



Multi-channel electronic circuit breakers

Safely protect against overload and short-circuit currents in a space-saving way. Thanks to multi-channel device circuit breakers, you can protect multiple circuits with just one single device, even in confined spaces. All channels can be individually adjusted and can therefore be adjusted as required to the connected consumers. An integrated electronic interlock secures and protects the parameters you have set from unwanted changes. Push-in connection technology enables quick and tool-free installation of the devices.

All devices constantly check the state of the individual channels. The multi-stage status indicator reliably informs you of the current status of the circuits. An early warning is also generated which indicates utilization over 80%. All devices also feature remote signaling.

Thanks to electronic tripping in the event of a short circuit, the faulty channels are switched off particularly quickly and precisely.

CBMC compact device circuit breaker

With the compact device circuit breakers, you can protect up to four circuits with a single device. The product range offers versions where the nominal current can be adjusted from 1 A to 4 A or 1 A to 10 A. The 1 - 4 A version provides optimum protection for cables and sensors as well as NEC Class 2 circuits by means of an adjusted internal output fuse. Devices with reset input are also available. They enable remote restart. The integrated status output indicates the status of the system.

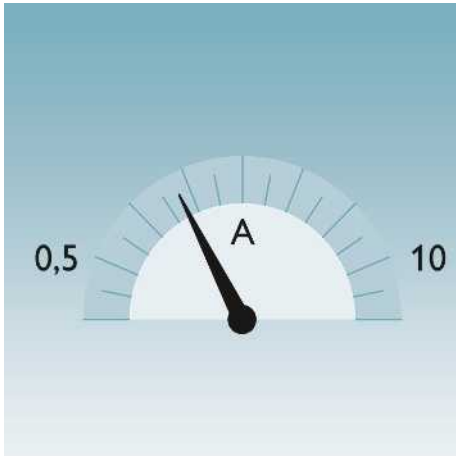
The product range also includes devices with IO-Link interface. The interface offers comprehensive diagnostic options, so process-related data is always available at a glance. You can therefore see the set nominal current, channel current or even the channel status of the device at all times, anywhere in the world.

Order the CBMC device circuit breakers preconfigured. This means the devices will be tailored precisely to your system. You can decide whether the preprogrammed current values can still be modified or whether they are blocked. Blocked values ensure the safe operation of your system. Specify all the relevant features when ordering, so that you can benefit from easier startup.

CBM highly functional device circuit breaker

The CBM device circuit breakers protect four or eight channels. Both devices protect nominal currents up to 10 A. A nominal current assistant helps you to correctly adjust the channels and makes installation especially easy. The CBM has a reset input, so that disconnected channels can be switched back on again remotely. Furthermore, the device provides the option of indicating utilization over 80% via a signal output.

Thanks to the active current limitation, the current does not exceed a certain threshold value in the event of a short circuit. This reduces the load on the power supply, thereby preventing a voltage drop.



Incremental adjustment

The multi-channel electronic circuit breakers have fine nominal current grading. The CBM can be adjusted in increments from 0.5 A to 10 A, the CBMC from 1 A to 4 A or 10 A, and set individually to the nominal currents of the connected end devices.



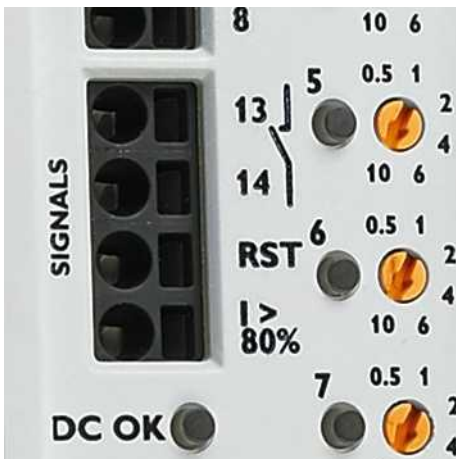
Fast connection

Easy and tool-free direct plug-in. Push-in connection technology enables easy and direct insertion of solid and stranded conductors without the need for great force.



