

# CB E1 24DC/2A SI-R P - Electronic circuit breaker



2905800

<https://www.phoenixcontact.com/us/products/2905800>

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Electronic circuit breaker, 1-pos., active current limitation, inverted status output and control input, plug for base element.

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 2905800                        |
| Packing unit                         | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | CL04                           |
| Product key                          | CLA134                         |
| GTIN                                 | 4046356997539                  |
| Weight per piece (including packing) | 34.8 g                         |
| Weight per piece (excluding packing) | 34.8 g                         |
| Customs tariff number                | 85362010                       |
| Country of origin                    | DE                             |

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## Technical data

### Product properties

|                     |                         |
|---------------------|-------------------------|
| Product type        | Device circuit breakers |
| Product family      | CB E                    |
| Type                | Male                    |
| Number of positions | 1                       |

### Insulation characteristics

|                     |   |
|---------------------|---|
| Degree of pollution | 2 |
|---------------------|---|

### Electrical properties

|   |     |
|---|-----|
| Maximum current with single arrangement | 2 A |
|---|-----|

### General

|                                |   |
|--------------------------------|---|
| Operating voltage              | 24 V DC                                   |
|                                | 18 V DC ... 30 V DC                       |
| Nominal current $I_N$          | 2 A                                       |
| Rated insulation voltage $U_i$ | 30 V (Load circuit)                       |
| Rated surge voltage            | 0.5 kV                                    |
| Tripping method                | E (electronic)                            |
| Required backup fuse           | not required, integrated failsafe element |
| Dielectric strength            | max. 30 V DC (Load circuit)               |
| Active current limitation      | typ. $1.25 \times I_N$                    |
| Fuse                           | electronic                                |
| Closed circuit current $I_0$   | typ. 8 mA (When switched on)              |
|                                | typ. 11 mA (With status output)           |
| Power dissipation              | 0.46 W (Nominal operation)                |
| Temperature derating           | 2 A (at 50 °C)                            |
| Voltage drop                   | 100 mV (at $I_N$ )                        |
| Fail-safe element              | 4 A DC                                    |
| Contact switching type         | without electrical isolation              |

### Load circuit

|                         |  |
|-------------------------|--|
| Shutdown time           | 400 ms (see time/current characteristic curve) |
| Undervoltage switch-off | < 14 V (typ. OFF)                              |
|                         | > 17 V (typ. ON)                               |
| Max. capacitive load    | 20000 $\mu$ F                                  |
| Switch-on delay         | typ. 2 ms                                      |

### Auxiliary contact

|                         |                                  |
|-------------------------|----------------------------------|
| Contact connection type | Positive-switching signal output |
|-------------------------|----------------------------------|

### Reset

|                     |  |
|---------------------|--|
| Input voltage range | 7 V DC ... 30 V DC (Reset with falling edge) |
|---------------------|--|

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|                     |                          |
|---------------------|--------------------------|
| Current consumption | typ. 2.6 mA (at 24 V DC) |
| Pulse length        | min. 20 ms               |
| Voltage             | < 3 V DC (Low state)     |
|                     | > 8 V DC (High state)    |

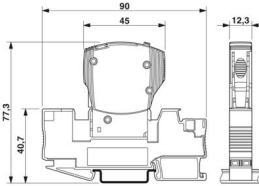
## Status output

|                |                                  |
|----------------|----------------------------------|
| Output voltage | 24 V DC                          |
| Output current | max. 0.2 A (Short-circuit-proof) |

## Connection data

|                   |           |
|-------------------|-----------|
| Connection method | pluggable |
|-------------------|-----------|

## Dimensions

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

## Material specifications

|  |     |
|--|-----|
| Flammability rating according to UL 94 | V-0 |
|--|-----|

## Environmental and real-life conditions

### Ambient conditions

|   |  |
|---|--|
| Degree of protection                    | IP30 (Actuation area)                    |
| 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                     |
| Vibration (operation)                   | 3g (according to IEC 60068-2-6, Test Fc) |

## Approvals

### UL approval

|                |                       |
|----------------|-----------------------|
| Identification | UL Listed UL 508      |
|                | UL Recognized UL 2367 |

### Shipbuilding approval

|                |        |
|----------------|--------|
| Identification | DNV GL |
|----------------|--------|

