

Power module - CAPAROC PM IOL



1115670

<https://www.phoenixcontact.com/pc/products/1115670>

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Power module with IO-Link interface for supplying the CAPAROC circuit breaker system with 12 or 24 V DC for up to 20 channels. For DIN rail installation via the CAPAROC current rails.

Your advantages

- The benchmark that you can customize by selecting single signals and resets all the way to IO-Link and PROFINET communication
- Particularly easy operation for everyone with tool-free assembly, direct feed-in to the busbar, and clear operating states
- Exceptionally easy design-in with the comprehensive digital data packet

Commercial Data

Item number	1115670
Packing unit	1 pc
Minimum order quantity	1 pc
Product Key	CLA231
GTIN	4063151040901
Weight per Piece (including packing)	129.3 g
Weight per Piece (excluding packing)	92 g
Customs tariff number	85363030
Country of origin	DE

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Technical Data

Product properties

Product type	Device circuit breakers
Number of slots	2

Insulation characteristics

Protection class	III
Pollution degree	2

Electrical properties

General

Operating voltage	10 V DC ... 30 V DC
Rated voltage	12 V DC
	24 V DC
Rated current I_N	45 A DC (Total current input)
Tripping method	E (electronic)
Feedback resistance	max. 35 V DC
Dielectric strength	35 V DC (Load circuit)
Efficiency	> 99 %
Closed circuit current I_0	typ. 12 mA (no load at 24 V)
Power dissipation	typ. 0.27 W (no load at 24 V)
	< 1.5 W (in nominal operation at 24 V and 45 A)
Temperature derating	45 A (Total current at 40°C)
	30 A (Total current at 65 °C)
MTBF (IEC 61709, SN 29500)	13826266.85 h (at 25 °C with 21 % load)
	5534344.72 h (at 40°C with 34.25% load)
	687502.35 h (at 65°C with 100% load)
Voltage drop	5 mV (at 10 A)
Current consumption	typ. 0.5 mA (at 24 V DC)
Pulse length	≥ 50 ms

Connection data

Main circuit IN+

Connection method	Push-in connection
Stripping length	18 mm
Conductor cross section solid	0.5 mm ² ... 16 mm ²
Conductor cross section AWG	20 ... 8
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.5 mm ² ... 16 mm ²
Conductor cross section flexible, with ferrule without plastic sleeve	0.5 mm ² ... 16 mm ²

Main circuit IN+

Connection method	Push-in connection
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Stripping length	18 mm
Conductor cross section solid	0.5 mm ² ... 16 mm ²
Conductor cross section AWG	20 ... 8
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.5 mm ² ... 16 mm ²
Conductor cross section flexible, with ferrule without plastic sleeve	0.5 mm ² ... 16 mm ²

Main circuit IN+

Connection method	Push-in connection
Stripping length	8 mm
Conductor cross section solid	0.2 mm ² ... 1.5 mm ²
Conductor cross section AWG	24 ... 16
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.2 mm ² ... 0.75 mm ²
Conductor cross section flexible, with ferrule without plastic sleeve	0.2 mm ² ... 1.5 mm ²

Interfaces

IO-Link

Interface type	IO-Link
Specification	V1.1
Reverse polarity protection	Yes
Transmission speed	230.4 kbps (COM3)
Cycle Time	min. 20 ms
Amount of process data	8 Byte (Input data) 3 Byte (Output data)
Current consumption	typ. 30 mA (IO-Link L+)
IO-Link Vendor ID	176 _{dec} , 00 B0 _{hex}

PROFINET

Maximum system extension	≤ 20 (Channels)
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LED signaling

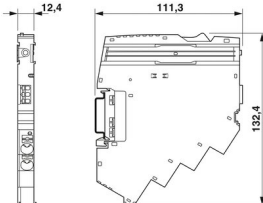
IO-Link LED off	off (No communication)
IO-Link LED green	flashing (IO-Link connection exists)
Power (PWR) LED green	lit (Supply voltage OK)
Power (PWR) LED red	lit (Supply voltage outside the nominal range) flashing (System topology changed)

Dimensions

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Dimensional drawing	
Width	12.4 mm
Height	132.4 mm
Depth	111.3 mm (incl. DIN rail 7.5 mm)