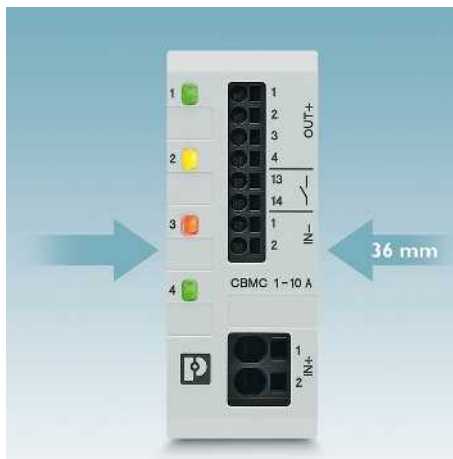
Easy to configure

Configuring the CBM could not be easier with the new nominal current assistant. It enables optimal adjustment of the consumer currents.



Analysis and signaling

The currents flowing are constantly monitored. As such, the CBM not only provides the floating signal contact, but also an 80% output. Consequently, you receive a message when at least one channel is heavily overloaded. The disconnected channel can then be easily switched back on remotely via the Reset IN signal input.



Very compact

The CBMC protects four circuits against overload and short-circuit currents on just 36 mm. Thanks to adjustable nominal currents of 1 A to 4 A or 10 A in a single device, storage costs are reduced while simultaneously increasing flexibility for system planning.

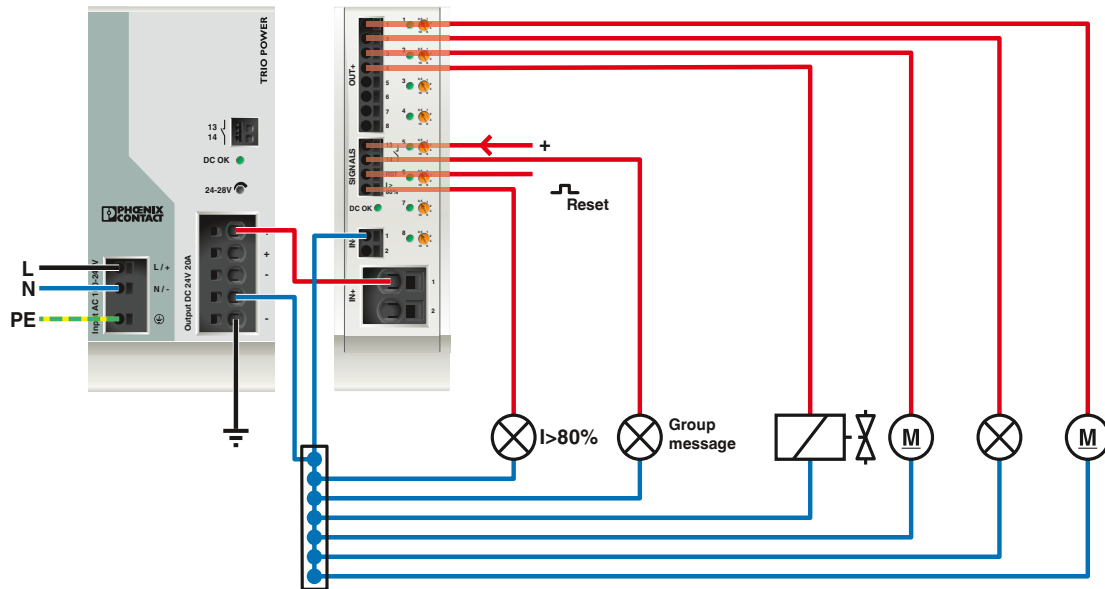


Can be ordered preconfigured

Order the CBMC device circuit breaker that is already configured for your system. This means the device can be used immediately, without further configuration effort. The preconfigured devices are also available with fixed, preprogrammed nominal current values.

