

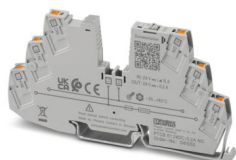
# PTCB E1 24DC/0.2A NO - Electronic circuit breaker



1361055

<https://www.phoenixcontact.com/us/products/1361055>

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Single-channel, electronic device protection for 12-24 V DC loads. Fixed nominal current value: 0.2 A. With remote signaling and active current limitation. Can be combined with CLIPLINE terminal blocks. For installation on DIN rails.

## Your advantages

- Precise fault localization and fast recovery thanks to status message and local and remote reset options
- Effortless system planning due to precise shutdown and low voltage losses
- More space in the control cabinet due to integrated potential distribution of positive and negative in 6 mm
- Simple application setup due to bridging option to CLIPLINE complete terminal block system

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1361055       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | CL10          |
| Product key                          | CLA135        |
| GTIN                                 | 4063151696573 |
| Weight per piece (including packing) | 32.1 g        |
| Weight per piece (excluding packing) | 25.81 g       |
| Customs tariff number                | 85363010      |
| Country of origin                    | DE            |

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## Technical data

### Notes

#### General

|      |  |
|------|--|
| Note | Connection for signal line tested in accordance with EN 61000-4-4 with 1 kV; if necessary, customer must provide appropriate protective measures |
|      | Repeated hard short circuits can reduce the melting integral of the integrated backup fuse.  |

### Product properties

|                     |                            |
|---------------------|----------------------------|
| Product type        | Device circuit breakers    |
| Product family      | PTCB                       |
| Type                | DIN rail module, one-piece |
| Number of positions | 1                          |
| No. of channels     | 1                          |

#### Insulation characteristics

|                  |     |
|------------------|-----|
| Protection class | III |
| Pollution degree | 2   |

### Electrical properties

#### General

|                                  |   |
|----------------------------------|---|
| Operating voltage                | 10 V DC ... 30 V DC   |
| Rated voltage                    | 12 V DC   |
|                                  | 24 V DC   |
| Rated current $I_N$              | 15 A DC (Total current input)   |
|                                  | 0.2 A DC (Rated current output)   |
| Rated current $I_N$              | 0.2 A DC  |
| Rated current (pre-adjusted)     | 0.2 A   |
| Rated surge voltage              | 0.5 kV  |
| Tripping method                  | E (electronic)  |
| Feedback resistance              | max. 35 V DC  |
| Required backup fuse             | Only required if $I_{max}$ of the power supply > the short-circuit switching capacity. Integrated failsafe element. |
| Short-circuit switching capacity | 300 A   |
| Dielectric strength              | max. 35 V DC (Load circuit)   |
| Active current limitation        | typ. $1,1 \times I_N$   |
| Fuse                             | electronic  |
| Efficiency                       | > 98.5 %  |
| Closed circuit current $I_0$     | typ. 5 mA   |
| Power dissipation                | typ. 0.1 W (No-load operation)  |
|                                  | < 0.7 W (Nominal operation)   |
| Module initialization time       | 40 ms   |

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|  |                                       |
|--|---------------------------------------|
| Waiting time after switch off of a channel | 5 s (at overload / short circuit)     |
| Measuring tolerance I                      | ± 8 %                                 |
| Temperature derating                       | 15 A (Total current at 60°C)          |
|  | 20 A (Total current at 50°C)          |
| MTBF (IEC 61709, SN 29500)                 | 29188558 h (at 25 °C with 21 % load)  |
|  | 13379716 h (at 40°C with 34.25% load) |
|  | 2326609 h (at 60°C with 100% load)    |
| Voltage drop                               | 0.11 V (at 0.2 A)                     |
| Fail-safe element                          | 4 A DC                                |
| Contact switching type                     | without electrical isolation          |

## Load circuit

|                         |   |
|-------------------------|---|
| Shutdown time           | ≤ 600 ms  |
|                         | ≥ 300 ms (depending on the available load)                                      |
|                         | Shutdown, typical, $1.1 \times I_N$   |
| Undervoltage switch-off | ≤ 9.2 V DC (active)   |
|                         | ≥ 10.2 V DC (inactive)  |
| Overvoltage switch-off  | ≥ 30.5 V DC (active)  |
|                         | ≤ 29.5 V DC (inactive)  |
| Max. capacitive load    | 4 mF (Depending on the current setting and the short-circuit current available) |

## Indicator/remote signaling

|                    |                           |
|--------------------|---------------------------|
| Connection name    | Remote indication circuit |
| Switching function | N/O contact               |
| Operating voltage  | 0 V DC ... 30 V DC        |
| Operating current  | 100 mA DC                 |

