

# Electronic device circuit breaker - CB E1 24DC/3A NC P - 2800917

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



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

## Your advantages

- ✓ 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



## Key Commercial Data

|              |                                                                                      |
|--------------|--------------------------------------------------------------------------------------|
| Packing unit | 1 pc                                                                                 |
| GTIN         |  |
| GTIN         | 4046356690669                                                                        |

## 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 |

### 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              |

# Electronic device circuit breaker - CB E1 24DC/3A NC P - 2800917

## Technical data

### Ambient conditions

|                       |                                                |
|-----------------------|------------------------------------------------|
| Vibration (operation) | 3g (In accordance with IEC 60068-2-6, Test Fc) |
| 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 | V-0                                                                                                                                                                                                                                                                                                                                                                                                          |
| 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 $I_N$                       | 3 A                                            |
| Active current limitation                   | typ. 1.25 x $I_N$                              |
| Closed circuit current $I_o$                | typ. 8 mA (When switched on)                   |
|                                             | typ. 17 mA (With alarm output)                 |
| Power dissipation                           | 0.77 W (Nominal operation)                     |
| Temperature derating                        | 3 A (at 50 °C)                                 |
| Tripping method                             | E (electronic)                                 |
| Required backup fuse                        | not required, integrated failsafe element      |
| Dielectric strength                         | max. 30 V DC (Load circuit)                    |
| Voltage drop                                | 120 mV (at $I_N$ )                             |
| Shutdown time load circuit                  | 300 ms (see time/current characteristic curve) |
| Undervoltage switch-off 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                                          |
| Maximum auxiliary contact operating current | 0.5 A                                          |

### Standards and Regulations

|                          |                                        |
|--------------------------|----------------------------------------|
| Standards/specifications | EMV EN 61000-6-3 Interference emission |
|--------------------------|----------------------------------------|

# Electronic device circuit breaker - CB E1 24DC/3A NC P - 2800917

## Technical data

### Standards and Regulations

|  |                                 |
|--|---------------------------------|
|  | EMV EN 61000-6-2 Noise immunity |
|--|---------------------------------|

### Conformance/approvals

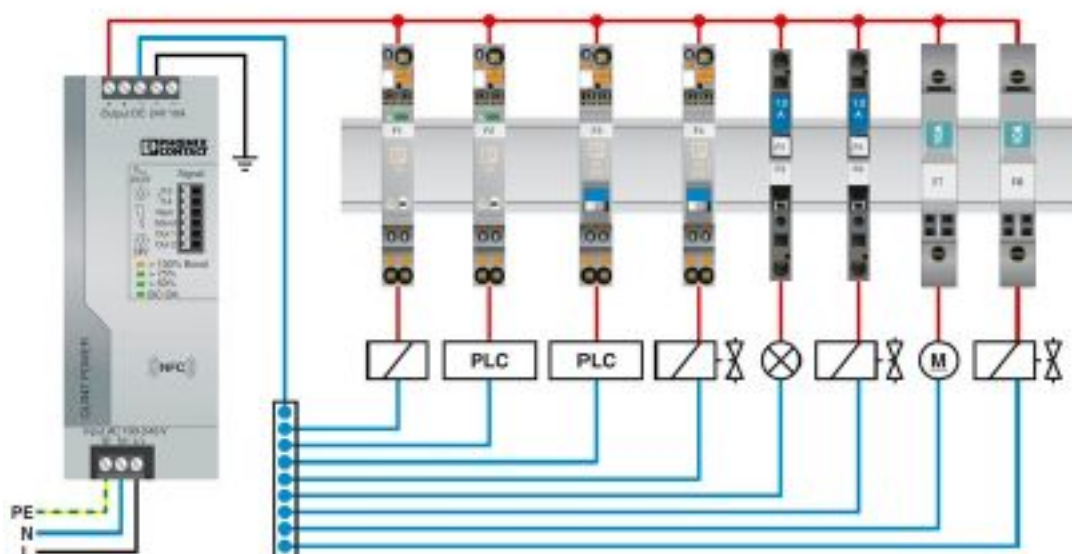
|                |                       |
|----------------|-----------------------|
| Designation    | UL approval           |
| Identification | UL Listed UL 508      |
|                | UL Recognized UL 2367 |
| Designation    | Shipbuilding approval |
| Identification | DNV GL                |