Material specifications

Color	light grey RAL 7035
Material	PA 6 (Housing)
	PA 6 (Pusher)
	PA 6 (Release lever)
	PC (Fiber optics)
Flammability rating according to UL 94	V-0

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-30 °C ... 65 °C
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Altitude	≤ 4000 m (amsl (above mean sea level))
Humidity test	96 h, 95 % RH, 40 °C

Standards and regulations

Standards/specifications	EN 61000-6-2
Standards/specifications	EN 61000-6-3
Standards/specifications	EN 60068-2-78
Standards/specifications	EN 50178

Mounting

Mounting type	pluggable onto CAPAROC CR... current rail
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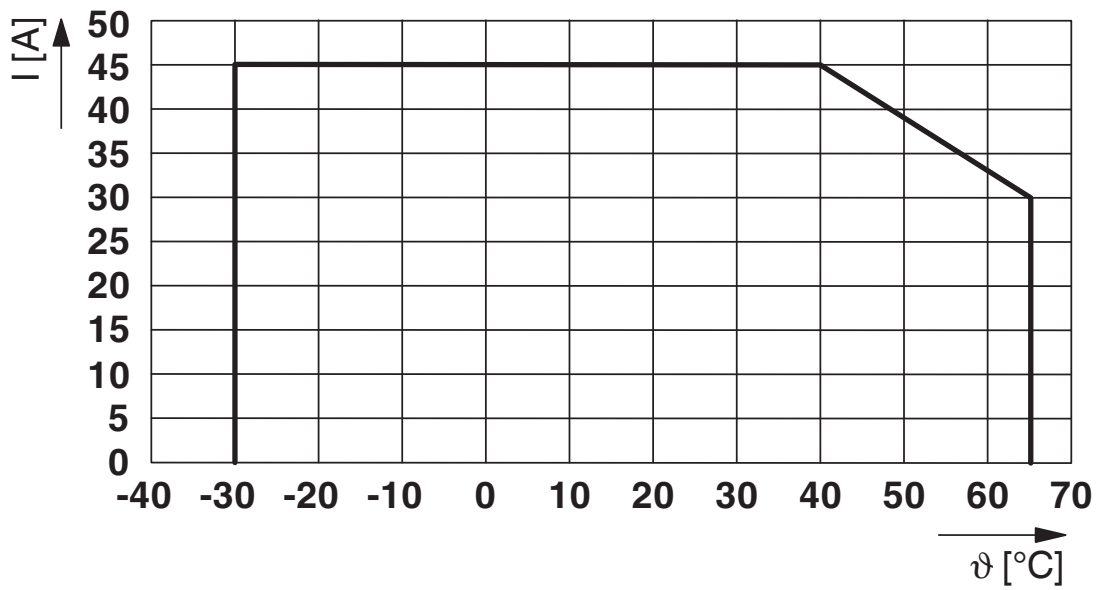
<https://www.phoenixcontact.com/pc/products/1115670>

