

## Electronic device circuit breaker - CB E1 24DC/4A NC P - 2800918

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Electronic device circuit breaker, 1-pos., active current limitation, 1 N/C contact, plug for base element.

The figure shows the CB E1  
24DC/1A NC P version

### Why buy this product

- ✓ Compact design with precise nominal current levels
- ✓ Modular expansion possible thanks to the uniform, plug-in housing concept
- ✓ Sophisticated remote signaling concept enables monitoring from any location
- ✓ N/C contact for remote signaling of the operating state
- ✓ Active current limitation, even when switching capacitive loads
- ✓ Supply/remote signaling can be bridged with CLIPLINE complete accessories

**RoHS**

### Key Commercial Data

|                                      |                                                                                                         |
|--------------------------------------|---------------------------------------------------------------------------------------------------------|
| Packing unit                         | 1 STK                                                                                                   |
| GTIN                                 | <br>4 046356 690676 |
| GTIN                                 | 4046356690676                                                                                           |
| Weight per Piece (excluding packing) | 35.900 g                                                                                                |
| Custom tariff number                 | 85362010                                                                                                |
| Country of origin                    | Germany                                                                                                 |

### Technical data

#### Dimensions

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

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## Technical data

### Ambient conditions

|                                         |                                   |
|-----------------------------------------|-----------------------------------|
| Ambient temperature (operation)         | -25 °C ... 50 °C (non-condensing) |
| Ambient temperature (storage/transport) | -40 °C ... 70 °C                  |
| Humidity test                           | 96 h, 95% RH, 40°C                |
| Degree of protection                    | IP30 (Actuation area)             |

### General

|                                        |                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Installation instructions              | When mounted in rows without convection cooling, the nominal device current should only be led to a maximum of 80% due to the thermal effect during continuous operation (100% operating factor). Special precautionary measures must be taken in systems or machines, to prevent components from restarting (e.g., use of a safety PLC). Parallel connection of multiple circuit breakers is not permitted. |
| Flammability rating according to UL 94 | V0                                                                                                                                                                                                                                                                                                                                                                                                           |
| Mounting type                          | on base element                                                                                                                                                                                                                                                                                                                                                                                              |
| Color                                  | gray                                                                                                                                                                                                                                                                                                                                                                                                         |
| Number of positions                    | 1                                                                                                                                                                                                                                                                                                                                                                                                            |
| Degree of pollution                    | 2                                                                                                                                                                                                                                                                                                                                                                                                            |
| Type                                   | Male                                                                                                                                                                                                                                                                                                                                                                                                         |

### Electrical data

|                                             |                                                |
|---------------------------------------------|------------------------------------------------|
| Fuse type                                   | electronic                                     |
| Rated surge voltage                         | 0.5 kV                                         |
| Operating voltage                           | 24 V DC                                        |
|                                             | 18 V DC ... 30 V DC                            |
| Nominal current $I_N$                       | 4 A                                            |
| Required backup fuse                        | not required, integrated failsafe element      |
| Active current limitation                   | typ. 1.25 x $I_N$                              |
| Closed circuit current $I_0$                | typ. 8 mA (When switched on)                   |
|                                             | typ. 17 mA (With alarm output)                 |
| Power dissipation                           | 0.81 W (Nominal operation)                     |
| Temperature derating                        | 4 A (at 50°C)                                  |
| Tripping method                             | E (electronic)                                 |
| Dielectric strength                         | max. 30 V DC (Load circuit)                    |
| Voltage drop                                | 100 mV (at $I_N$ )                             |
| Contact type                                | without electrical isolation                   |
| Shutdown time load circuit                  | 200 ms (see time/current characteristic curve) |
| Undervoltage shutdown load circuit          | < 14 V (typ. OFF)                              |
|                                             | > 17 V (typ. ON)                               |
| Max. capacitive load load circuit           | 20000 µF                                       |
| Auxiliary type of contact                   | floating signal contact                        |
| Minimum auxiliary contact operating voltage | 10 V DC                                        |
| Maximum auxiliary contact operating voltage | 30 V DC                                        |
| Minimum auxiliary contact operating current | 10 mA                                          |

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## Technical data

### Electrical data

|                                             |       |
|---------------------------------------------|-------|
| Maximum auxiliary contact operating current | 0.5 A |
|---------------------------------------------|-------|

