

# CBMC EG4 24DC/1-8A NO - Electronic circuit breaker



1065730

<https://www.phoenixcontact.com/au/products/1065730>

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Multi-channel electronic circuit breaker with electrical isolation for protecting four loads at 24 V DC in the event of overload or short circuit. With 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
- System safety is increased during maintenance work thanks to disconnection via electrical isolation
- Safe system operation, thanks to patented monitoring of electrical isolation
- Reliable protection against unintentional adjustment of current values, thanks to electronic locking
- Status LEDs in traffic light colors enable instantaneous determination of operating states

## Commercial data

Item number	1065730
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CLA152
Product key	CLA152
GTIN	4055626729312
Weight per piece (including packing)	182.3 g
Weight per piece (excluding packing)	167 g
Customs tariff number	85362010
Country of origin	DE

## Technical data

### Notes

#### General

Note	Repeated hard short circuits can reduce the melting integral of the integrated backup fuse.
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### 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. 32 A DC (IN+)
	max. 40 A DC (per terminal position when bridging additional devices via IN+)
Rated current $I_N$	1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 A DC (adjustable per output channel)
Rated current (pre-adjusted)	4 A
Rated surge voltage	0.5 kV
Tripping method	EG (electronic - galvanic disconnection)
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.
	30 A (gG, supplied with linear power supply, $I_{cn} \geq 200$ A)
Short-circuit switching capacity	300 A
Dielectric strength	max. 35 V DC (Load circuit)
Fuse	electronic
Efficiency	> 99 %
Closed circuit current $I_0$	typ. 75 mA
Power dissipation	typ. 1.8 W (No-load operation)
	< 7 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 %
	25 A DC (at 60 °C)

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Temperature derating	28 A DC (at 56 °C)
	32 A DC (at 52 °C)
MTBF (IEC 61709, SN 29500)	5000000 h (at 25 °C with 21 % load)
	2000000 h (at 40 °C with 34.25% load)
	321056 h (at 52 °C with 100% load)
Fail-safe element	15 A DC (per output channel)
Contact switching type	Relay, N/O contact

## 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)

## Indicator/remote signaling

Connection name	Remote indication circuit
Switching function	N/O contact
Operating voltage	0 V DC ... 30 V DC
Operating current	100 mA DC

## Connection data

### Main circuit IN+

Connection method	Push-in connection
Stripping length	15 mm
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
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Stripping length	10 mm
Conductor cross section rigid	0.2 mm² ... 2.5 mm²
Conductor cross section AWG	24 ... 12
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm² ... 1.5 mm²
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm² ... 2.5 mm²

## Remote indication circuit

Connection method	Push-in connection
Stripping length	10 mm
Conductor cross section rigid	0.2 mm² ... 2.5 mm²
Conductor cross section AWG	24 ... 12
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm² ... 1.5 mm²
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm² ... 2.5 mm²

## 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, relay error, overvoltage 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 32 A exceeded)

## Dimensions

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

## Material specifications

Color	light gray (RAL 7035)
Material	PC PA 6.6 PA 6.3T

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	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

## Approvals

### Corrosive gas test

Identification	ISA S71.04.2013 G3 Harsh Group A
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## 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
Standards/specifications	EN 60068-2-78
Note	Environmental influences – Vibrations (sinusoidal)
Standards/specifications	EN 50178
Note	Equipping power installations with electronic equipment

