



808

Single-pole, polarised circuit breaker with magnetic fast trip mechanism. A plain switching system ensures disconnection even in the event of smallest overcurrents. Also suitable for impulse tripping. The small design is specifically suitable for PCB-mounting. Only low temperature sensitivity.



TYPICAL FEATURES

- Single pole, resettable circuit breaker with magnetic fast trip mechanism.
- Rated voltage: DC 24 V
- Rated current: 0.01 - 5 A
- PCB mounting

YOUR BENEFITS

- Increased device availability: the circuit breaker can be quickly and conveniently switched on after an overcurrent tripping. The overload protection is perfectly adjusted to the load, nuisance tripping is prevented.
- Space-saving design
- Reduced operating costs: no procurement, stocking, disposal and service costs, as incur when using fuses.
- Reduced costs: the circuit breaker saves components and reduces mounting and wiring efforts as well as material planning and storage costs.
- Very fast tripping provides reliable protection specifically of sensitive PCB components.
- Many application areas thanks to temperature insensitivity. Due to the magnetic tripping principle, the function of the circuit breaker is largely independent to the ambient temperature.

TYPICAL APPLICATIONS

Protection of semiconductors in control and regulation circuits against harmful overcurrents and use as safety and control switch

WEB LINKS

[Further information](#), [Soldering recommendation](#), [International approvals](#), [Technical basics](#), [REACH](#), [RoHS](#), [Contact](#)

APPROVALS / CERTIFICATIONS



COMPLIANCE



TECHNICAL DATA

ELECTRICAL DATA

Rated voltage and rated current range acc. to UL 1077 DC 24 V; 0.01...5 A

Dielectric strength according to UL 1077:
Operating area test voltage AC 1,240 V
Excitation circuit to switching circuit: test voltage AC 1,240 V
Excitation circuit to signalling circuit: test voltage AC 1,240 V

Current ratings 0.01 A; 0.02 A; 0.03 A; 0.04 A; 0.05 A; 0.08 A; 0.10 A; 0.20 A; 0.30 A; 0.40 A; 0.50 A; 0.60 A; 0.70 A; 0.80 A; 0.90 A; 1.00 A; 1.20 A; 1.50 A; 2.00 A; 2.50 A; 3.00 A; 3.25 A; 4.00 A; 4.50 A; 5.00 A;

Auxiliary circuit ratings Permanent load energising circuit (pole 2-3) 2.65 I_n max.
Permanent load auxiliary circuit (pole 4-5) 5 A
Permanent load switching circuit (pole 6-7) 5 A

Minimum load Switching circuit: DC 24 V/6 mA
Signalling circuit DC 24 V/6 mA

RATED CURRENTS AND TYPICAL INTERNAL RESISTANCE VALUES

Rated current I _n [A]	Internal resistance [Ω]
0.01	625
0.02	170
0.03	77
0.04	47
0.05	29.2
0.08	10.3
0.1	5.6
0.2	1.65
0.3	0.89
0.4	0.39
0.5	0.28
0.6	0.198
0.7	0.143
0.8	0.096
0.9	0.085
1	0.073
1.2	0.050
1.5	0.031
2	≤ 0.02
2.5	≤ 0.02
3	≤ 0.02
3.25	≤ 0.02
4	≤ 0.02
4.5	≤ 0.02
5	≤ 0.02

Insulation co-ordination (EN IEC 60664) 1.5kV/2

Insulation resistance > 100 MΩ at DC 500 V

RUPTURE CAPACITY ACCORDING TO UL 1077 (I_{nc})

Rated voltage U _n [V]	Rated short circuit current I _{nc} [A]	Comments
AC 120	2,000	-
DC 60	1,000	resistive load

MECHANICAL DATA

Mass 9...10 g

Mechanical endurance 6000 cycles at 5 A for switching cycle

Operating force On-switching 1.6 N, Off-switching 1.8 N

Actuating method	M-type
Trip method	MO

AMBIENT CONDITIONS	
Ambient temperature	-30...+70 °C
Storage temperature	-40...+80 °C
Damp heat	Test according to IEC 60068-2-78, test Cab 240 hrs in 95 % RH Temperature +40 °C
Vibration	Test according to DIN IEC 60068-2-6, test Fc 10 frequency cycles/axis and ± 0.23 mm (10-57 Hz), 3g (57-500Hz)
Shock	Test according to IEC 60068-2-27, Test Ea 25 g (11 ms)
Corrosion	Test according to DIN IEC 60068-2-11, Test Ka 48 hours in 5% salt mist
IP code standard	IEC 60529, DIN VDE 0470
Actuating area IP code (standard)	IP30
Terminal area IP code (standard)	IP00
IP code description	Actuating area means the operating area (push button, rocker etc.). Sealing (higher IP protection class) prevents the ingress of humidity or foreign objects into the circuit breaker. Terminal area: the circuit breaker terminals are located here. Humidity or foreign objects cannot enter the terminal area through the cover (increased degree of protection) or penetrate the circuit breaker through openings at the back.