Applications

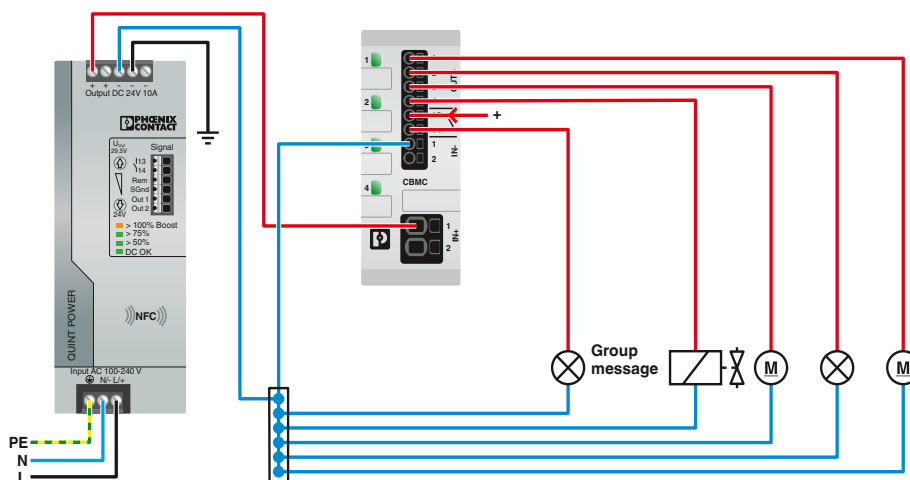
CBM



CBM

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CBMC



CBMC

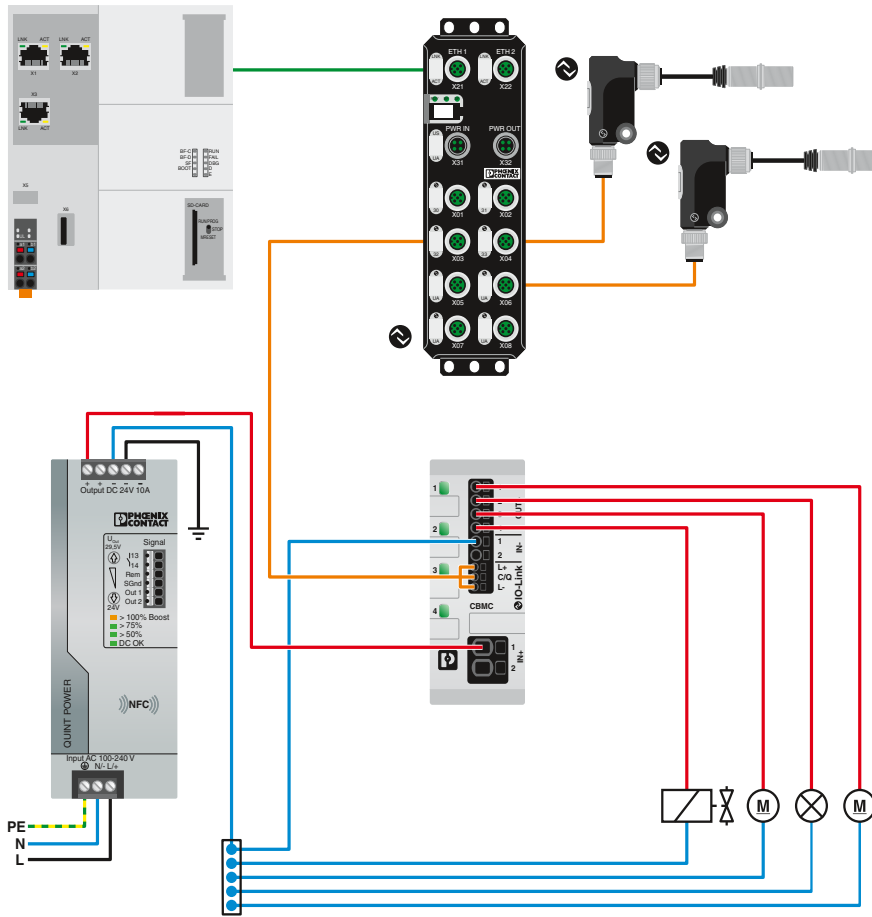
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Device circuit breakers

