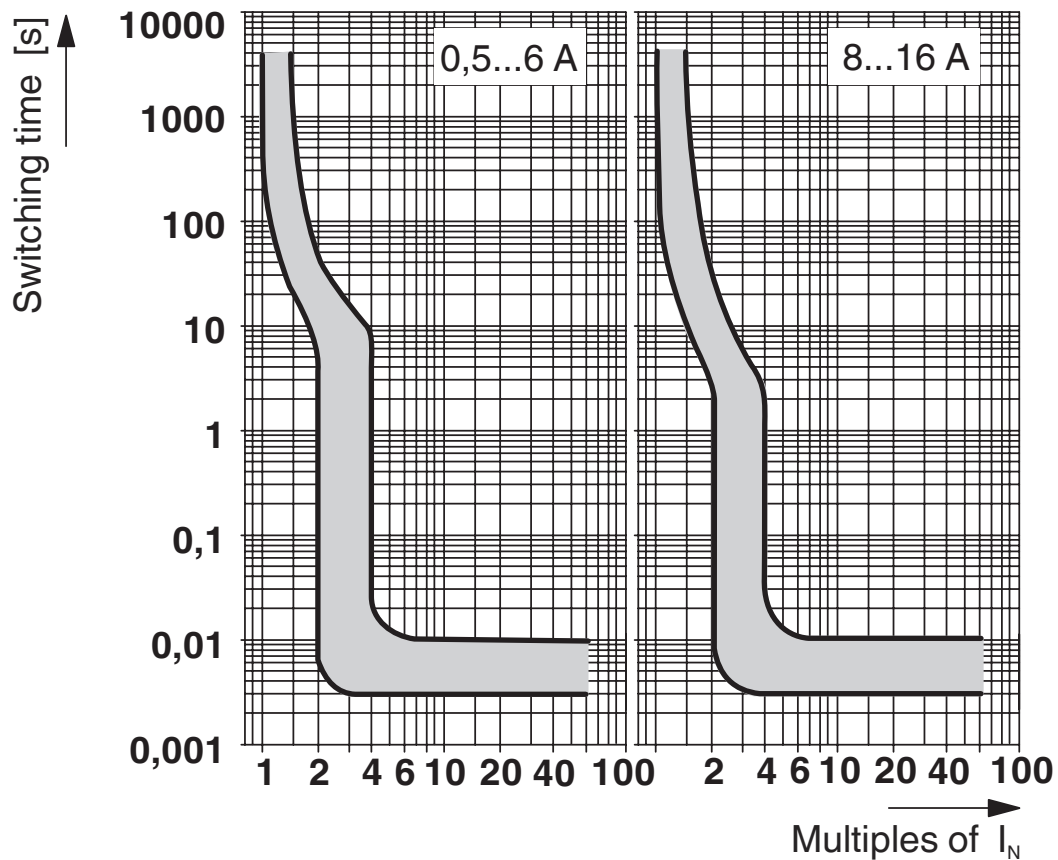
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Application drawing



Diagram



Trigger characteristic in the DC range

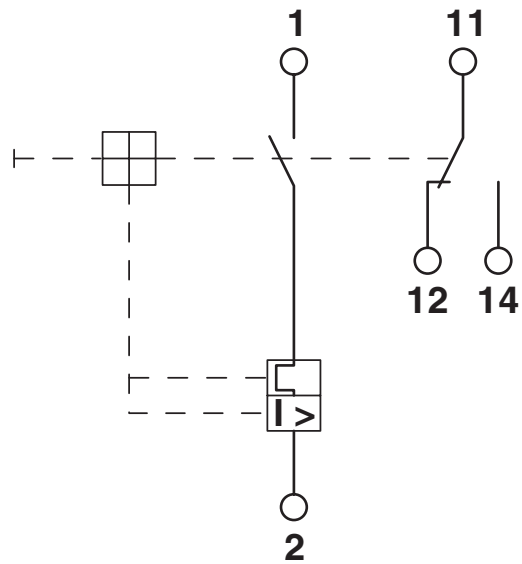
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Circuit diagram



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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



UL Listed
Approval ID: FILE E 172140



CCC
Approval ID: 2025010307749779



CSA
Approval ID: 2786957



cUL Listed
Approval ID: FILE E 172140



KC
Approval ID: SW05012-15003

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 | 4.362 kg CO2e |
|---------|---------------|

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