

# CBMC E4 24DC/1-10A S-R-C - Electronic circuit breaker



1103875

<https://www.phoenixcontact.com/us/products/1103875>

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 documentation. Our general terms of use for downloads are valid.



Multi-channel electronic circuit breaker that can be preconfigured, for protecting four loads at 24 V DC in the event of overload and short circuit. With status output, reset input, and electronic locking of the set nominal currents. For installation on DIN rails.

## Your advantages

- Easy device replacement without replanning, thanks to compact design and options for individual adjustments
- Circuits can be adjusted without any tools by means of one single pushable LED button
- Pre-configuration available – for device protection that meets the specific requirements of your system
- Enhanced diagnostic and control options, thanks to integrated status output and reset input
- Reliable protection against unintentional adjustment of current values, thanks to electronic locking



## Commercial data

Item number	1103875
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Sales key	CL99
Product key	CLA152
Weight per piece (including packing)	141.5 g
Weight per piece (excluding packing)	123.61 g
Customs tariff number	85362010
Country of origin	DE

# CBMC E4 24DC/1-10A S-R-C - Electronic circuit breaker



1103875

<https://www.phoenixcontact.com/us/products/1103875>

## Technical data

### Notes

#### General

Note	Repeated hard short circuits can reduce the melting integral of the integrated backup fuse.
	Always connect the negative pole to terminal IN- to ensure the internal power supply. Return currents from the loads must not be fed back to the power supply via IN- of the circuit breaker.

### Product properties

Product type	Device circuit breakers
Product family	CBMC
Type	DIN rail module, one-piece
Number of positions	1
No. of channels	4

#### Insulation characteristics

Protection class	III
Pollution degree	2

### Electrical properties

#### General

Operating voltage	18 V DC ... 30 V DC
Rated voltage	24 V DC
Rated current $I_N$	max. 40 A (IN+)
Rated current $I_N$	1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 A DC (adjustable or fixed per output channel)
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)
Fuse	electronic
Efficiency	> 99 %
Closed circuit current $I_0$	typ. 25 mA
Power dissipation	typ. 0.6 W (No-load operation) < 9 W (Nominal operation)
Module initialization time	1.6 s
Waiting time after switch off of a channel	5 s (at overload / short circuit)
Measuring tolerance I	± 15 % 24 A DC (at 60 °C)

# CBMC E4 24DC/1-10A S-R-C - Electronic circuit breaker



1103875

<https://www.phoenixcontact.com/us/products/1103875>

Temperature derating	28 A DC (at 54 °C)
	32 A DC (at 47 °C)
	36 A DC (at 41 °C)
	40 A DC (at 35 °C)
MTBF (IEC 61709, SN 29500)	8403361 h (at 25 °C with 21 % load)
	3067484 h (at 40 °C with 34.25% load)
	534188 h (at 35 °C with 100 % load)
Fail-safe element	15 A DC (per output channel)
Contact switching type	without electrical isolation

## Load circuit

Shutdown time	≤ 10 ms (for short circuit > 2.0 x I <sub>N</sub> )
	1 s (1.2 ... 2.0 x I <sub>N</sub> )
Undervoltage switch-off	≤ 17.8 V DC (active)
	≥ 18.8 V DC (inactive)
Overvoltage switch-off	≥ 30.5 V DC (active)
	≤ 29.5 V DC (inactive)
Max. capacitive load	45000 µF (Depending on the current setting and the short-circuit current available)
Switch-on delay	0.1 s (per output channel)

## Reset

Input voltage range	7 V DC ... 30 V DC (Reset with falling edge)
Current consumption	typ. 0.4 mA (at 24 V DC)
Pulse length	≥ 50 ms (High)
	≥ 50 ms (Low)
Voltage	< 5 V DC (Low state)
	> 8 V DC (High state)
Stripping length	10 mm
Conductor cross-section rigid	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross-section AWG	24 ... 12
Conductor cross-section, flexible, with ferrule, with plastic sleeve	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section, flexible, with ferrule, without plastic sleeve	0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>