Electronic circuit breakers

Applications

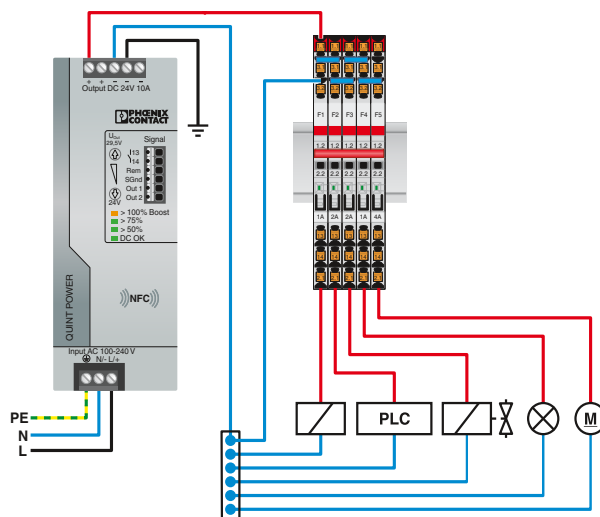
CBMC with IO-Link interface



CBMC ... IOL

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PTCB

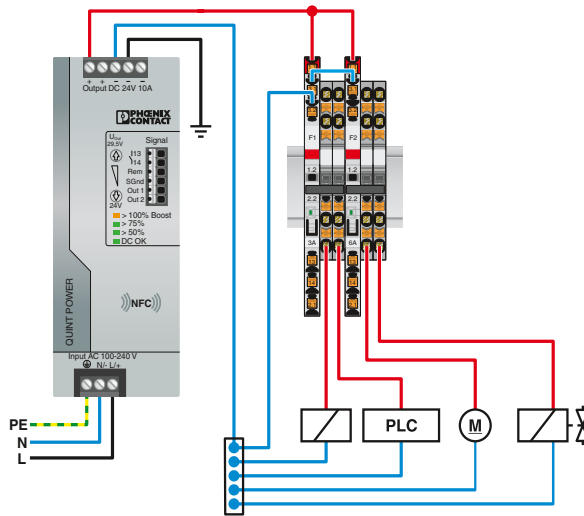


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Applications

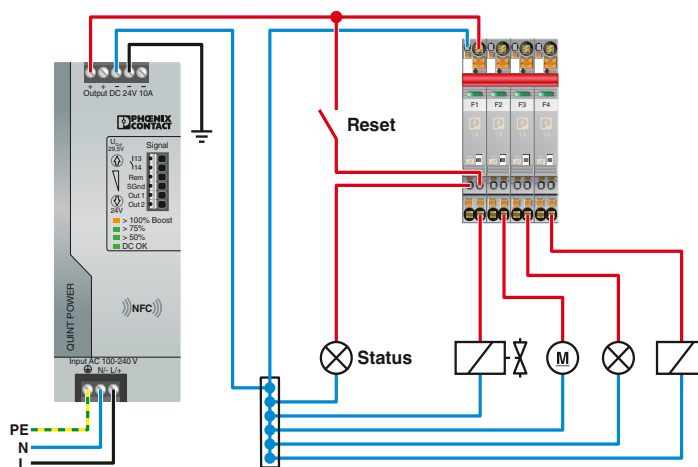
CBMC with CLIPLINE terminal blocks



PTCB

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CB E1



CB E1...

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Device circuit breakers

Electronic circuit breakers

CBM electronic circuit breakers

- For protection against voltage dips caused by overload and short circuit
- Adjustable from 0.5 - 10 A
- Integrated dynamic current limitation
- Supply of up to 80 A possible
- Slim design

Notes:
For additional technical data, drawings, and accessories, please visit phoenixcontact.net/products.



DIN-rail-mountable,
4-channel



DIN-rail-mountable,
8-channel



Electrical data	
Rated voltage	24 V DC
Rated current I_N	max. 40 A DC
Rated current I_N	0.5 / 1 / 2 / 4 / 6 / 10 A DC (adjustable per output channel)
Switch-on delay	0.1 s (per output channel)
Max. capacitive load	75000 μ F (per channel at 24 V DC)
Internal output fuse	15 A DC (per output channel)
Active current limitation	typ. $2.0 \times I_N$ (0.5 - 1 A) / typ. $1.5 \times I_N$ (2 - 10 A)
Load circuit	
Shutdown time	0.02 s ($> 1.3 \times I_N$) / 30 s ($1.1 \dots 1.3 \times I_N$)
Reset input	
Input voltage range	7 V DC ... 30 V DC (Reset with falling edge)
General data	
Dimensions W/H/D	41 mm / 130 mm / 121 mm
Ambient temperature (operation)	-25°C ... 70°C (Startup at -40°C type-tested)
Standards/regulations	EN 61000-6-2/EN 61000-6-3/EN 60068-2-6/EN 60068-2-11/ EN 60068-2-78/
Remote indication contact	
DC operating voltage	0 V DC ... 30 V DC
DC operating current	1 mA DC ... 100 mA DC