## Connection data

### Main circuit IN+

|   |                     |
|---|---------------------|
| Connection method   | Push-in connection  |
| Stripping length  | 8 mm                |
| Conductor cross-section flexible                                      | 0.2 mm² ... 2.5 mm² |
| Conductor cross-section rigid   | 0.2 mm² ... 4 mm²   |
| Conductor cross-section AWG   | 24 ... 12           |
| Conductor cross-section, flexible, with ferrule, with plastic sleeve  | 0.2 mm² ... 2.5 mm² |
| Conductor cross-section flexible, with ferrule without plastic sleeve | 0.2 mm² ... 2.5 mm² |

### Main circuit IN-

|                                  |                     |
|----------------------------------|---------------------|
| Connection method                | Push-in connection  |
| Stripping length                 | 8 mm                |
| Conductor cross-section flexible | 0.2 mm² ... 2.5 mm² |
| Conductor cross-section rigid    | 0.2 mm² ... 4 mm²   |
| Conductor cross-section AWG      | 24 ... 12           |

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|   |                     |
|---|---------------------|
| Conductor cross-section, flexible, with ferrule, with plastic sleeve  | 0.2 mm² ... 2.5 mm² |
| Conductor cross-section flexible, with ferrule without plastic sleeve | 0.2 mm² ... 2.5 mm² |

## Main circuit OUT

|   |                     |
|---|---------------------|
| Connection method   | Push-in connection  |
| Stripping length  | 8 mm                |
| Conductor cross-section flexible                                      | 0.2 mm² ... 2.5 mm² |
| Conductor cross-section rigid   | 0.2 mm² ... 4 mm²   |
| Conductor cross-section AWG   | 24 ... 12           |
| Conductor cross-section, flexible, with ferrule, with plastic sleeve  | 0.2 mm² ... 2.5 mm² |
| Conductor cross-section flexible, with ferrule without plastic sleeve | 0.2 mm² ... 2.5 mm² |

## Remote indication circuit

|   |                     |
|---|---------------------|
| Connection method   | Push-in connection  |
| Stripping length  | 8 mm                |
| Conductor cross-section flexible                                      | 0.2 mm² ... 2.5 mm² |
| Conductor cross-section rigid   | 0.2 mm² ... 4 mm²   |
| Conductor cross-section AWG   | 24 ... 14           |
| Conductor cross-section, flexible, with ferrule, with plastic sleeve  | 0.2 mm² ... 2.5 mm² |
| Conductor cross-section flexible, with ferrule without plastic sleeve | 0.2 mm² ... 2.5 mm² |

## Signaling

|                    |  |
|--------------------|--|
| Channel LED off    | off (Channel switched off)   |
| Channel LED yellow | flashing (Programming mode active)   |
| Channel LED green  | lit (Channel switched on)  |
| Channel LED red    | lit (Channel switched off, over- or undervoltage active)   |
|                    | ON temporarily (Channel switched off, 5 s cool-down phase, overload or short-circuit release)        |
|                    | flashing (Channel switched off, ready to be switched back on, overload or short-circuit release)     |
|                    | flashing quickly (Channel switched off, external voltage at the output, possible installation error) |

## Dimensions

|                     |                                 |
|---------------------|---------------------------------|
| Dimensional drawing |                                 |
| Width               | 6.2 mm                          |
| Height              | 105.8 mm                        |
| Depth               | 55.6 mm (incl. DIN rail 7.5 mm) |

## Material specifications

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|  |                 |
|--|-----------------|
| Color                                  | gray (RAL 7042) |
| Material                               | PBT             |
|  | PBT             |
| Flammability rating according to UL 94 | V-0             |

## Environmental and real-life conditions

### Ambient conditions

|   |   |
|---|---|
| Degree of protection                    | IP20  |
| Ambient temperature (operation)         | -30 °C ... 60 °C  |
| Ambient temperature (storage/transport) | -40 °C ... 70 °C  |
| Altitude                                | ≤ 3000 m up to 52 °C (amsl)   |
|   | ≤ 4000 m up to 46 °C (amsl)   |
| Humidity test                           | 96 h, 95 % RH, 40 °C  |
| Shock (operation)                       | 30g (IEC 60068-2-27, Test Ea)   |
| Vibration (operation)                   | 10 Hz ... 59.6 Hz (Amplitude ±0.35 mm; in accordance with IEC 60068-2-6, Test Fc)                       |
|   | 59.6 Hz ... 150 Hz (Acceleration 5g; in accordance with IEC 60068-2-6, Test Fc)                         |
|   | 5 Hz ... 100 Hz (Resonance search 4g; resonance frequency 4g; 90 min in accordance with DNV GL Class B) |