## Status output

Output voltage	24 V DC
Output current	max. 0.04 A (Short-circuit-proof)
Stripping length	10 mm
Conductor cross-section rigid	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross-section AWG	24 ... 12
Conductor cross-section, flexible, with ferrule, with plastic sleeve	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section, flexible, with ferrule, without plastic sleeve	0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>

## Connection data

# CBMC E4 24DC/1-10A S-R-C - Electronic circuit breaker



1103875

<https://www.phoenixcontact.com/us/products/1103875>

## Main circuit IN+

Connection method	Push-in connection
Stripping length	15 mm
Conductor cross-section flexible	0.2 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Conductor cross-section rigid	0.2 mm <sup>2</sup> ... 10 mm <sup>2</sup>
Conductor cross-section AWG	24 ... 8
Conductor cross-section, flexible, with ferrule, with plastic sleeve	0.25 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross-section, flexible, with ferrule, without plastic sleeve	0.25 mm <sup>2</sup> ... 6 mm <sup>2</sup>

## Main circuit IN-

Connection method	Push-in connection
Stripping length	10 mm
Conductor cross-section rigid	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross-section AWG	24 ... 12
Conductor cross-section, flexible, with ferrule, with plastic sleeve	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section, flexible, with ferrule, without plastic sleeve	0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>

## Main circuit OUT+

Connection method	Push-in connection
Stripping length	10 mm
Conductor cross-section rigid	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross-section AWG	24 ... 12
Conductor cross-section, flexible, with ferrule, with plastic sleeve	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section, flexible, with ferrule, without plastic sleeve	0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>

## Signaling

Channel LED off	off (Channel switched off)
Channel LED yellow	lit (Channel switched on, channel load > 80% )
	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)
	two flashes (Channel switched off, device total current limit 40 A exceeded)

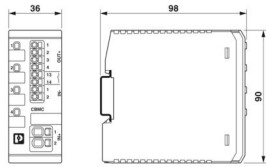
## Dimensions

# CBMC E4 24DC/1-10A S-R-C - Electronic circuit breaker



1103875

<https://www.phoenixcontact.com/us/products/1103875>

Dimensional drawing	
Width	36 mm
Height	90 mm
Depth	98 mm (incl. DIN rail 7.5 mm)

## Material specifications

Material	PC
	PA 6.6
	PA 6.3T
	POM
Flammability rating according to UL 94	V-0

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °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 ... 57.6 Hz (Amplitude ±0.35 mm; in accordance with IEC 60068-2-6, Test Fc)
	57.6 Hz ... 150 Hz (Acceleration 5g; in accordance with IEC 60068-2-6, Test Fc)

## Approvals

### UL approval

Identification	UL/C-UL Listed UL 508
	UL Recognized UL 2367

### Corrosive gas test

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

## Standards and regulations

Standards/specifications	EN 61000-6-2
Note	EMC – Immunity for industrial areas
Standards/specifications	EN 61000-6-3
Note	EMC – Emission for residential, business and commercial properties and small operations

# CBMC E4 24DC/1-10A S-R-C - Electronic circuit breaker



1103875

<https://www.phoenixcontact.com/us/products/1103875>

Standards/specifications	EN 60068-2-6
Note	Environmental influences – Vibrations (sinusoidal)
Standards/specifications	EN 60068-2-27
Note	Environmental influences – Shocks
Standards/specifications	EN 60068-2-78
Note	Environmental influences – Moisture and heat, constant
Standards/specifications	EN 50178
Note	Equipping power installations with electronic equipment