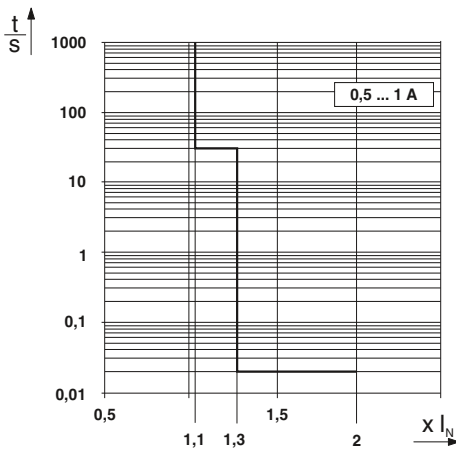
Technical data	
Rated voltage	24 V DC
Rated current I_N	max. 40 A DC
Rated current I_N	0.5 / 1 / 2 / 4 / 6 / 10 A DC (adjustable per output channel)
Switch-on delay	0.1 s (per output channel)
Max. capacitive load	75000 μ F (per channel at 24 V DC)
Internal output fuse	15 A DC (per output channel)
Active current limitation	typ. $2.0 \times I_N$ (0.5 - 1 A) / typ. $1.5 \times I_N$ (2 - 10 A)
Shutdown time	0.02 s ($> 1.3 \times I_N$) / 30 s ($1.1 \dots 1.3 \times I_N$)
Input voltage range	7 V DC ... 30 V DC (Reset with falling edge)
Dimensions W/H/D	41 mm / 130 mm / 121 mm
Ambient temperature (operation)	-25°C ... 70°C (Startup at -40°C type-tested)
Standards/regulations	EN 61000-6-2/EN 61000-6-3/EN 60068-2-6/EN 60068-2-11/ EN 60068-2-78/
DC operating voltage	0 V DC ... 30 V DC
DC operating current	1 mA DC ... 100 mA DC

Technical data	
Rated voltage	24 V DC
Rated current I_N	max. 80 A DC (for double supply IN+ with at least $2 \times 6 \text{ mm}^2$)
Rated current I_N	0.5 / 1 / 2 / 4 / 6 / 10 A DC (adjustable per output channel)
Switch-on delay	0.1 s (per output channel)
Max. capacitive load	75000 μ F (per channel at 24 V DC)
Internal output fuse	15 A DC (per output channel)
Active current limitation	typ. $2.0 \times I_N$ (0.5 - 1 A) / typ. $1.5 \times I_N$ (2 - 10 A)
Shutdown time	0.02 s ($> 1.3 \times I_N$) / 30 s ($1.1 \dots 1.3 \times I_N$)
Input voltage range	7 V DC ... 30 V DC (Reset with falling edge)
Dimensions W/H/D	41 mm / 130 mm / 121 mm
Ambient temperature (operation)	-25°C ... 70°C (Startup at -40°C type-tested)
Standards/regulations	EN 61000-6-2/EN 61000-6-3/EN 60068-2-6/EN 60068-2-11/ EN 60068-2-78/
DC operating voltage	0 V DC ... 30 V DC
DC operating current	1 mA DC ... 100 mA DC

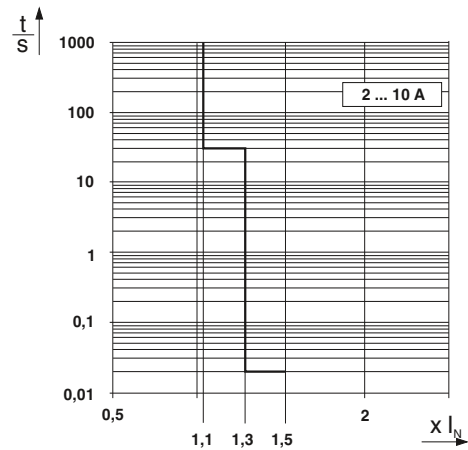
Ordering data	
Type	CBM E4 24DC/0.5-10A NO-R
Order No.	2905743
Pcs./Pkt.	1