## Approvals

### UL approval

|                |   |
|----------------|---|
| Identification | UL/C-UL Listed UL 508   |
|                | UL Recognized UL 2367   |
|                | NEC Class 2 according to UL 1310  |
|                | UL/C-UL Listed ANSI/UL 121201 Class I, Division 2, Groups A, B, C, D (Hazardous Location) |

### DNV GL

|                |                       |
|----------------|-----------------------|
| Identification | Shipbuilding approval |
|----------------|-----------------------|

### Corrosive gas test

|                |                                  |
|----------------|----------------------------------|
| Identification | ISA S71.04.2013 G3 Harsh Group A |
|----------------|----------------------------------|

### Shipbuilding data

|             |   |
|-------------|---|
| Temperature | A |
| Humidity    | B |
| Vibration   | B |
| EMC         | A |
| Enclosure   | A |

## Standards and regulations

|                          |                                     |
|--------------------------|-------------------------------------|
| Standards/specifications | EN 61000-6-2                        |
| Note                     | EMC – Immunity for industrial areas |
| Standards/specifications | EN 61000-6-3                        |

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|                          |   |
|--------------------------|---|
| Note                     | EMC – Emission for residential, business and commercial properties and small operations |
| Standards/specifications | EN 60068-2-78   |
| Note                     | Environmental influences – Moisture and heat, constant                                  |
| Standards/specifications | EN 50178  |
| Note                     | Equipping power installations with electronic equipment                                 |
| Standards/specifications | EN 60068-2-6  |
| Note                     | Environmental influences – Vibrations (sinusoidal)                                      |
| Standards/specifications | EN 60068-2-27   |
| Note                     | Environmental influences – Shocks   |
| Standards/specifications | EN 60068-2-30   |
| Note                     | Environmental influences – Part 2–30: Tests – Test Db: Damp heat, cyclical              |

## Mounting

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

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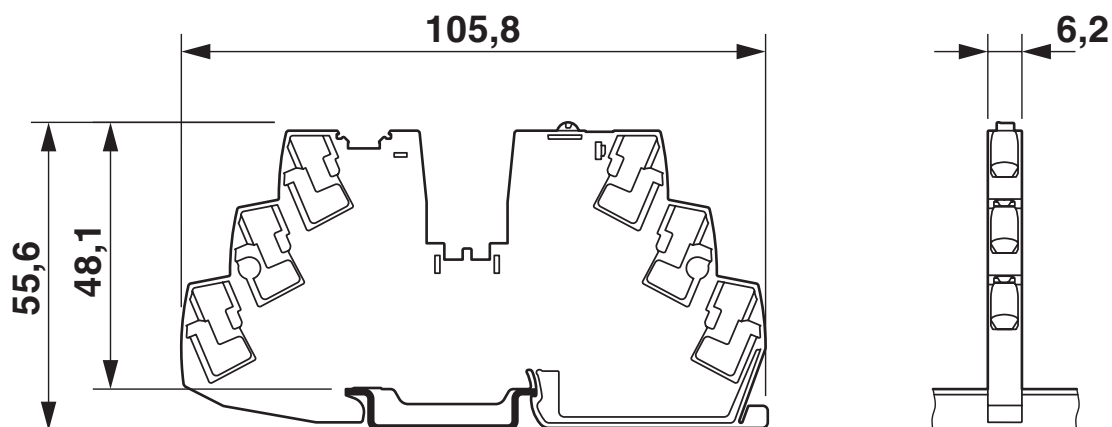
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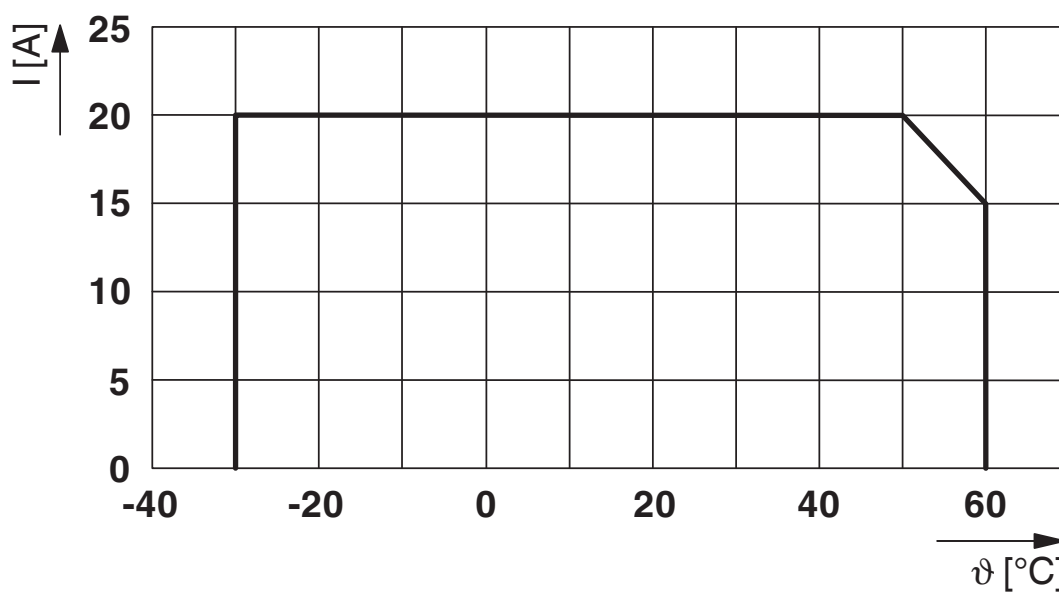