## Mounting

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

# CBMC E4 24DC/1-10A S-R-C - Electronic circuit breaker

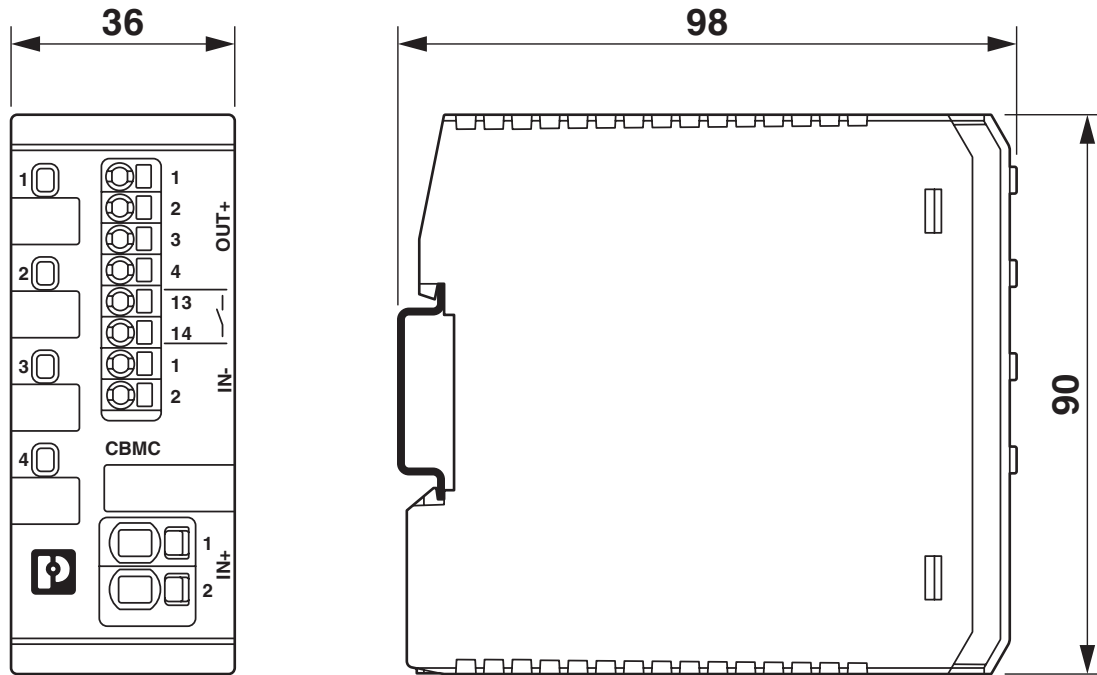


1103875

<https://www.phoenixcontact.com/us/products/1103875>

## Drawings

Dimensional drawing



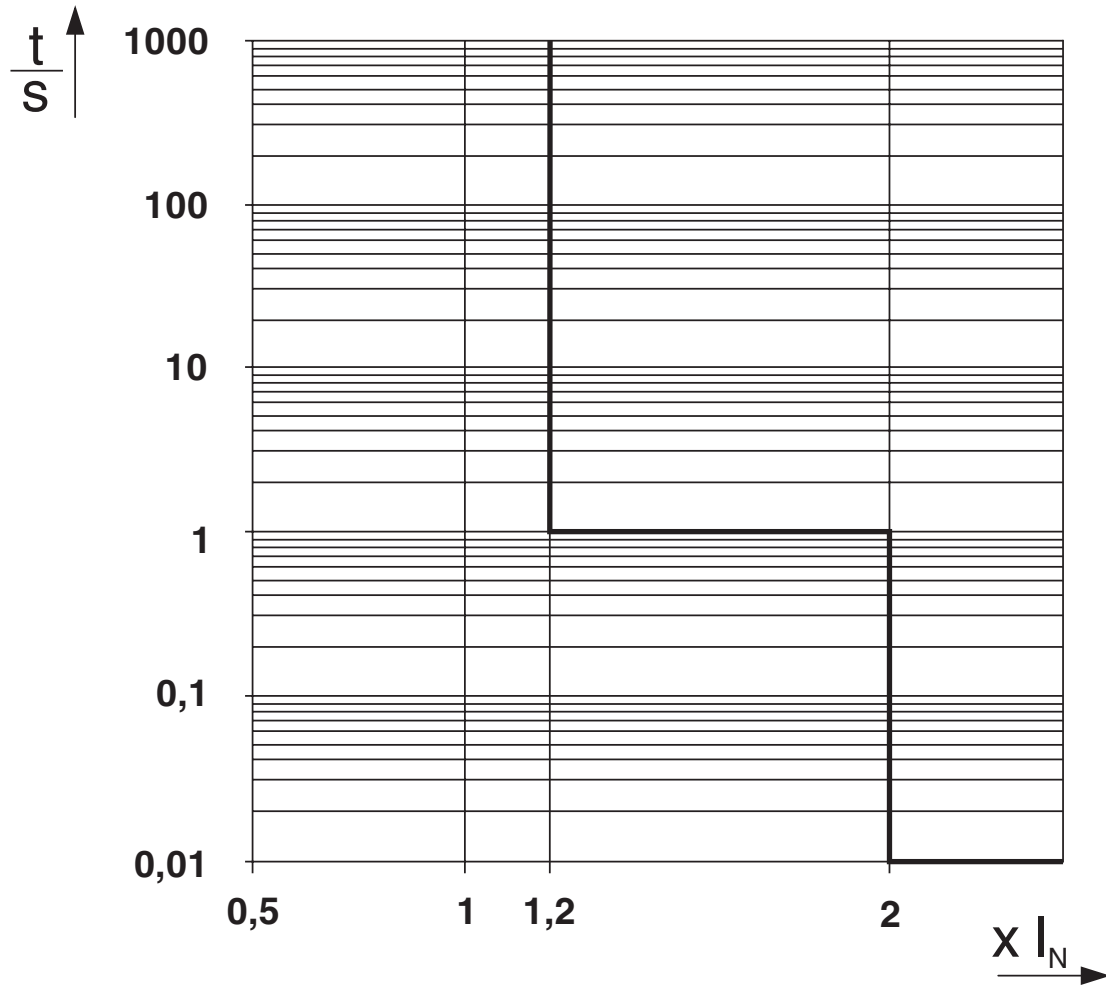