Drawings

Product drawing



Diagram



Max. permissible current in relation to the ambient temperature

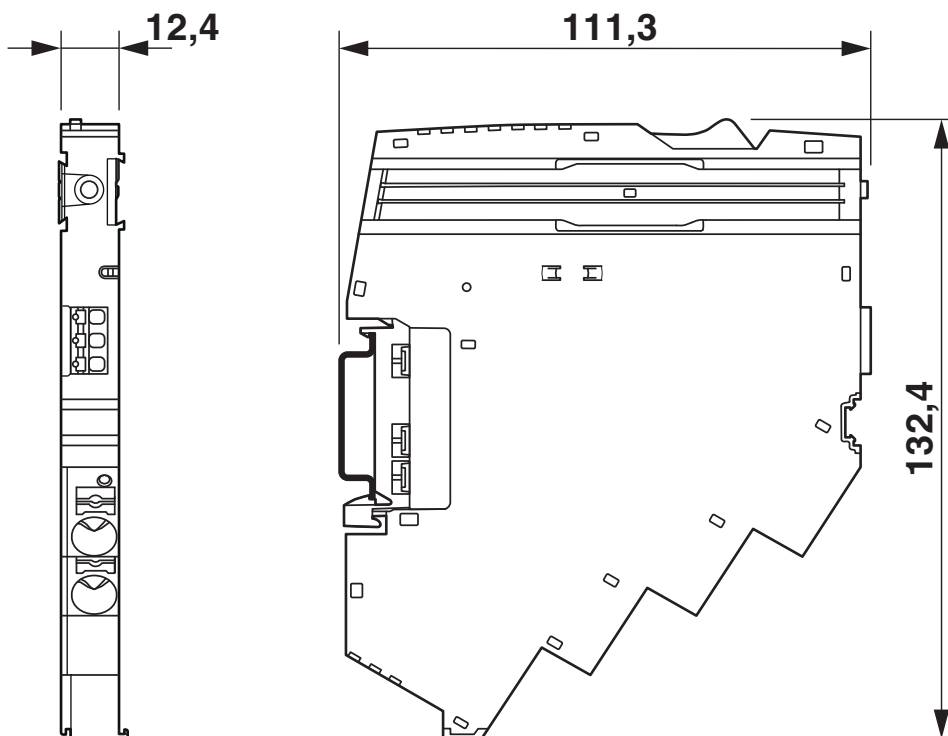
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Dimensional drawing



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Approvals



UL Listed

Approval ID: FILE E 123528



cUL Listed

Approval ID: FILE E 123528

cULus Listed

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Classifications

ECLASS

ECLASS-9.0	27141116
ECLASS-10.0.1	27140401
ECLASS-11.0	27140401

ETIM

ETIM 8.0	EC003538
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UNSPSC

UNSPSC 21.0	39121400
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Environmental Product Compliance

REACH SVHC

Lead 7439-92-1

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Mandatory Accessories

Busbar

Busbar - CAPAROC CR 20 - 1110989

<https://www.phoenixcontact.com/pc/products/1110989>

Busbar for CAPAROC system with 20 slots. For installation on a DIN rail.



Busbar

Busbar - CAPAROC CR 8 - 1115672

<https://www.phoenixcontact.com/pc/products/1115672>

Busbar for the CAPAROC system with 8 slots. For installation on a DIN rail.



Accessories

Power module - CAPAROC PM IOL



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Electronic circuit breaker

Electronic circuit breaker - CAPAROC E1 12-24DC/1-4A - 1115415

<https://www.phoenixcontact.com/pc/products/1115415>



1-channel electronic circuit breaker module for protecting 12 and 24 V DC loads against overload and short circuit. Nominal current adjustable from 1 A to 4 A via LED button. For DIN rail installation via the CAPAROC current rails.

Electronic circuit breaker

Electronic circuit breaker - CAPAROC E1 12-24DC/1-10A - 1115649

<https://www.phoenixcontact.com/pc/products/1115649>



1-channel electronic circuit breaker module for protecting 12 and 24 V DC loads against overload and short circuit. Nominal current adjustable from 1 A to 10 A via LED button. For DIN rail installation via the CAPAROC current rails.

Power module - CAPAROC PM IOL



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Electronic circuit breaker

Electronic circuit breaker - CAPAROC E1 12-24DC/1A - 1157288

<https://www.phoenixcontact.com/pc/products/1157288>



1-channel electronic circuit breaker module for protecting 12 and 24 V DC loads against overload and short circuit. With fixed nominal current. For DIN rail installation via the CAPAROC current rails.

Electronic circuit breaker

Electronic circuit breaker - CAPAROC E1 12-24DC/2A - 1157290

<https://www.phoenixcontact.com/pc/products/1157290>



1-channel electronic circuit breaker module for protecting 12 and 24 V DC loads against overload and short circuit. With fixed nominal current. For DIN rail installation via the CAPAROC current rails.

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Electronic circuit breaker

Electronic circuit breaker - CAPAROC E1 12-24DC/4A - 1157285

<https://www.phoenixcontact.com/pc/products/1157285>



1-channel electronic circuit breaker module for protecting 12 and 24 V DC loads against overload and short circuit. With fixed nominal current. For DIN rail installation via the CAPAROC current rails.