### Environmental Product Compliance

|            |                                                                                                     |
|------------|-----------------------------------------------------------------------------------------------------|
| REACH SVHC | Lead 7439-92-1                                                                                      |
| China RoHS | Environmentally Friendly Use Period = 50 years                                                      |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

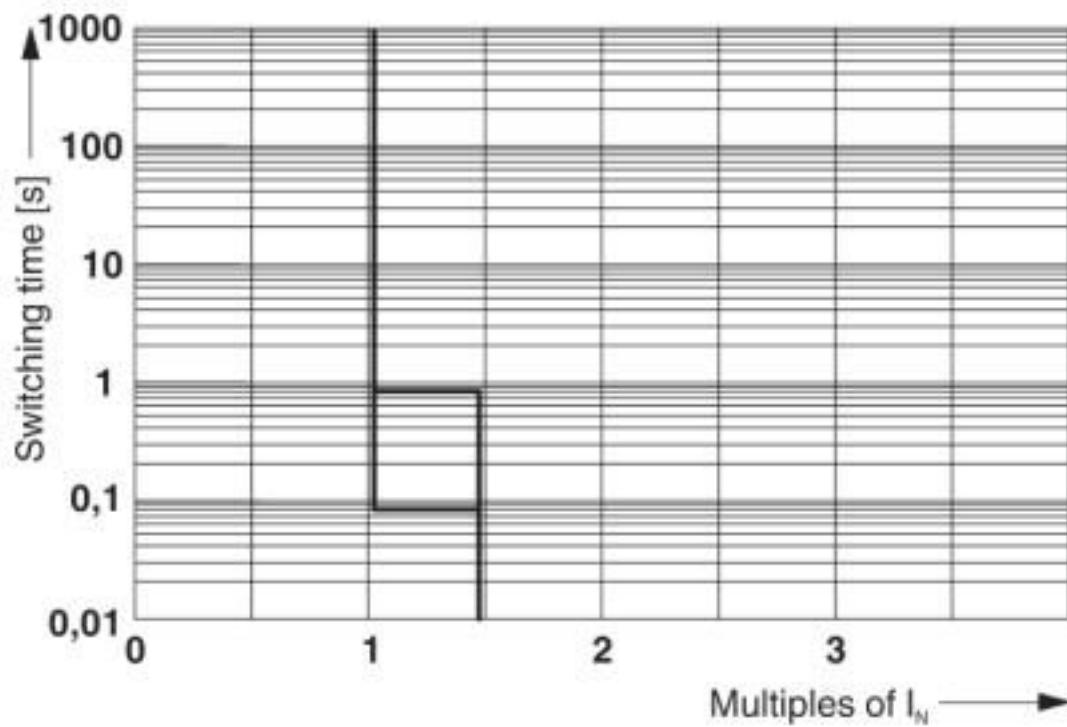
## Drawings

Application drawing



## Electronic device circuit breaker - CB E1 24DC/3A NC P - 2800917

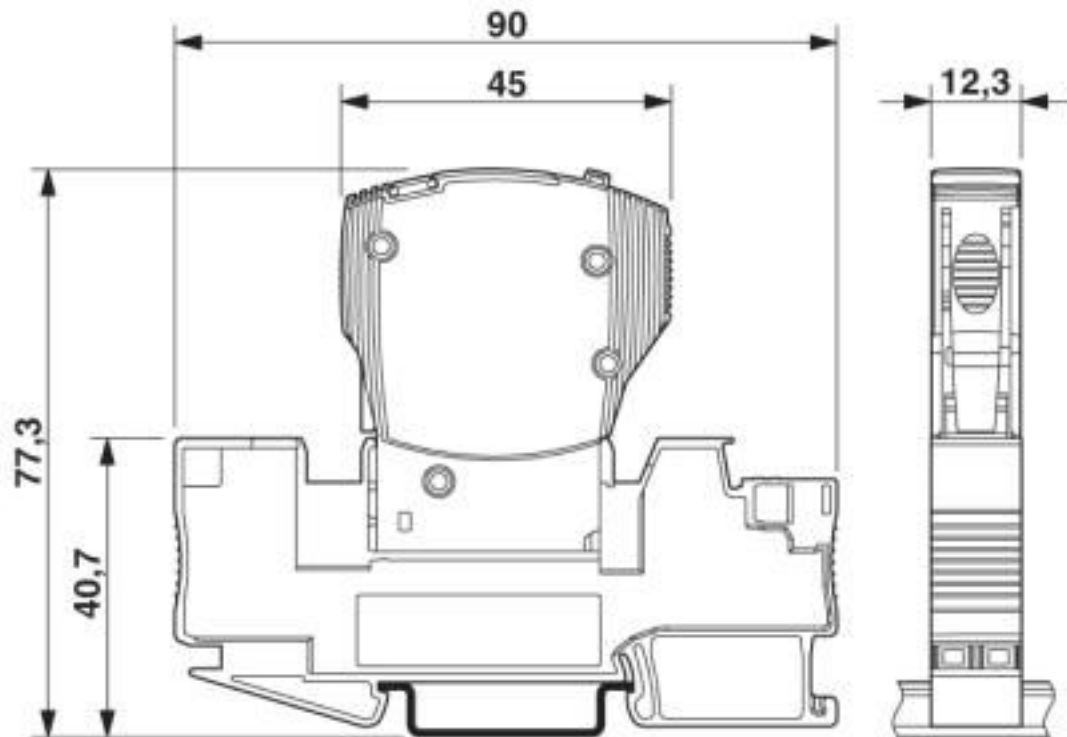
Diagram



Trigger characteristic

## Electronic device circuit breaker - CB E1 24DC/3A NC P - 2800917

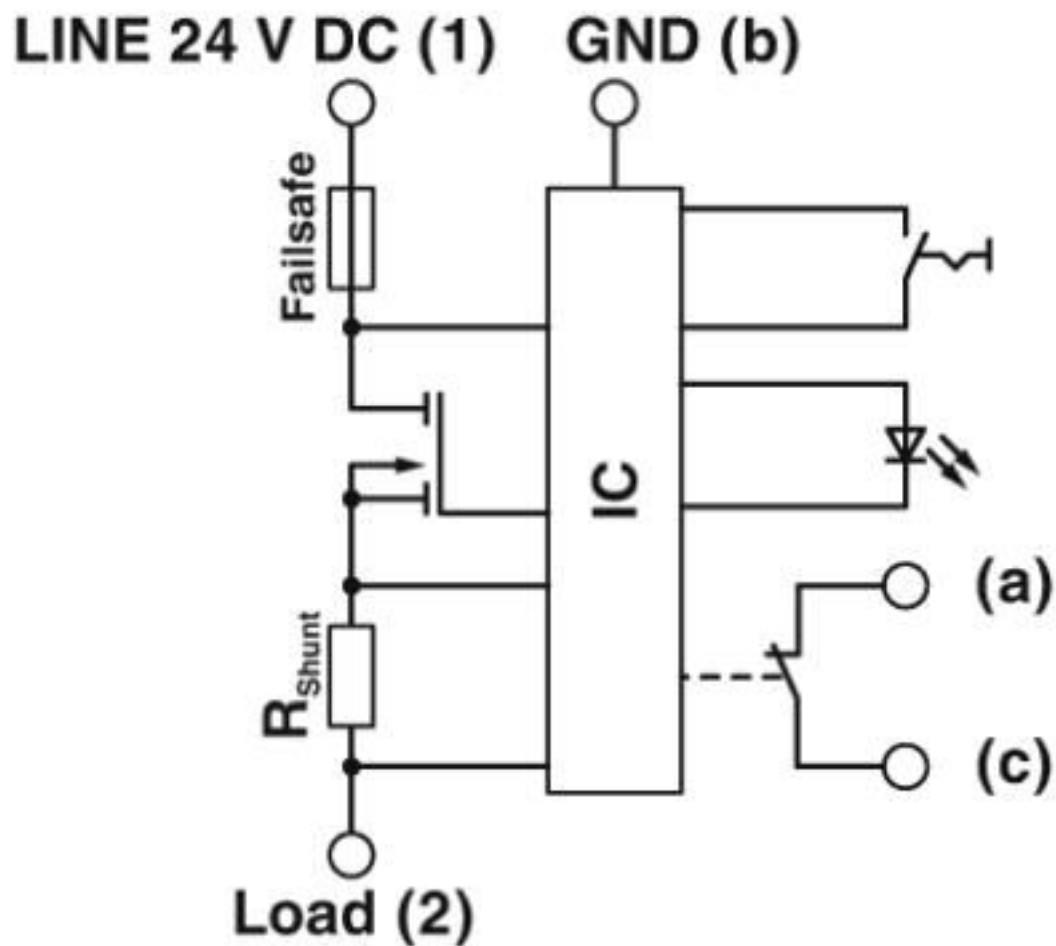
Dimensional drawing



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

## Electronic device circuit breaker - CB E1 24DC/3A NC P - 2800917

Circuit diagram



### Classifications

eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27140401 |
| eCl@ss 4.0    | 27141100 |
| eCl@ss 4.1    | 27141100 |
| eCl@ss 5.0    | 27141100 |
| eCl@ss 5.1    | 27141100 |
| eCl@ss 6.0    | 27141100 |
| eCl@ss 7.0    | 27141116 |
| eCl@ss 8.0    | 27141116 |
| eCl@ss 9.0    | 27141116 |

ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC000899 |
| ETIM 4.0 | EC000899 |

## Electronic device circuit breaker - CB E1 24DC/3A NC P - 2800917

### Classifications

#### ETIM

|          |          |