Ordering data	
Type	CBM E8 24DC/0.5-10A NO-R
Order No.	2905744
Pcs./Pkt.	1

Ordering data	
Type	CBM E8 24DC/0.5-10A NO-R
Order No.	2905744
Pcs./Pkt.	1



Tripping characteristic in the DC range



Tripping characteristic in the DC range

CBMC electronic circuit breakers

- For protection against voltage dips caused by overload and short circuit
- Adjustable in 1 A increments up to max. 10 A
- Compact design
- Can be ordered pre-assembled, with fixed or adjustable nominal currents

NEC Class 2
acc. to UL 1310



**DIN-rail-mountable,
4-channel, preconfigurable**



**DIN-rail-mountable,
4-channel, preconfigurable**



Electrical data	
Rated voltage	24 V DC
Rated current I_N	max. 16 A DC (IN+)
Rated current I_N	1 / 2 / 3 / 4 A DC (adjustable or fixed per output channel)
Switch-on delay	0.1 s (per output channel)
Max. capacitive load	30000 μ F (depending on the current setting and the short-circuit current available)
Internal output fuse	4 A DC (per output channel)
Active current limitation	-
Load circuit	
Shutdown time	≤ 10 ms (for short circuit $> 2.0 \times I_N$) / 1 s (1.2 ... 2.0 $\times I_N$)
General data	
Dimensions W/H/D	36 mm / 90 mm / 98 mm
Ambient temperature (operation)	-25°C ... 60°C
Standards/regulations	EN 61000-6-2/EN 61000-6-3/EN 60068-2-6/EN 60068-2-27/ EN 60068-2-78/EN 50178/UL 508/UL 2367/ UL 1310
Remote indication contact	
DC operating voltage	0 V DC ... 30 V DC
DC operating current	100 mA DC

Technical data

Rated voltage	24 V DC
Rated current I_N	max. 16 A DC (IN+)
Rated current I_N	1 / 2 / 3 / 4 A DC (adjustable or fixed per output channel)
Switch-on delay	0.1 s (per output channel)
Max. capacitive load	30000 μ F (depending on the current setting and the short-circuit current available)
Internal output fuse	4 A DC (per output channel)
Active current limitation	-
Shutdown time	≤ 10 ms (for short circuit $> 2.0 \times I_N$) / 1 s (1.2 ... 2.0 $\times I_N$)
Dimensions W/H/D	36 mm / 90 mm / 98 mm
Ambient temperature (operation)	-25°C ... 60°C
Standards/regulations	EN 61000-6-2/EN 61000-6-3/EN 60068-2-6/EN 60068-2-27/ EN 60068-2-78/EN 50178/UL 508/UL 2367/ UL 1310
DC operating voltage	0 V DC ... 30 V DC
DC operating current	100 mA DC

Technical data

Rated voltage	24 V DC
Rated current I_N	max. 40 A DC (IN+)
Rated current I_N	1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 A DC (adjustable or fixed per output channel)
Switch-on delay	0.1 s (per output channel)
Max. capacitive load	45000 μ F (depending on the current setting and the short-circuit current available)
Internal output fuse	15 A DC (per output channel)
Active current limitation	-
Shutdown time	≤ 10 ms (for short circuit $> 2.0 \times I_N$) / 1 s (1.2 ... 2.0 $\times I_N$)
Dimensions W/H/D	36 mm / 90 mm / 98 mm
Ambient temperature (operation)	-25°C ... 60°C
Standards/regulations	EN 61000-6-2/EN 61000-6-3/EN 60068-2-6/EN 60068-2-27/ EN 60068-2-78/EN 50178/UL 2367/UL 508
DC operating voltage	0 V DC ... 30 V DC
DC operating current	100 mA DC

Ordering data

Type	Order No.	Pcs./Pkt.
CBMC E4 24DC/1-4A NO-C	2908713	1

Ordering data

Type	Order No.	Pcs./Pkt.
CBMC E4 24DC/1-10A NO-C	2908716	1

Description	Circuit breaker
	4-channel

**Order key for the device circuit breaker:
CBMC E4 24DC/1-4A NO-C**

Order No.	Adjustability	Channel 1	Channel 2	Channel 3	Channel 4
2908713	ADJ	1	3	1	4
	ADJ – adjustable	Select the current value in amperes individually for each channel			
	FIX – not adjustable	1 ... 4			

