

# UT 6-TMC M 8A - Thermal-magnetic device circuit breaker



0916609

<https://www.phoenixcontact.com/us/products/0916609>

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Thermal-magnetic circuit breaker, 1-pos., for DIN rail mounting



## Your advantages

- Simple feed-in due to bridging capability using CLIPLINE complete accessories
- High system availability, thanks to easy resetting
- Quick and easy identification with large-area marking options
- The right device for every application, thanks to a nominal current range of 0.5 to 16 A
- Space savings of 30 % compared to miniature circuit breakers owing to the compact width of 12.3 mm

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 0916609       |
| Packing unit                         | 6 pc          |
| Minimum order quantity               | 6 pc          |
| Sales key                            | CL16          |
| Product key                          | CLA122        |
| GTIN                                 | 4046356449052 |
| Weight per piece (including packing) | 63.16 g       |
| Weight per piece (excluding packing) | 63 g          |
| Customs tariff number                | 85362010      |
| Country of origin                    | CZ            |

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## Technical data

### Product properties

|                       |                                        |
|-----------------------|----------------------------------------|
| Product type          | Thermomagnetic device circuit breakers |
| Product family        | UT 6-TMC                               |
| Type                  | DIN rail module, one-piece             |
| Number of positions   | 1                                      |
| Number of connections | 2                                      |
| Number of rows        | 1                                      |
| No. of channels       | 1                                      |
| Potentials            | 1                                      |

### Insulation characteristics

|                      |    |
|----------------------|----|
| Overvoltage category | II |
| Degree of pollution  | 2  |

### Electrical properties

|                                                 |                        |
|-------------------------------------------------|------------------------|
| Fuse type                                       | Automatic device       |
| Maximum power dissipation for nominal condition | $\leq 1.43 \text{ VA}$ |

### General

|                                                 |                                        |
|-------------------------------------------------|----------------------------------------|
| Operating voltage                               | 50 V AC ... 264 V AC (48 - 62 Hz)      |
|                                                 | 5 V DC ... 30.8 V DC                   |
| Rated voltage                                   | 240 V AC (50/60 Hz)                    |
|                                                 | 28 V DC                                |
|                                                 | 240 V AC (50/60 Hz)                    |
|                                                 | 28 V DC                                |
| Rated insulation voltage $U_i$                  | 440 V AC                               |
| Rated current $I_N$                             | 8 A                                    |
| Rated surge voltage                             | 2.8 kV                                 |
| Insulation resistance $R_{iso}$                 | $> 100 \text{ M}\Omega$ (main contact) |
| Type of actuation                               | S type                                 |
| Tripping method                                 | TM (thermal-magnetic)                  |
| Tripping level                                  | Trip-free mechanism (positive)         |
| Device resistance                               | 22.2 m $\Omega$                        |
| Required backup fuse                            | 25 A                                   |
| Rated short-circuit switching capacity $I_{cn}$ | 200 A (240 V AC)                       |
|                                                 | 400 A (28 V DC)                        |
| Dielectric strength                             | 2000 V                                 |
| Switching cycles, max.                          | 6000 (at $1 \times I_n$ )              |
|                                                 | 50 (at $1.5 \times I_n$ )              |
|                                                 | 40 (at $6 \times I_n$ )                |
| Fuse                                            | M1 (normal blow)                       |
| Power dissipation                               | $\leq 1.43 \text{ VA}$                 |

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|                        |                       |
|------------------------|-----------------------|
| Temperature derating   | 5.6 A DC (at -30 °C)  |
|                        | 5.84 A DC (at -20 °C) |
|                        | 6.24 A DC (at -10 °C) |
|                        | 6.72 A DC (at 0 °C)   |
|                        | 7.2 A DC (at 10 °C)   |
|                        | 8 A DC (at 23 °C)     |
|                        | 8.24 A DC (at 30 °C)  |
|                        | 8.48 A DC (at 40 °C)  |
|                        | 9.04 A DC (at 50 °C)  |
|                        | 9.68 A DC (at 60 °C)  |
| Contact switching type | none                  |

## Indicator/remote signaling

|                 |                   |
|-----------------|-------------------|
| Connection name | Auxiliary contact |
|-----------------|-------------------|

## Connection data

|                         |                      |
|-------------------------|----------------------|
| Nominal cross section   | 6.00 mm <sup>2</sup> |
| Rated cross section AWG | 8                    |
| Connection method       | Screw connection     |

