

Description

Miniaturised single pole thermal circuit breaker with switching function optional (push-push actuation). Reliable snap-acting and trip-free mechanism. Approved to CBE standard EN/IEC 60934. S type, TO. Blade terminals fitting into sockets for rail mounting.

Typical applications

Protection of loads in power distribution systems in control cabinets and process control.

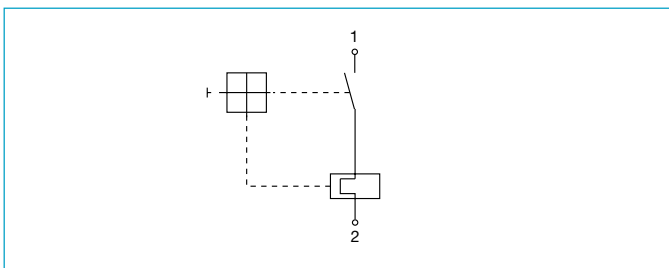
Ordering information

Type No.	
1180	single pole thermal circuit breaker, plug-in mounting
Versions	
01	with switching function, without label
02	reset function only, without label
Current rating range	
0.1...10 A	
1180 - 01 - 1 A	ordering example

Standard current ratings and typical internal resistance values

Current rating (A)	Internal resistance (Ω)	Current rating (A)	Internal resistance (Ω)
0.1	81	2	0.25
0.2	22	2.5	0.18
0.25	14	3	0.11
0.3	8.7	3.5	0.08
0.4	5.5	4	0.07
0.5	3.4	5	≤ 0.05
0.6	2.5	6	≤ 0.05
0.7	1.7	7	≤ 0.05
0.8	1.5	8	≤ 0.05
1	0.9	10	≤ 0.05
1.5	0.4		

Internal connection diagram



1180-...

Technical data

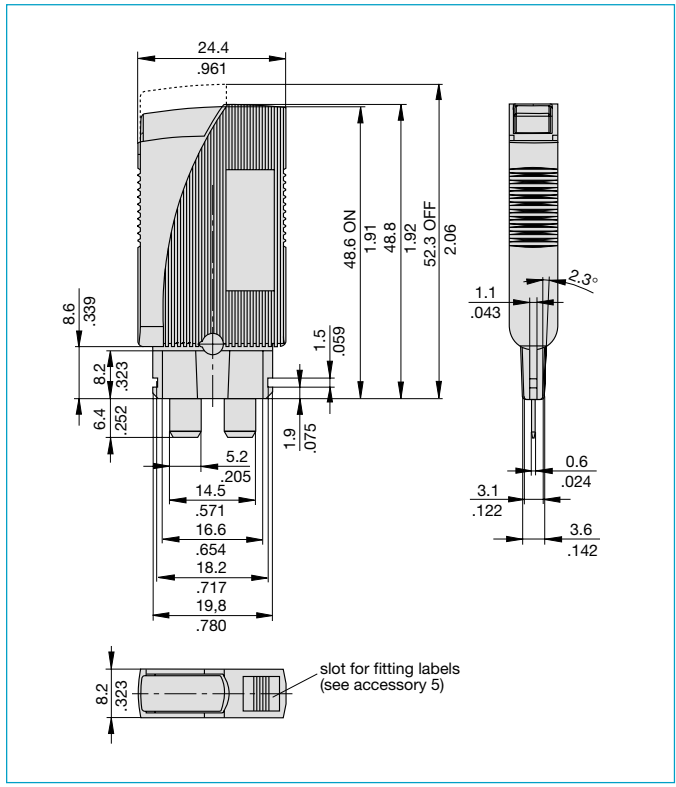
Voltage rating	AC 250 V; DC 65 V	
Current ratings	0,1...10 A	
Typical life	3,000 operations at 1 x I _N (low-resistive) 500 operations at 2 x I _N (inductive)	
Ambient temperature	-20...+60 °C (T 60) -4...+140 °F	
Insulation co-ordination (IEC 60664 and 60664 A)	Rated impulse withstand voltage 2.5 kV	Pollution degree 2 reinforced insulation in operating area
Dielectric strength (IEC 60664 and 60664A) operating area installation area	Test voltage AC 3,000 V AC 1,500 V	
Insulation resistance	> 100 MΩ (DC 500 V)	
Interrupting capacity I _{cn}	0.1...5 A 6 x I _N 6...10 A 8 x I _N	
Interrupting capacity (UL 1077)	AC 250 V: 2,000 A DC 65 V: 200 A	
Degree of protection (IEC 60529/DIN 40050)	operating area IP 40 terminal area IP 00	
Vibration	5 g (57-500 Hz) ±0.38mm (10-57 Hz) o IEC 60068-2-6, Test Fc, 10 frequency cycles/axis	
Shock	25 g (11 ms) to IEC 60068-2-27, test Ea	
Corrosion	96 hours at 5 % salt mist, to IEC 60068-2-11, test Ka	
Humidity	240 hours at 95 % RH to IEC 60068-2-3, test Ca	
Mass	approx. 15 g	