## Drawings

Dimensional drawing

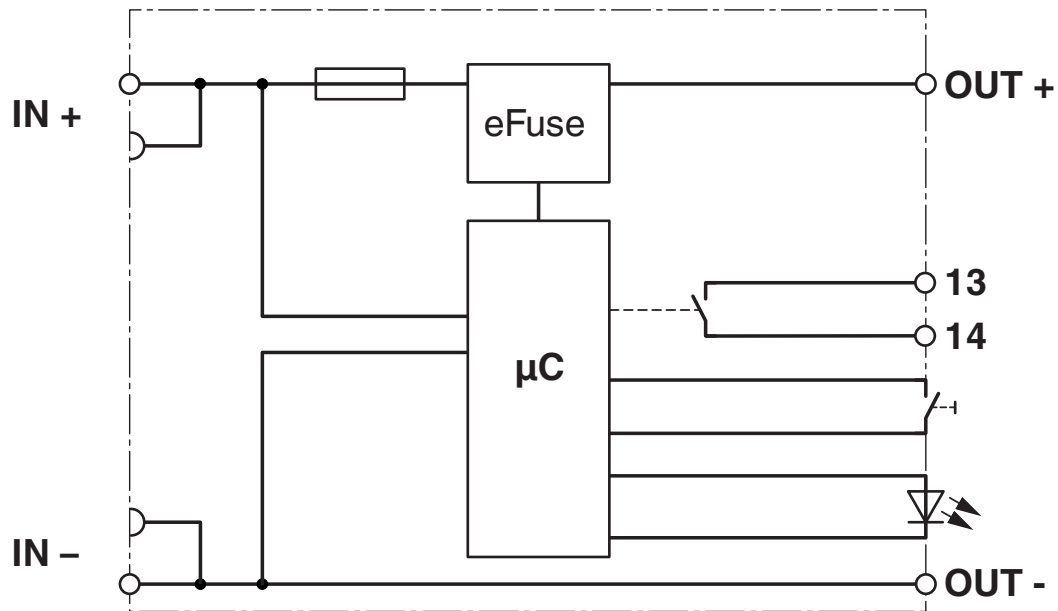


Diagram



Total current input

Block diagram





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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1361055>



**UL Recognized**

Approval ID: E317172-20170817



**UL Listed**

Approval ID: E123528-20170530



**cUL Listed**

Approval ID: E123528-20170530



**DNV GL**

Approval ID: TAE00003UT



**UL Recognized**

Approval ID: E324415-20201030



**cUL Listed**

Approval ID: E483407-20201030



**UL Listed**

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## Classifications

### ECLASS

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

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC003538 |
|----------|----------|

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## Environmental product compliance

### EU RoHS

|   |              |
|---|--------------|
| Fulfills EU RoHS substance requirements | Yes          |
| Exemption                               | 7(a), 7(c)-I |

### China RoHS

|  |   |
|--|---|
| Environment friendly use period (EFUP) | EFUP-50   |
|  | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |

### EU REACH SVHC

|                                     |                                      |
|-------------------------------------|--------------------------------------|
| REACH candidate substance (CAS No.) | Lead(CAS: n/a)                       |
| SCIP                                | d83e5ee2-9565-42f8-99de-bbb6f1e76b68 |

### EF3.0 Climate Change

|         |              |
|---------|--------------|
| CO2e kg | 1.27 kg CO2e |
|---------|--------------|

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