**Order key for the device circuit breaker:
CBMC E4 24DC/1-10A NO-C**

Order No.	Adjustability	Channel 1	Channel 2	Channel 3	Channel 4
2908716	ADJ	1	5	8	10
	ADJ – adjustable	Select the current value in amperes individually for each channel			
	FIX – not adjustable	1 ... 10			

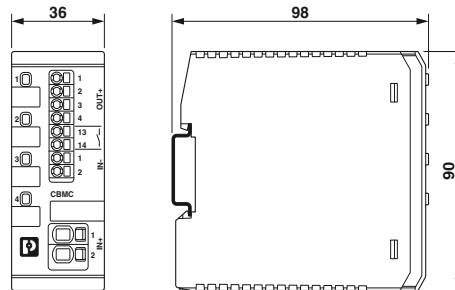
Device circuit breakers

Electronic circuit breakers

CBMC electronic circuit breakers

- For protection against voltage dips caused by overload and short circuit
- Adjustable in 1 A increments up to max. 10 A
- Compact design
- Various versions with electrical isolation or status output and reset input

Notes:
For additional technical data, drawings, and accessories, please visit phoenixcontact.net/products.



NEC Class 2
acc. to UL 1310



**DIN-rail-mountable,
4-channel, max. 4 A/channel**



Electrical data

Rated voltage
Rated current I_N
Rated current I_N

Switch-on delay
Max. capacitive load

Internal output fuse
Active current limitation

Load circuit

Shutdown time

General data

Dimensions W/H/D
Ambient temperature (operation)
Standards/regulations

Remote indication contact

DC operating voltage
DC operating current

Technical data

24 V DC
max. 16 A DC (I_{N+})
1 / 2 / 3 / 4 A DC (adjustable per output channel)
0.1 s (per output channel)
30000 μ F (depending on the current setting and the short-circuit current available)
4 A DC (per output channel)
-

≤ 10 ms (for short circuit $> 2.0 \times I_N$) /
1 s ($1.2 \dots 2.0 \times I_N$)

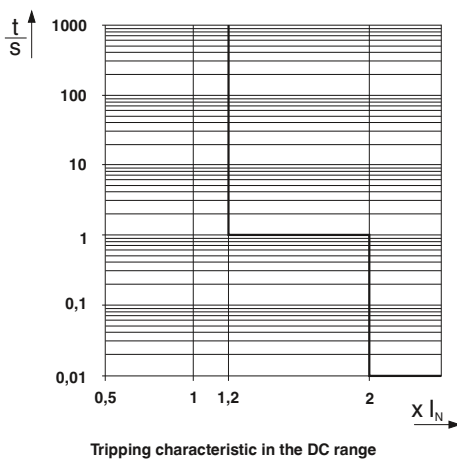
36 mm / 90 mm / 98 mm
-25°C ... 60°C
EN 61000-6-2/EN 61000-6-3/EN 60068-2-6/EN 60068-2-27/
EN 60068-2-78/EN 50178/UL 508/UL 2367/
UL 1310

0 V DC ... 30 V DC
100 mA DC

Ordering data

Description
Circuit breaker , four-channel
N/O contact remote signaling
Status and reset
Electrically isolating

Type	Order No.	Pcs./Pkt.
CBMC E4 24DC/1-4A NO	2906031	1
CBMC E4 24DC/1-4A S-R	1065727	1





**DIN-rail-mountable,
4-channel, max. 8 A/channel
Electrical isolation**



**DIN-rail-mountable,
4-channel, max. 10 A/channel**



Technical data
24 V DC max. 32 A DC (IN+) 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 A DC (adjustable per output channel)
0.1 s (per output channel) 45000 µF (depending on the current setting and the short-circuit current available) 15 A DC (per output channel)
-
≤ 10 ms (for short circuit > 2.0 x I _N) / 1 s (1.2 ... 2.0 x I _N)
36 mm / 90 mm / 98 mm -25°C ... 60°C EN 61000-6-2/EN 61000-6-3/EN 60068-2-78/EN 50178
0 V DC ... 30 V DC 100 mA DC

Technical data
24 V DC max. 40 A DC (IN+) 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 A DC (adjustable per output channel)
0.1 s (per output channel) 45000 µF (depending on the current setting and the short-circuit current available) 15 A DC (per output channel)
-
≤ 10 ms (for short circuit > 2.0 x I _N) / 1 s (1.2 ... 2.0 x I _N)
36 mm / 90 mm / 98 mm -25°C ... 60°C EN 61000-6-2/EN 61000-6-3/EN 60068-2-6/EN 60068-2-27/ EN 60068-2-78/EN 50178/UL 2367/UL 508
0 V DC ... 30 V DC 100 mA DC

