

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



1115649

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

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.



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.

Your advantages

- The benchmark that you can tailor with channel-precise design with integrated potential distribution
- Easy operation for everyone through tool-free assembly, uninterrupted installation, and transparent operating state
- Exceptionally easy design-in with the narrowest of space requirements and four protected outputs

Commercial data

Item number	1115649
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	CLA232
GTIN	4063151039967
Weight per piece (including packing)	77.4 g
Weight per piece (excluding packing)	71.4 g
Country of origin	DE

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



1115649

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

Technical data

Notes

General

Note	LABS release – in accordance with test specification VW PV 3. 10.7:2005-0
------	--

Product properties

Product type	Device circuit breakers
Product family	CAPAROC
Type	Plug-in module
Number of positions	1
No. of channels	1
Number of slots	1

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	10 A DC (per channel)
Rated current I_N	1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 A DC (adjustable per output channel)
Rated current (pre-adjusted)	4 A
Rated surge voltage	0.5 kV
Tripping method	E (electronic)
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	35 V DC (Load circuit)
Fuse	electronic
Efficiency	> 99 %
Closed circuit current I_0	typ. 8.5 mA (no load at 24 V)
Power dissipation	typ. 0.2 W (no load at 24 V)
	< 1.6 W (in nominal operation at 24 V and 10 A)
Measuring tolerance I	± 15 % (typ.)
Temperature derating	10 A (Total current at 40°C)
	7 A (Total current at 65 °C)
MTBF (IEC 61709, SN 29500)	18685596 h (at 25 °C with 21 % load)
	7871572 h (at 40°C with 34.25% load)

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



1115649

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

	1102033 h (at 40°C with 100% load)
Voltage drop	0.14 V (at 10 A)
Fail-safe element	15 A DC (per output channel)
Contact switching type	without electrical isolation

Load circuit

Shutdown time	4 s (with overload 1.1...1.5 x I_N) 1 s (with overload 1.5...2.0 x I_N) 0.1 s (with overload 2.0...3.0 x I_N) typ. 10 ms (For short circuit > 3.0 x I_N)
Undervoltage switch-off	≤ 8.5 V DC (active) ≥ 9.2 V DC (inactive)
Oversupply switch-off	≥ 32.5 V DC (active) ≤ 30.5 V DC (inactive)
Max. capacitive load	$\leq 20000 \mu F$ (Depending on the current setting and the short-circuit current available)
Switch-on delay	50 ms (can be adapted with CAPAROC PM IOL and CAPAROC PM PN power modules)

Connection data

Fuse-protected output

Connection method	Push-in connection
Stripping length	10 mm
Conductor cross section flexible	0.2 mm ² ... 4 mm ²
Conductor cross section rigid	0.2 mm ² ... 4 mm ²
Conductor cross section AWG	24 ... 12
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm ² ... 4 mm ²
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² ... 4 mm ²

Signaling

Channel LED off	off (Channel switched off)
Channel LED yellow	lit (Channel switched on, channel load > 80%) flashing (Programming mode active) two flashes (Check the installation, no communication to power module)
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)

Dimensions