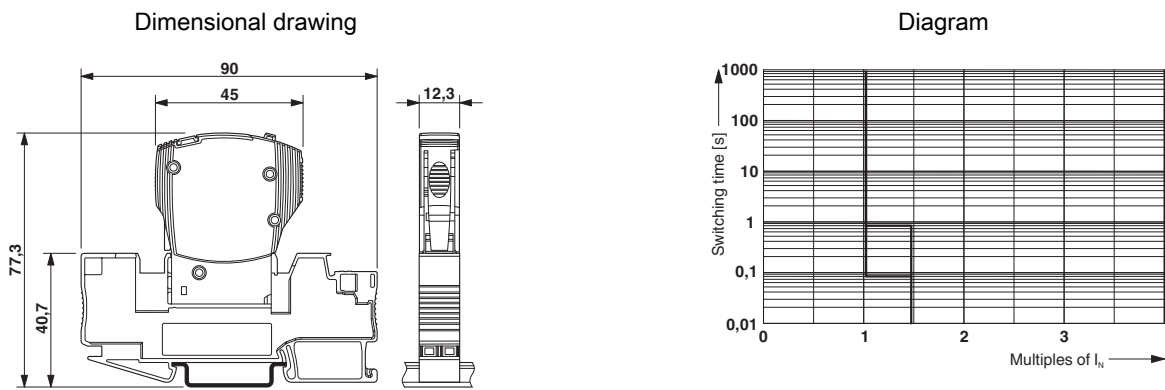
### Standards and Regulations

|                          |                                        |
|--------------------------|----------------------------------------|
| Standards/specifications | UL 2367 UL recognized                  |
|                          | UL 508 UL/C-UL listed                  |
|                          | EMV EN 61000-6-3 Interference emission |
|                          | EMV EN 61000-6-2 Noise immunity        |

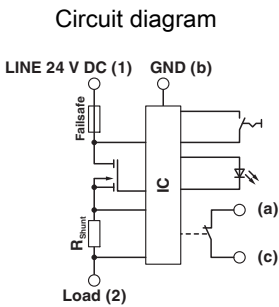
### Environmental Product Compliance

|            |                                                                                                     |
|------------|-----------------------------------------------------------------------------------------------------|
| China RoHS | Environmentally Friendly Use Period = 50                                                            |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

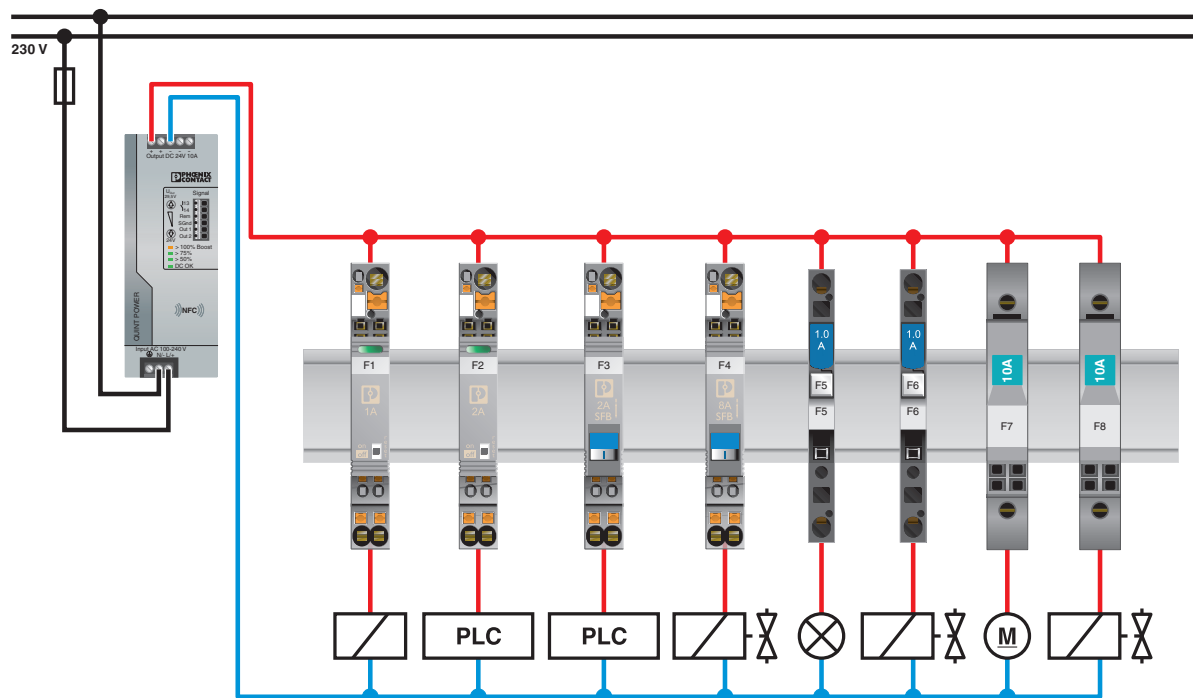
## Drawings



The figure shows the complete module consisting of a base element and Trigger characteristic connector