Electronic circuit breaker

Electronic circuit breaker - CAPAROC E1 12-24DC/6A - 1157286

<https://www.phoenixcontact.com/pc/products/1157286>



1-channel electronic circuit breaker module for protecting 12 and 24 V DC loads against overload and short circuit. With fixed nominal current. For DIN rail installation via the CAPAROC current rails.

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Electronic circuit breaker

Electronic circuit breaker - CAPAROC E1 12-24DC/8A - 1157279

<https://www.phoenixcontact.com/pc/products/1157279>



1-channel electronic circuit breaker module for protecting 12 and 24 V DC loads against overload and short circuit. With fixed nominal current. For DIN rail installation via the CAPAROC current rails.

Electronic circuit breaker

Electronic circuit breaker - CAPAROC E1 12-24DC/10A - 1157284

<https://www.phoenixcontact.com/pc/products/1157284>



1-channel electronic circuit breaker module for protecting 12 and 24 V DC loads against overload and short circuit. With fixed nominal current. For DIN rail installation via the CAPAROC current rails.

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Electronic circuit breaker

Electronic circuit breaker - CAPAROC E2 12-24DC/1-4A - 1115655

<https://www.phoenixcontact.com/pc/products/1115655>



2-channel electronic circuit breaker module for protecting 12 and 24 V DC loads against overload and short circuit. Nominal current adjustable from 1 A to 4 A via step switch. For DIN rail installation via the CAPAROC current rails.

Electronic circuit breaker

Electronic circuit breaker - CAPAROC E2 12-24DC/2-10A - 1110984

<https://www.phoenixcontact.com/pc/products/1110984>



2-channel electronic circuit breaker module for protecting 12 and 24 V DC loads against overload and short circuit. Nominal current adjustable from 2 A to 10 A via step switch. For DIN rail installation via the CAPAROC current rails.

Power module - CAPAROC PM IOL

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Electronic circuit breaker

Electronic circuit breaker - CAPAROC E4 12-24DC/1-4A - 1115657

<https://www.phoenixcontact.com/pc/products/1115657>



Four-channel electronic circuit breaker module for protecting 12 and 24 V DC loads against overload and short circuit. Nominal current adjustable from 1 A to 4 A via LED button. For DIN rail installation via the CAPAROC current rails.

Electronic circuit breaker

Electronic circuit breaker - CAPAROC E4 12-24DC/1-10A - 1115658

<https://www.phoenixcontact.com/pc/products/1115658>



Four-channel electronic circuit breaker module for protecting 12 and 24 V DC loads against overload and short circuit. Nominal current adjustable from 1 A to 10 A via LED button. For DIN rail installation via the CAPAROC current rails.

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Potential distributors

Potential distributors - CAPAROC PD 0V - 1110987

<https://www.phoenixcontact.com/pc/products/1110987>



Potential distributor with Push-in connections for directly connecting the 0 V return conductor in the CAPAROC system. For DIN rail installation via the CAPAROC current rails.

Marker for terminal blocks

Marker for terminal blocks - UC-TM 12 - 0819194

<https://www.phoenixcontact.com/pc/products/0819194>



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 12 mm, lettering field size: 11.45 x 10.5 mm, Number of individual labels: 40

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Marker for terminal blocks

Marker for terminal blocks - UCT-TM 12 - 0829144

<https://www.phoenixcontact.com/pc/products/0829144>



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snapped, for terminal block width: 12 mm, lettering field size: 10.8 x 9.6 mm, Number of individual labels: 30

Busbar

Busbar - CAPAROC CR EXT20 - 1115674

<https://www.phoenixcontact.com/pc/products/1115674>



Extension busbar with 20 slots for the CAPAROC system. For installation on a DIN rail.

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Busbar

Busbar - CAPAROC CR EXT8 - 1110990

<https://www.phoenixcontact.com/pc/products/1110990>



Extension busbar with 8 slots for CAPAROC system. For installation on a DIN rail.

Busbar

Busbar - CAPAROC CR EXT4 - 1110991

<https://www.phoenixcontact.com/pc/products/1110991>



Extension busbar with 4 slots for the CAPAROC system. For installation on a DIN rail.

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Metal part

Metal part - CAPAROC CR CON - 1270955

<https://www.phoenixcontact.com/pc/products/1270955>



Metal extension rails from connecting CAPAROC initial busbars.

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