

# TMC 72C 50A - Miniature Circuit Breaker



1020012

<https://www.phoenixcontact.com/us/products/1020012>

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Miniature Circuit Breaker, 2-position, use: Supplementary Protector (UL 1077), for protection against overcurrent up to a short-circuit current of 7.5 kA. Supplementary protector; OC; UG-EA,B,D., tripping characteristic: C, mounting type: NS 35/..., rated current: 50 A

## Product description

CCC marking on the product is only present on products purchased from Phoenix Contact China.

## Your advantages

- Can be used worldwide due to international approvals
- Suitable for various grid types, as it is available in 1-, 2-, 3-pos. versions
- Ideally coordinated protection due to various tripping characteristics and a wide selection of nominal currents
- Reduced inventory because of suitability for AC and DC applications
- Optional accessories enable remote control and monitoring

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1020012       |
| Packing unit                         | 6 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | CL09          |
| Product key                          | CLA126        |
| GTIN                                 | 4055626508986 |
| Weight per piece (including packing) | 222.222 g     |
| Weight per piece (excluding packing) | 234 g         |
| Customs tariff number                | 85362010      |
| Country of origin                    | CN            |

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## Technical data

### Product properties

|                         |   |
|-------------------------|---|
| Product type            | Circuit breakers  |
| Product family          | TMC 7   |
| Type                    | DIN rail module, one-piece  |
| Number of positions     | 2   |
| Mechanical service life | 20000   |
| Special properties      | Supplementary Protector (UL 1077), for protection against overcurrent up to a short-circuit current of 7.5 kA. Supplementary protector; OC; UG- EA,B,D. |

### Electrical properties

|                         |      |
|-------------------------|------|
| Service life electrical | 6000 |
|-------------------------|------|

#### General

|   |  |
|---|--|
| Operating voltage                               | 277 V AC (277/480Y, 240D)              |
|   | 125 V DC (two poles in series)         |
| Rated current $I_N$                             | 50 A                                   |
| Tripping method                                 | TM (thermal-magnetic)                  |
| Rated short-circuit switching capacity $I_{cn}$ | 5 kA (277/480Y, 240D)                  |
|   | 7.5 kA (125 V DC, two poles in series) |
| Fuse  | C                                      |
| Contact switching type                          | none                                   |

### Connection data

|                                       |  |
|---------------------------------------|--|
| Conductor cross-section rigid         | 1 mm <sup>2</sup> ... 35 mm <sup>2</sup> |
| Cross section AWG                     | 18 ... 2 (converted acc. to IEC)         |
| Conductor cross-section flexible      | 1 mm <sup>2</sup> ... 35 mm <sup>2</sup> |
| Connection method                     | Screw connection                         |
| Tightening torque, min                | 2 Nm                                     |
| Tightening torque                     | 2 Nm                                     |
| Stripping length                      | 11 mm ... 12 mm                          |
| Conductor cross-section flexible max. | 35 mm <sup>2</sup>                       |
| Conductor cross-section, rigid max.   | 35 mm <sup>2</sup>                       |
| Conductor cross-section flexible      | 1 mm <sup>2</sup> ... 35 mm <sup>2</sup> |
| Conductor cross-section rigid         | 1 mm <sup>2</sup> ... 35 mm <sup>2</sup> |
| Conductor cross-section AWG           | 18 ... 2                                 |

### Dimensions

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|                     |  |
|---------------------|--|
| Dimensional drawing |  |
| Width               | 35.3 mm  |
| Height              | 84.3 mm  |
| Depth               | 76.6 mm (incl. DIN rail 7.5 mm)  |

## Material specifications

|       |  |
|-------|--|
| Color | light gray (RAL 7035)<br>gray (RAL 7042) |
|-------|--|

## Environmental and real-life conditions

### Ambient conditions

|                                 |   |
|---------------------------------|---|
| Degree of protection            | IP20  |
| Ambient temperature (operation) | -35 °C ... 70 °C  |
| Humidity test                   | 48 h, 95% RH, 40°C (IEC 60068-2-78)   |
| Shock (operation)               | 30g (11 ms) (IEC 60068-2-11, test Ea)   |
| Vibration (operation)           | ±0,38 mm (10 Hz ... 57 Hz), 5g (57 Hz ... 500 Hz) (Sinusoidal test to IEC 60068-2-6, Test Fc. 10 frequency cycles per axis) |

## Standards and regulations

|                          |             |
|--------------------------|-------------|
| Standards/specifications | UL 1077     |
| Standards/specifications | IEC 60947-2 |

## Mounting

|               |           |
|---------------|-----------|
| Mounting type | NS 35/... |
|---------------|-----------|

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## Drawings

Dimensional drawing



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Diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1020012>



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



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



**TÜV Rheinland**  
Approval ID: R 50531587



**CCC**  
Approval ID: 2024010307673885

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## Classifications

### ECLASS

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

### ETIM

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

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39121410 |
|-------------|----------|

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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 | 3.57 kg CO2e |
|---------|--------------|

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