# CBMC E4 24DC/1-10A S-R-C - Electronic circuit breaker



1103875

<https://www.phoenixcontact.com/us/products/1103875>

Diagram



Trigger characteristic in the DC range

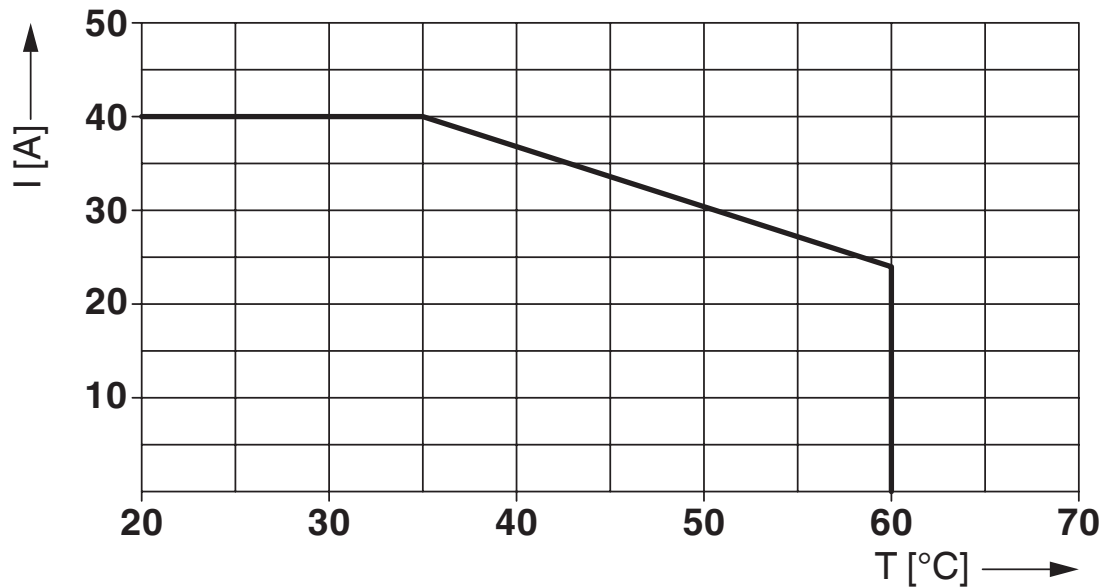
# CBMC E4 24DC/1-10A S-R-C - Electronic circuit breaker



