

PTCB E1 24DC/2A NO - Electronic circuit breaker



2909903

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1-channel, electronic circuit breaker for protecting loads at 24 V DC against overload and short circuit. Easy potential distribution with components from the CLIPLINE complete terminal block system. With fixed nominal current. For installation on DIN rails.



Your advantages

- Simple application setup due to bridging option to CLIPLINE complete terminal block system
- More space in the control cabinet: narrowest protection on just 6 mm width
- Individual setup for suitable protection, exactly according to your requirements
- Optimum protection for cables and sensors as well as NEC Class 2 circuits by means of an additional internal output fuse

Commercial Data

Item number	2909903
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	CLA
Product Key	CLA135
Catalog Page	Page 378 (C-4-2019)
GTIN	4055626408712
Weight per Piece (including packing)	44 g
Weight per Piece (excluding packing)	27.58 g
Customs tariff number	85363010
Country of origin	DE

Technical Data

Notes

General

Note	
	EN 50121-3-2: Railway applications - Electromagnetic compatibility - Part 3-2: Rolling stock – Apparatus
	Connection for signal line tested in accordance with EN 61000-4-4 with 1 kV; if necessary, customer must provide appropriate protective measures
	Repeated hard short circuits can reduce the melting integral of the integrated backup fuse.

Product properties

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

Insulation characteristics

Protection class	III
Pollution degree	2

Electrical properties

No. of channels	1
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General

Operating voltage	18 V DC ... 30 V DC
Rated voltage	24 V DC
Rated current I_N	24 A DC (Total current input) 2 A DC (Rated current output)
Rated current (pre-adjusted)	2 A
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. 12 mA
Power dissipation	typ. 0.3 W (No-load operation) < 0.8 W (Nominal operation)
Module initialization time	< 0.55 s

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Waiting time after switch off of a channel	5 s (at overload / short circuit)
Measuring tolerance I	± 15 %
Temperature derating	21 A (Total current at 60°C)
	24 A (Total current at 50°C)
	2 A (Channel current at 60°C)
	2 A (Channel current at 50°C)
MTBF (IEC 61709, SN 29500)	28571428 h (at 25 °C with 21 % load)
	14084507 h (at 40°C with 34.25% load)
	2053388 h (at 60°C with 100% load)
Voltage drop	0.06 V (at 2 A)
Fail-safe element	4 A DC

Load circuit

Shutdown time	≤ 10 ms (for short circuit > 2.0 x I _N)
	1 s (1.2 ... 2.0 x I _N)
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	14000 µF (Depending on the available short-circuit current)

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	8 mm
Conductor cross section flexible	0.2 mm ² ... 2.5 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	0.2 mm ² ... 2.5 mm ²
Conductor cross section flexible, with ferrule without plastic sleeve	0.2 mm ² ... 2.5 mm ²

Main circuit IN-

Connection method	Push-in connection
Stripping length	8 mm
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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	0.2 mm ² ... 2.5 mm ²