## Mounting

Mounting type	DIN rail: 35 mm
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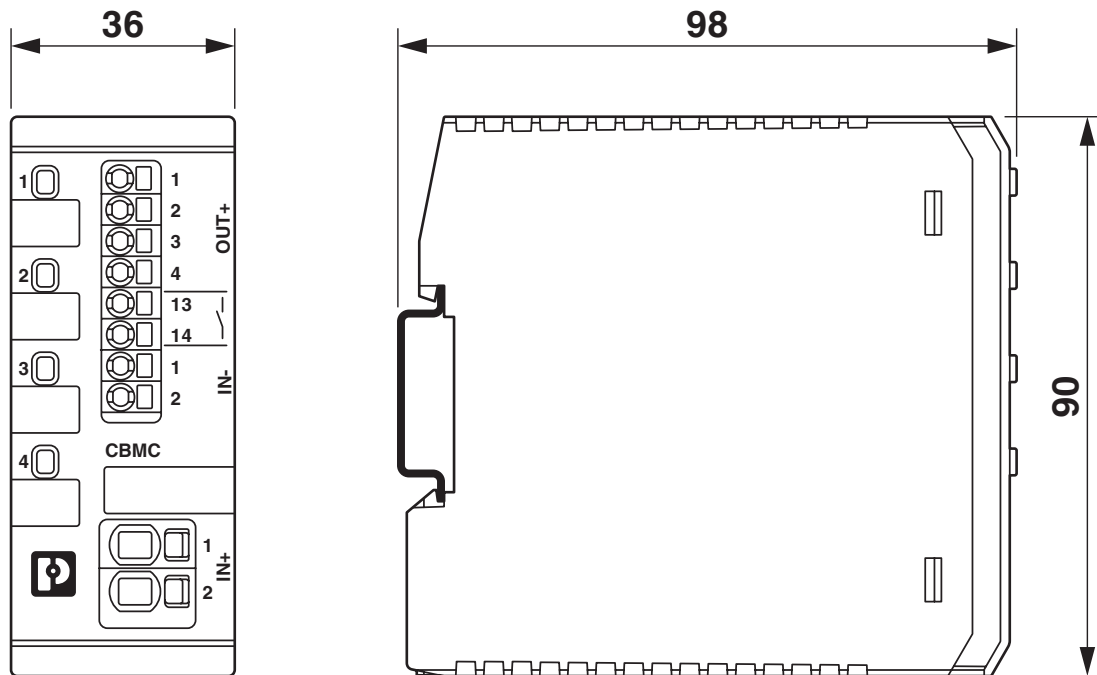