ORDERING NUMBER CODE

8	0	8	-	H	-	5	A
	1			2		3	4

1	TYPE NUMBER
808	single-pole magnetic circuit breaker
2	ACTUATION
H	Push button 16.2 mm, red
3	RATED CURRENT
0,01...5 A	for increments see indication in the rated current series
Recommendations for the soldering of E-T-A products: Please refer to the weblinks on the first page of the data sheet	

APPROVALS

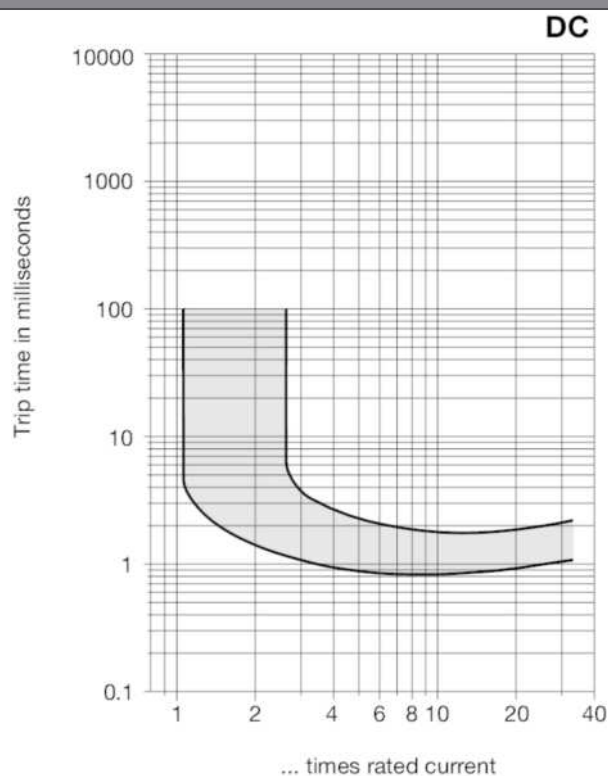
APPROVALS			
Approval authority	Test standard	Rated voltage [V]	Rated current range [A]
UL	UL 1077	AC 120 V	0.006 A...8 A
UL	UL 1077	DC 60 V	0.006 A...8 A
CSA	C22.2 No. 235	AC 120 V	0.01...5 A
CSA	C22.2 No. 235	DC 60 V	0.01...8 A

Find further information about approvals here: https://www.e-t-a.de/approvals_en

Note: Only the current ratings indicated in the ordering number code are available.

TIME-/CURRENT CHARACTERISTICS

TIME/CURRENT CHARACTERISTICS

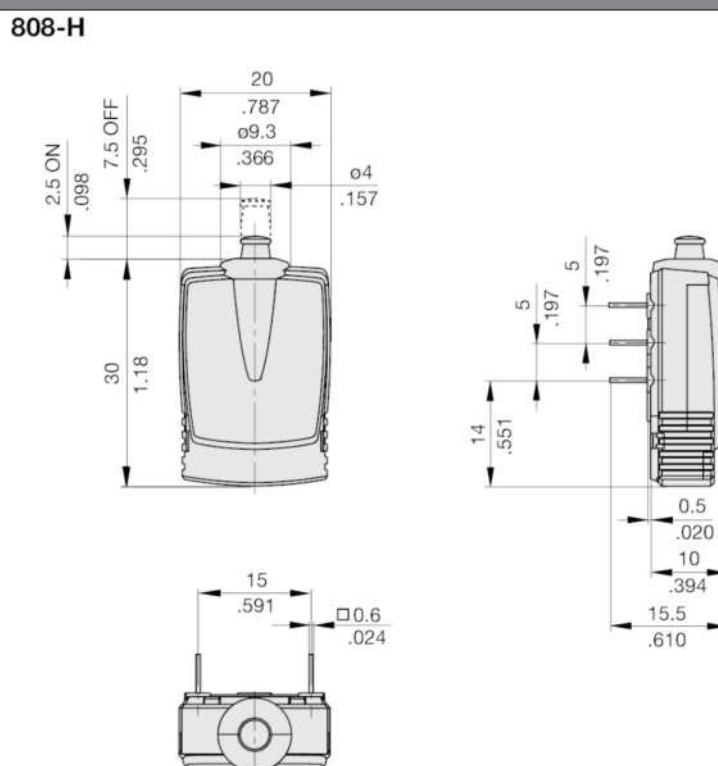


Note: Trip curve indication for direct current (DC) at 23 °C ambient temperature

Caution: Tripping < 0.001 sec. can occur also at high-energy current peaks!

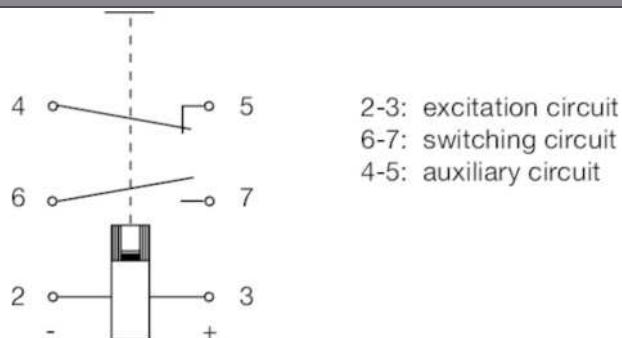
DIMENSIONS

DIMENSIONAL DRAWING



SCHEMATIC DIAGRAMS

SCHEMATIC DIAGRAM



Note: The 808 version is a polarised circuit breaker, observe correct polarity when connecting poles 2 and 3!

All information and data given on our products are accurate and reliable to the best of our knowledge, but E-T-A does not accept any responsibility for the use in applications which are not in accordance with the present specification. E-T-A reserves the right to change specifications at any time in the interest of technical improvement. Dimensions are subject to change without notice. Please enquire for the latest dimensional drawing with tolerances if required. All dimensions, data, pictures and descriptions are for information only and are not binding. Amendments, errors and omissions excepted. Ordering part numbers may differ from the device marking.