

# TMC 83D 20A - Miniature Circuit Breaker



2907689

<https://www.phoenixcontact.com/us/products/2907689>

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Thermal-magnetic Miniature Circuit Breaker, 3-position, use: Branch Circuit Protection (UL 489), for protection against overload with a breaking capacity of 10 kA, tripping characteristic: D, mounting type: NS 35/..., rated current: 20 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                          | 2907689       |
| Packing unit                         | 4 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | CL08          |
| Product key                          | CLA125        |
| GTIN                                 | 4055626216249 |
| Weight per piece (including packing) | 407.75 g      |
| Weight per piece (excluding packing) | 393 g         |
| Customs tariff number                | 85362010      |
| Country of origin                    | CN            |

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## Technical data

### Product properties

|                         |  |
|-------------------------|--|
| Product type            | Circuit breakers   |
| Product family          | TMC 8  |
| Type                    | DIN rail module, one-piece   |
| Number of positions     | 3  |
| Mechanical service life | 20000  |
| Special properties      | Branch Circuit Protection (UL 489), for protection against overload with a breaking capacity of 10 kA Thermal-magnetic |

### Electrical properties

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

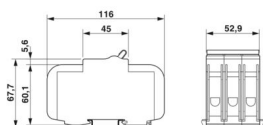
### General

|   |                           |
|---|---------------------------|
| Operating voltage                               | 277 V AC (277/480Y, 240D) |
| Rated current $I_N$                             | 20 A                      |
| Tripping method                                 | TM (thermal-magnetic)     |
| Rated short-circuit switching capacity $I_{cn}$ | 10 kA (IC)                |
| Fuse  | D                         |
| 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

|                     |  |
|---------------------|--|
| Dimensional drawing |  |
| Width               | 52.9 mm  |
| Height              | 116 mm   |
| Depth               | 76.6 mm (incl. DIN rail 7.5 mm)  |

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## Material specifications

|  |                       |
|--|-----------------------|
| Color                                  | light gray (RAL 7035) |
|  | orange (RAL 2003)     |
| Flammability rating according to UL 94 | V-0                   |

## Environmental and real-life conditions

### Ambient conditions

|                                 |   |
|---------------------------------|---|
| 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)  |
| Vibration (operation)           | ±0,38 mm (10 Hz ... 57 Hz), 5g (57 Hz ... 500 Hz) (IEC 60068-2-6, Fc, sine) |

## Standards and regulations

|                          |             |
|--------------------------|-------------|
| Standards/specifications | UL 489      |
|                          | IEC 60947-2 |

## Mounting

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

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## Drawings



Diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2907689>



**UL Listed**

Approval ID: FILE E 320373



**cUL Listed**

Approval ID: FILE E 320373



**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 | 13.674 kg CO2e |
|---------|----------------|

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