Ordering data		
Type	Order No.	Pcs./Pkt.
CBMC EG4 24DC/1-8A NO	1065730	1

Ordering data		
Type	Order No.	Pcs./Pkt.
CBMC E4 24DC/1-10A NO	2906032	1
CBMC E4 24DC/1-10A S-R	1065729	1

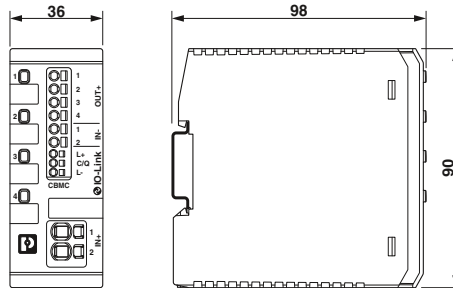
Device circuit breakers

Electronic circuit breakers

CBMC electronic circuit breakers, with IO-Link interface

- For protection against voltage dips caused by overload and short circuit
- Adjustable in 1 A increments up to max. 10 A
- Compact design
- Suitable for NEC Class 2 applications
- Comprehensive control and analysis options by means of IO-Link interface

Notes:
For additional technical data, drawings, and accessories, please visit phoenixcontact.net/products.



NEC Class 2
acc. to UL 1310



**DIN-rail-mountable,
4-channel, max. 4 A/channel**



Technical data

Electrical data

Rated voltage
Rated current I_N
Rated current I_N

Switch-on delay
Max. capacitive load

Internal output fuse
Active current limitation

Load circuit

Shutdown time

General data

Dimensions W/H/D
Ambient temperature (operation)
Standards/regulations

24 V DC
max. 16 A DC (IN+)
1 / 2 / 3 / 4 A DC (adjustable per output channel)
0.1 s (per output channel)
30000 μ F (depending on the current setting and the short-circuit current available)
15 A DC (per output channel)
-

≤ 10 ms (for short circuit $> 2.0 \times I_N$) /
1 s ($1.2 \dots 2.0 \times I_N$)

36 mm / 90 mm / 98 mm
-25°C ... 60°C
EN 61000-6-2/EN 61000-6-3/EN 60068-2-6/EN 60068-2-27/
EN 60068-2-78/EN 50178/UL 508/UL 2367/
UL 1310

Ordering data

Description

Circuit breaker, four-channel

Type

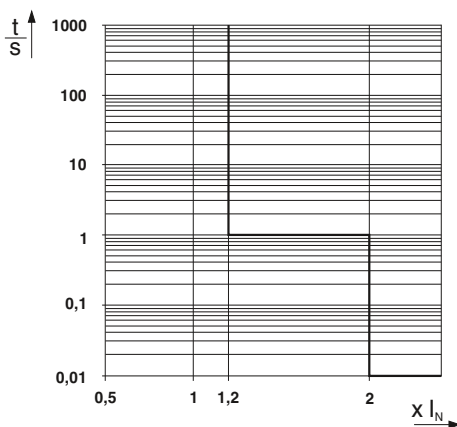
CBMC E4 24DC/1-4A+ IOL

Order No.

2910410

Pcs./Pkt.

1



Tripping characteristic in the DC range

 IO-Link


**DIN-rail-mountable,
4-channel, max. 10 A/channel**



Technical data

24 V DC
max. 40 A DC (I_N+)
1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 A DC (adjustable per output channel)

0.1 s (per output channel)
40000 µF (depending on the current setting and
the short-circuit current available)
15 A DC (per output channel)

≤ 10 ms (for short circuit > 2.0 x I_N) /
1 s (1.2 ... 2.0 x I_N)

36 mm / 90 mm / 98 mm
-25°C ... 60°C
EN 61000-6-2/EN 61000-6-3/EN 60068-2-6/EN 60068-2-27/
EN 60068-2-78/EN 50178/UL 2367/UL 508

Ordering data

Type	Order No.	Pcs./Pkt.
CBMC E4 24DC/1-10A IOL	2910411	1