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## Drawings

Dimensional drawing



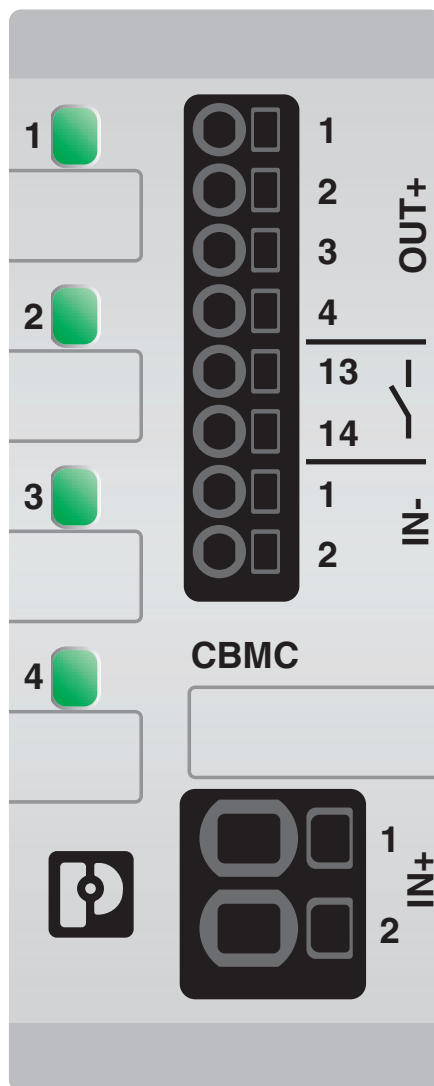
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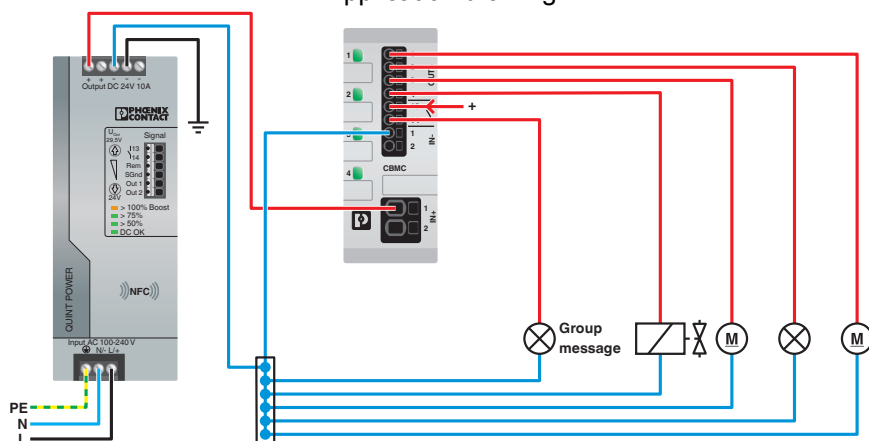
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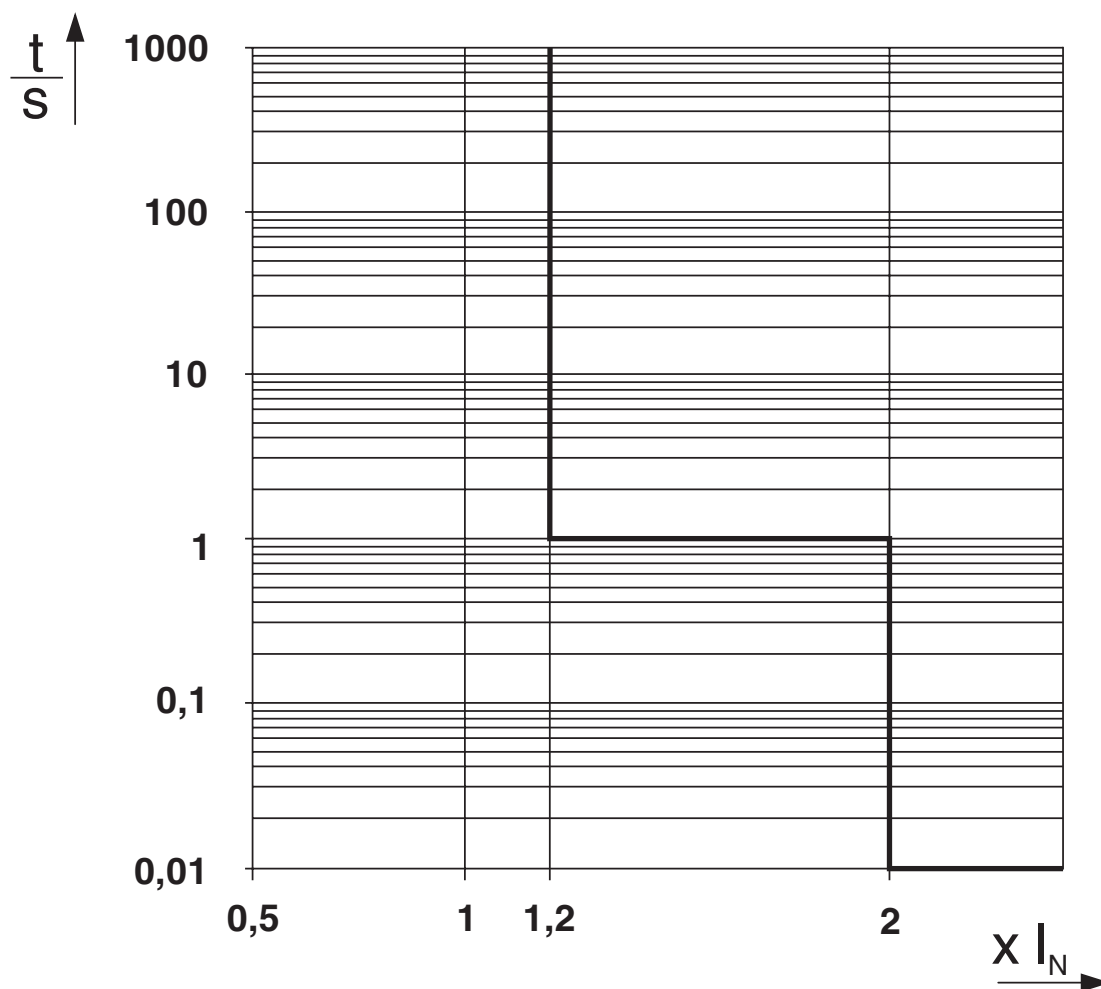
Product drawing