## Application drawing



eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27141116 |
| eCl@ss 4.1 | 27141116 |
| eCl@ss 5.0 | 27141116 |
| eCl@ss 5.1 | 27141116 |
| eCl@ss 6.0 | 27141116 |
| eCl@ss 7.0 | 27141116 |
| eCl@ss 8.0 | 27141116 |
| eCl@ss 9.0 | 27141116 |

|          |          |
|----------|----------|
| ETIM 3.0 | EC000899 |
| ETIM 4.0 | EC000899 |
| ETIM 5.0 | EC000899 |
| ETIM 6.0 | EC000899 |

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## Classifications

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211812 |
| UNSPSC 7.0901 | 39121411 |
| UNSPSC 11     | 39121411 |
| UNSPSC 12.01  | 39121411 |
| UNSPSC 13.2   | 39121410 |

## Approvals

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UL Recognized / GL / UL Listed / cUL Listed / EAC / cULus Listed

#### Ex Approvals

### Approval details

|               |                                                                                     |                                                                                                                                                       |                         |
|---------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| UL Recognized |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 317172           |
| GL            |  | <a href="http://exchange.dnv.com/tari/">http://exchange.dnv.com/tari/</a>                                                                             | 61533-13 HH             |
| UL Listed     |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 140324           |
| cUL Listed    |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 140324           |
| EAC           |  |                                                                                                                                                       | RU C-<br>DE.A*30.B01561 |
| cULus Listed  |  |                                                                                                                                                       |                         |

## Electronic device circuit breaker - CB E1 24DC/4A NC P - 2800918

### Accessories

#### Accessories

#### Bridge

Jumper - CB PT BRIDGE - 2801014



Bridge plug for bridging contacts 1 to 2 for CB base elements

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Jumper - CB RC BRIDGE - 2801616



Bridge plug for bridging contacts 11 to 14 for CB base elements

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#### Cutting tools

Front cutter - CUTFOX-FBS - 1212124



Cutting tool, for separating individual jumper bars from FBS ... plug-in bridges and EB ... insertion bridges

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#### Jumper

Plug-in bridge - FBS 2-6 - 3030336



Plug-in bridge, pitch: 6.2 mm, width: 10.7 mm, number of positions: 2, color: red

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Plug-in bridge - FBS 3-6 - 3030242



Plug-in bridge, pitch: 6.2 mm, width: 16.9 mm, number of positions: 3, color: red

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### Accessories

Plug-in bridge - FBS 4-6 - 3030255



Plug-in bridge, pitch: 6.2 mm, width: 23.1 mm, number of positions: 4, color: red

Plug-in bridge - FBS 5-6 - 3030349



Plug-in bridge, pitch: 6.2 mm, width: 29.3 mm, number of positions: 5, color: red

Plug-in bridge - FBS 10-6 - 3030271



Plug-in bridge, pitch: 6.2 mm, width: 60.3 mm, number of positions: 10, color: red

Plug-in bridge - FBS 20-6 - 3030365



Plug-in bridge, pitch: 6.2 mm, width: 122.3 mm, number of positions: 20, color: red

Plug-in bridge - FBS 50-6 - 3032224



Plug-in bridge, pitch: 6.2 mm, width: 308.3 mm, number of positions: 50, color: red

Labeled terminal marker

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### Accessories

Zack Marker strip, flat - ZBF 12 CUS - 0825018



Zack Marker strip, flat, can be ordered: Strip, white, labeled according to customer specifications, Mounting type: snap into flat marker groove, for terminal block width: 12 mm, Lettering field: 5.15 x 12.15 mm

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### Terminal marking

Zack Marker strip, flat - ZBF 12:UNBEDRUCKT - 0809735



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, Mounting type: snap into flat marker groove, for terminal block width: 12 mm, Lettering field: 5.15 x 12.15 mm

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### Necessary add-on products

Base element - CB 1/6-2/4 PT-BE - 2800929



Base element with push-in connection technology for CB ... device circuit breakers

Base element - CB 1/10-1/10 UT-BE - 2801305



Base element with screw connection technology for CB... device circuit breakers