Approvals

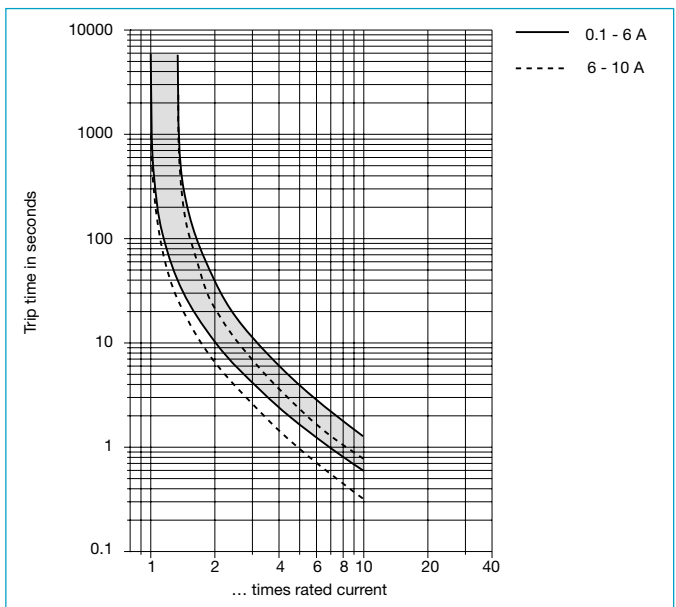
Authority	Voltage rating	Current ratings
VDE	AC 250 V; DC 65 V	0.1...10 A
CSA, UL	AC 250 V; DC 65 V	0.1...10 A

1

Dimensions



Typical time/current characteristics at +23°C/73.4°F

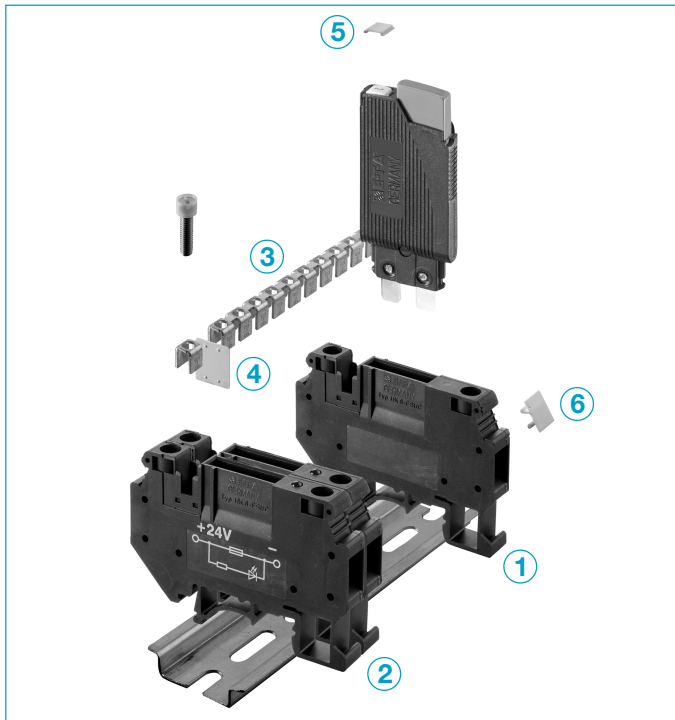


The time/current characteristic curve depends on the ambient temperature prevailing. In order to eliminate nuisance tripping, please multiply the circuit breaker current ratings by the derating factor shown below. See also section 9 – Technical information.

Ambient temperature °F	-22	-4	+14	+32	+73.4	+104	+122	+140
°C	-30	-20	-10	0	+23	+40	+50	+60
Multiplication factor	0.8	0.76	0.84	0.92	1	1.08	1.16	1.24

Note: When several devices are mounted together, each device should only carry 80 % of its rating or it must be overrated accordingly.

Accessories



- 1 Terminal block** for DIN rail mounting, with screw terminals up to 6 mm² cord, width 8.2 mm, dimensions 64x42.5x8.2 mm, headroom over the upper rail edge with circuit breaker fitted (OFF position) 84 mm.
Approvals: UL 300 V/ 30 A / AWG 26-8
X 222 233 01
- 2 Terminal block** for DIN rail mounting see item 1., but with LED DC24V (lighted after tripping); current rating LED 2mA.
X 222 233 02
- 3 Jumper** for potential bridging of several terminal blocks (10pole, separable, mounting hardware included), max. current rating 34 A
X 222 232 01
- 4 Insulation barriers** between two circuitries (packaging quantity 10 pcs)
Y 307 373 01
- 5 Label** for circuit breaker, surface for marking 4.5x5 mm (packaging quantity 120 pcs)
Y 307 374 01
- 6 Label** for terminal block, surface for marking 8x10 mm (packaging quantity 10 pcs)
Y 307 375 01

This is a metric design and millimeter dimensions take precedence ($\frac{mm}{inch}$)

All dimensions without tolerances are for reference only. In the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without notice is reserved. Product markings may not be exactly as the ordering codes. Errors and omissions excepted.