|----------|----------|
| ETIM 5.0 | EC000899 |
| ETIM 6.0 | EC000899 |
| ETIM 7.0 | EC000899 |

#### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211812 |
| UNSPSC 7.0901 | 39121411 |
| UNSPSC 11     | 39121411 |
| UNSPSC 12.01  | 39121411 |
| UNSPSC 13.2   | 39121410 |
| UNSPSC 18.0   | 39121410 |
| UNSPSC 19.0   | 39121410 |
| UNSPSC 20.0   | 39121410 |
| UNSPSC 21.0   | 39121410 |

### Approvals

#### Approvals

##### Approvals

UL Listed / UL Recognized / cUL Listed / DNV GL / cULus Listed

##### Ex Approvals

#### Approval details

|               |                                                                                     |                                                                                                                                                       |               |
|---------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 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 |
| 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 |
| 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 |

## Electronic device circuit breaker - CB E1 24DC/3A NC P - 2800917

### Approvals

DNV GL



<https://approvalfinder.dnvgl.com/>

TAE00003KA

cULus Listed



### Accessories

#### Accessories

##### Bridge

Jumper - CB PT BRIDGE - 2801014



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

Jumper - CB RC BRIDGE - 2801616



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

### Cutting tools

Front cutter - CUTFOX-FBS - 1212124



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

### Jumper

## Electronic device circuit breaker - CB E1 24DC/3A NC P - 2800917

### Accessories

Plug-in bridge - FBS 2-6 - 3030336



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

---

Plug-in bridge - FBS 3-6 - 3030242



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

---

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

---

# Electronic device circuit breaker - CB E1 24DC/3A NC P - 2800917

## Accessories

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

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 size: 5.15 x 12.15 mm, Number of individual labels: 5

## Terminal marking

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



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into flat marker groove, for terminal block width: 12 mm, lettering field size: 5.15 x 12.15 mm, Number of individual labels: 5

## 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

## Electronic device circuit breaker - CB E1 24DC/3A NC P - 2800917

### Accessories

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



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

---

Phoenix Contact 2020 © - all rights reserved  
<http://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG  
Flachsmarktstr. 8  
32825 Blomberg  
Germany  
Tel. +49 5235 300  
Fax +49 5235 3 41200  
<http://www.phoenixcontact.com>

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Phoenix Contact:](#)

[2800917](#)