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## Standards and regulations

|                          |                       |
|--------------------------|-----------------------|
| Standard designation     | EMV                   |
| Standards/specifications | EN 61000-6-3          |
| Note                     | Interference emission |
| Standard designation     | EMV                   |
| Standards/specifications | EN 61000-6-2          |
| Note                     | Noise immunity        |

## Mounting

|               |                 |
|---------------|-----------------|
| Mounting type | on base element |
|---------------|-----------------|

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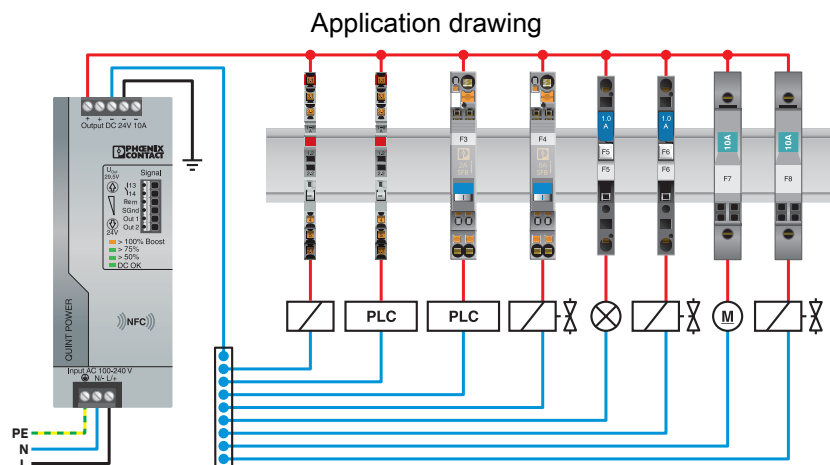
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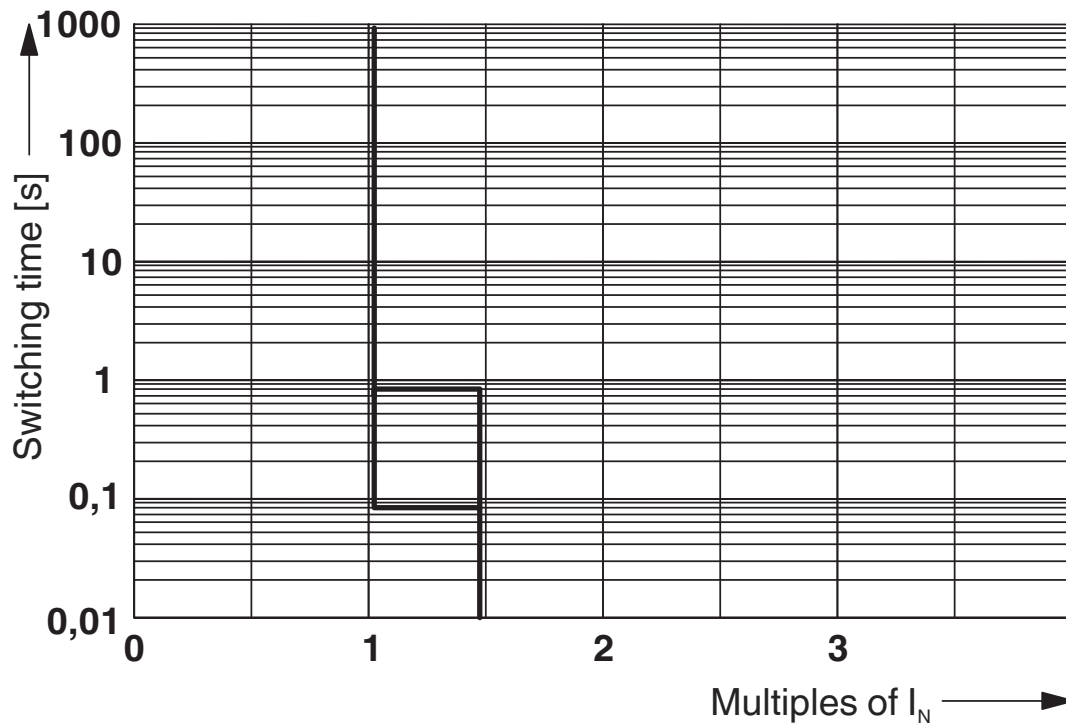
## Drawings



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



Diagram



Trigger characteristic

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