## Level 1 above 1 below 1

|                                                                                           |                                              |
|-------------------------------------------------------------------------------------------|----------------------------------------------|
| Connection method                                                                         | Screw connection                             |
| Screw thread                                                                              | M4                                           |
| Tightening torque                                                                         | 1.5 ... 1.8 Nm                               |
| Stripping length                                                                          | 12 mm                                        |
| Conductor cross-section rigid                                                             | 0.2 mm <sup>2</sup> ... 10 mm <sup>2</sup>   |
| Cross section AWG                                                                         | 24 ... 8 (converted acc. to IEC)             |
| Conductor cross-section flexible                                                          | 0.2 mm <sup>2</sup> ... 10 mm <sup>2</sup>   |
| Conductor cross-section, flexible [AWG]                                                   | 24 ... 8 (converted acc. to IEC)             |
| Conductor cross-section flexible (ferrule without plastic sleeve)                         | 0.25 mm <sup>2</sup> ... 6 mm <sup>2</sup>   |
| Flexible conductor cross-section (ferrule with plastic sleeve)                            | 0.25 mm <sup>2</sup> ... 6 mm <sup>2</sup>   |
| 2 conductors with same cross section, solid                                               | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>  |
| 2 conductors with same cross section, flexible                                            | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>  |
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve       | 0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm <sup>2</sup> ... 4 mm <sup>2</sup>    |
| Nominal current                                                                           | 8 A                                          |
| Nominal voltage                                                                           | 240 V AC                                     |
|                                                                                           | 28 V DC                                      |
| Nominal cross section                                                                     | 6 mm <sup>2</sup>                            |

## Main contact

|                   |                   |
|-------------------|-------------------|
| Connection method | Screw connection  |
| Screw thread      | M4                |
| Tightening torque | 1.5 Nm ... 1.8 Nm |

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|                                                                                           |                    |
|-------------------------------------------------------------------------------------------|--------------------|
| Stripping length                                                                          | 12 mm              |
| Conductor cross-section flexible                                                          | 0.2 mm² ... 10 mm² |
| Conductor cross-section rigid                                                             | 0.2 mm² ... 10 mm² |
| Conductor cross-section AWG                                                               | 24 ... 8           |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm² ... 4 mm²  |
| Conductor cross-section, flexible, with ferrule, with plastic sleeve                      | 0.25 mm² ... 6 mm² |
| Conductor cross-section flexible, with ferrule without plastic sleeve                     | 0.25 mm² ... 6 mm² |

## Dimensions

|        |         |
|--------|---------|
| Width  | 12.3 mm |
| Height | 85.5 mm |
| Depth  | 89.5 mm |

## Material specifications

|                                        |                 |
|----------------------------------------|-----------------|
| Color                                  | gray (RAL 7042) |
| Flammability rating according to UL 94 | V-0             |
| Insulating material                    | PA66            |

## Mechanical properties

### Mechanical data

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

## Environmental and real-life conditions

### Ambient conditions

|                                 |                           |
|---------------------------------|---------------------------|
| Degree of protection            | IP40 (Actuation area)     |
|                                 | IP20 (Connection area)    |
| Ambient temperature (operation) | -30 °C ... 60 °C          |
| Altitude                        | 2000 m (acc. to EN 60934) |

## Standards and regulations

|                          |          |
|--------------------------|----------|
| Standards/specifications | EN 60934 |
| Standards/specifications | UL 1077  |
| Standards/specifications | CSA 22.2 |
| Note                     | No. 235  |

## Mounting

|               |                 |
|---------------|-----------------|
| Mounting type | DIN rail: 35 mm |
|---------------|-----------------|