Application drawing



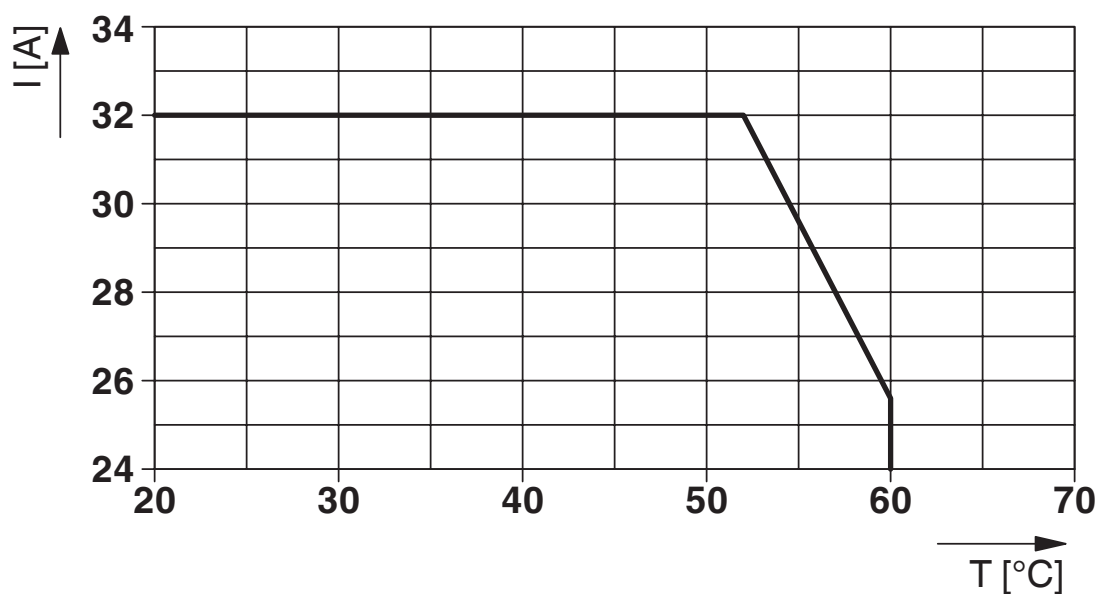
Diagram



Trigger characteristic in the DC range

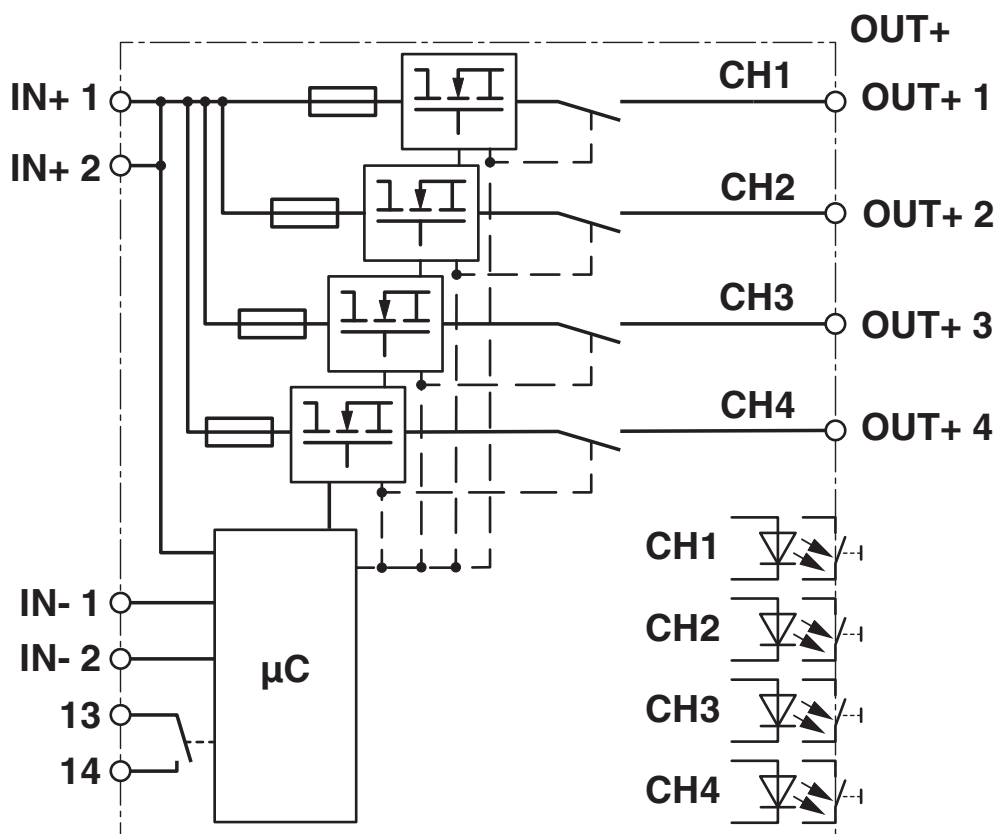


Diagram



Max. permissible current in relation to the ambient temperature

Block diagram




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## Approvals

 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/au/products/1065730>



**UL Recognized**

Approval ID: E317172



**UL Listed**

Approval ID: E123528



**cUL Listed**

Approval ID: E123528

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## Classifications

### ECLASS

ECLASS-13.0	27140401
ECLASS-15.0	27140401

### ETIM

ETIM 9.0	EC003538
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### UNSPSC

UNSPSC 21.0	39121400
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## 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)
SCIP	da16fb6d-c2a1-4e67-a0bb-e2eaed2383be