1103875

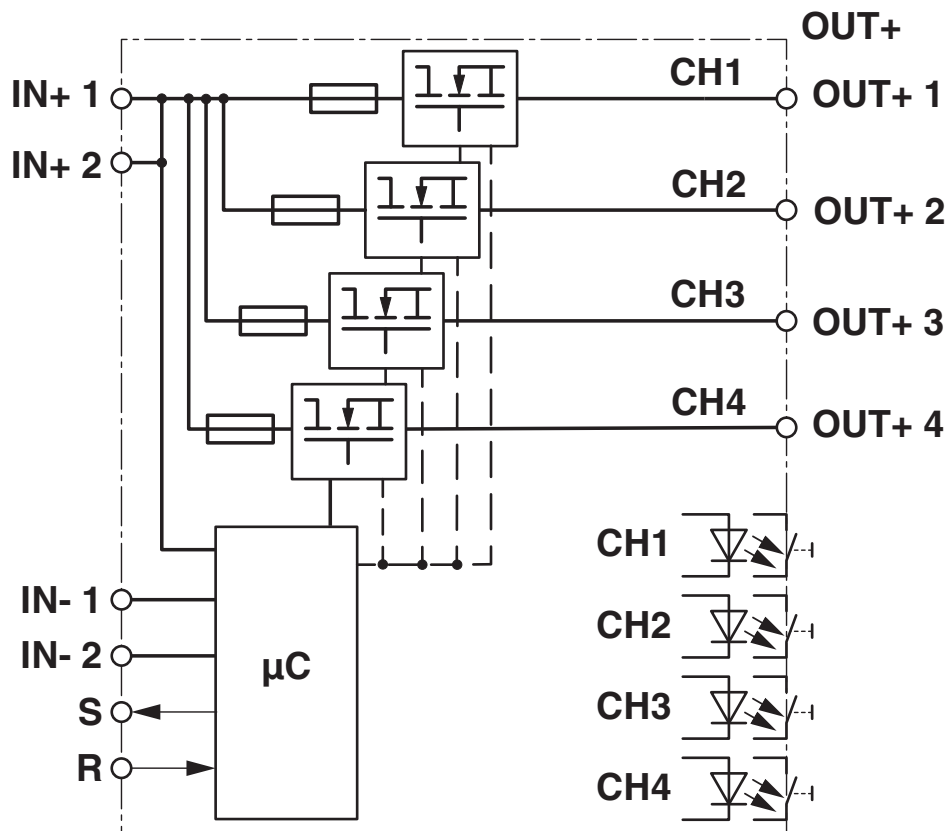
<https://www.phoenixcontact.com/us/products/1103875>

Diagram



Max. permissible current in relation to the ambient temperature

Block diagram



# CBMC E4 24DC/1-10A S-R-C - Electronic circuit breaker



1103875

<https://www.phoenixcontact.com/us/products/1103875>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1103875>



**UL Recognized**

Approval ID: FILE E 317172



**UL Listed**

Approval ID: E123528



**cUL Listed**

Approval ID: E123528

# CBMC E4 24DC/1-10A S-R-C - Electronic circuit breaker



1103875

<https://www.phoenixcontact.com/us/products/1103875>

## Classifications

### ECLASS

ECLASS-13.0	27140401
ECLASS-15.0	27140401

### ETIM

ETIM 10.0	EC003538
-----------	----------

### UNSPSC

UNSPSC 21.0	39121400
-------------	----------

# CBMC E4 24DC/1-10A S-R-C - Electronic circuit breaker



1103875

<https://www.phoenixcontact.com/us/products/1103875>

## 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: 7439-92-1)
	Perfluorobutane sulfonic acid (PFBS) and its salts(CAS: n/a)

### EF3.1 Climate Change

CO2e kg	8.567 kg CO2e
---------	---------------

Phoenix Contact 2026 © - all rights reserved  
<https://www.phoenixcontact.com>

Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)