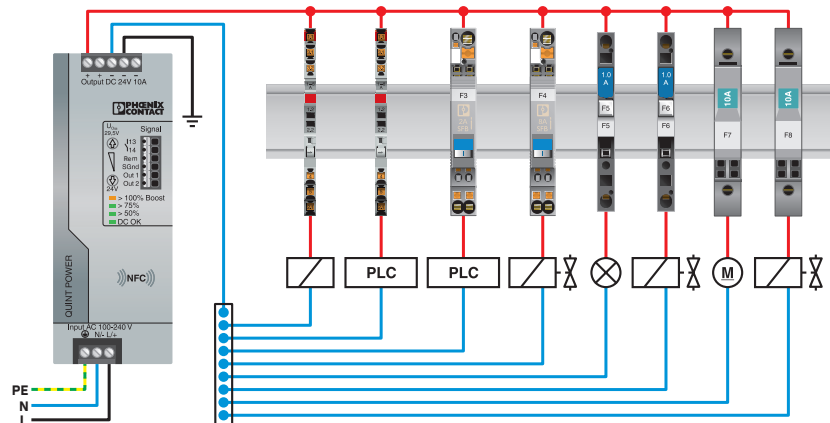
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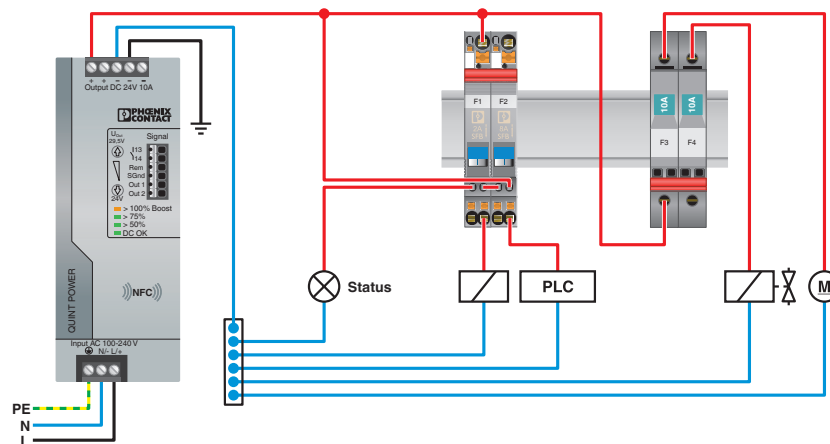
<https://www.phoenixcontact.com/us/products/0916609>

## Drawings

Application drawing



Application drawing



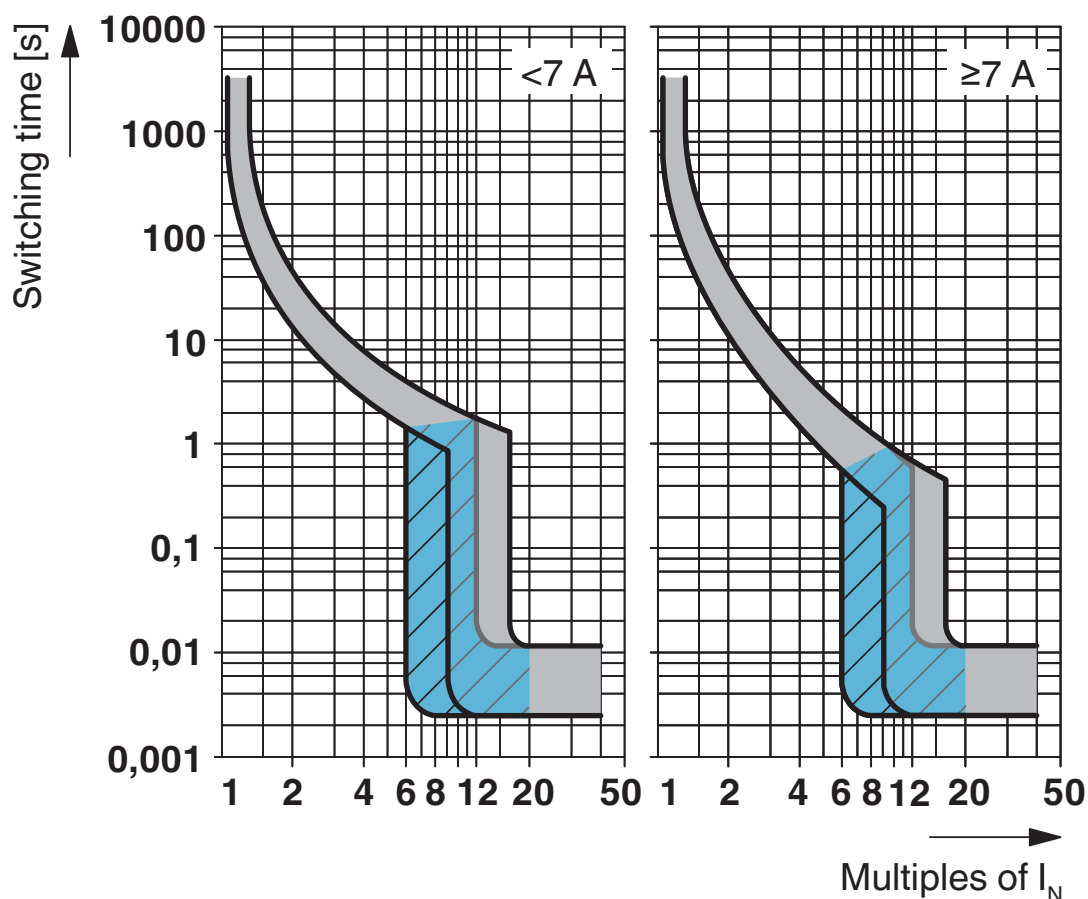
# UT 6-TMC M 8A - Thermal-magnetic device circuit breaker



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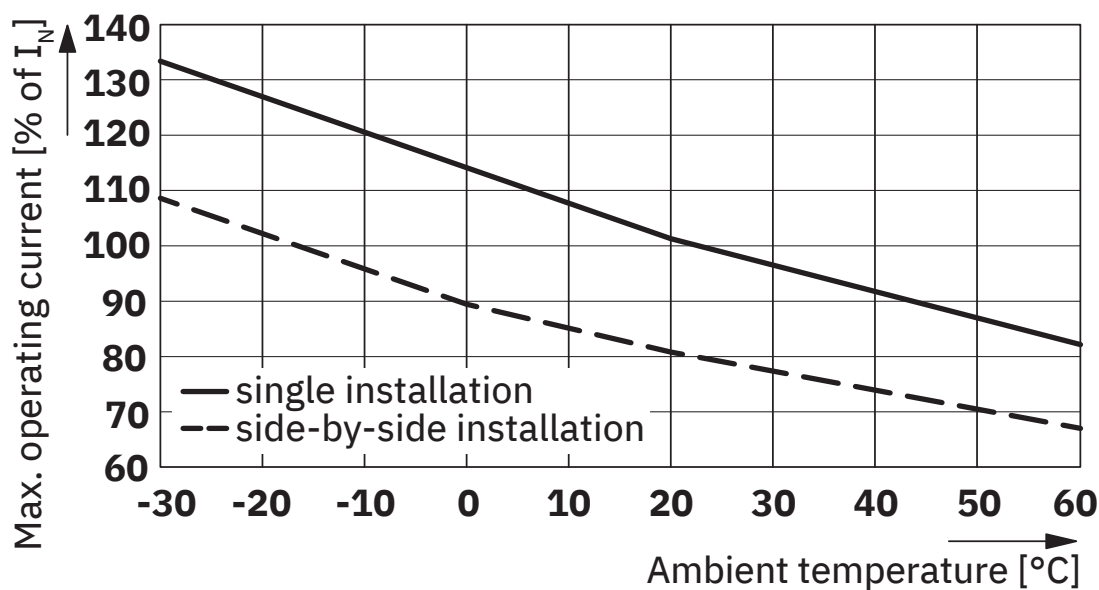
<https://www.phoenixcontact.com/us/products/0916609>

Diagram



Trigger characteristic

Diagram



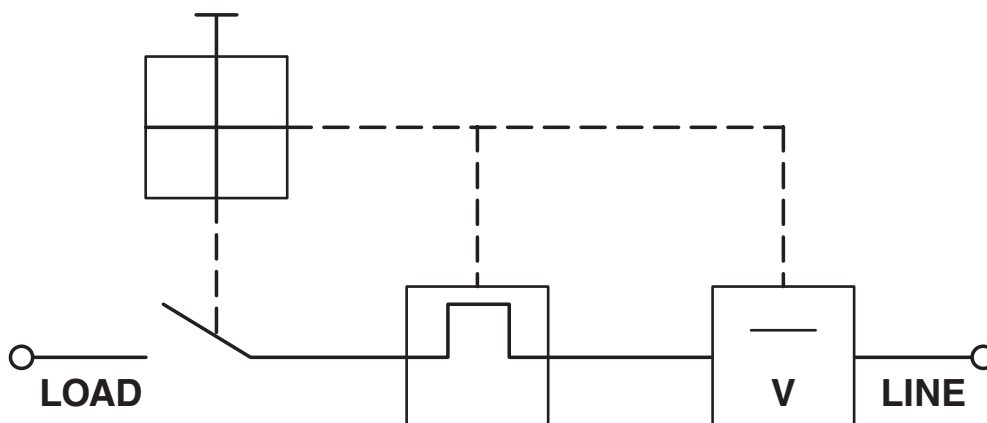
Operating current correction factor

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Block diagram



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## Approvals

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



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



**VDE Zeichengenehmigung**  
Approval ID: 40028127



**CSA**  
Approval ID: 250505

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## Classifications

### ECLASS

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

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | 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%               |
| EF3.0 Climate Change                    |                                          |
| CO2e kg                                 | 4.883 kg CO2e                            |

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