Description

Single pole thermal-magnetic circuit breaker with tease-free, trip-free, snap action mechanism and two button operation (M-type TM CBE to EN 60934). Featuring a flange for panel mounting and optional auxiliary contacts. Approved to CBE standard EN 60934 (IEC 60934).

Typical applications

Control systems, instrumentation, medical equipment, machine tools, robotics, communications systems.

Ordering information

Type No.
3500 standard version
Terminal design
P10 blade terminals 6.3-0.8 (QC .250), tinned
Auxiliary contacts (optional)
Si auxiliary contacts, silver plated terminals one each N/O and N/C
Current ratings
0.05...16 A

3500 - P10 - Si - 10 A ordering example

The exact part number required can be built up from the table of choices shown above. Ordering references for optional features should be omitted if not required.

Standard current ratings and typical internal resistance values

Current rating (A)	Internal resistance (Ω)	Current rating (A)	Internal resistance (Ω)
0.05	447	3	0.19
0.1	131	4	0.090
0.2	40	5	0.061
0.3	19.3	6	0.041
0.4	10.4	7	0.034
0.5	7.1	8	≤ 0.02
0.6	4.3	10	≤ 0.02
0.8	2.5	12	≤ 0.02
1	1.67	14	≤ 0.02
1.5	0.61	15	≤ 0.02
2	0.38	16	≤ 0.02
2.5	0.24		

Approvals

Authority	Voltage ratings	Current ratings
VDE (EN 60934)	AC 240 V; DC 65 V	0.05...16 A
CSA, UL	AC 250 V; DC 80 V	0.05...16 A
UL	DC 65 V	0.05...25 A

3500

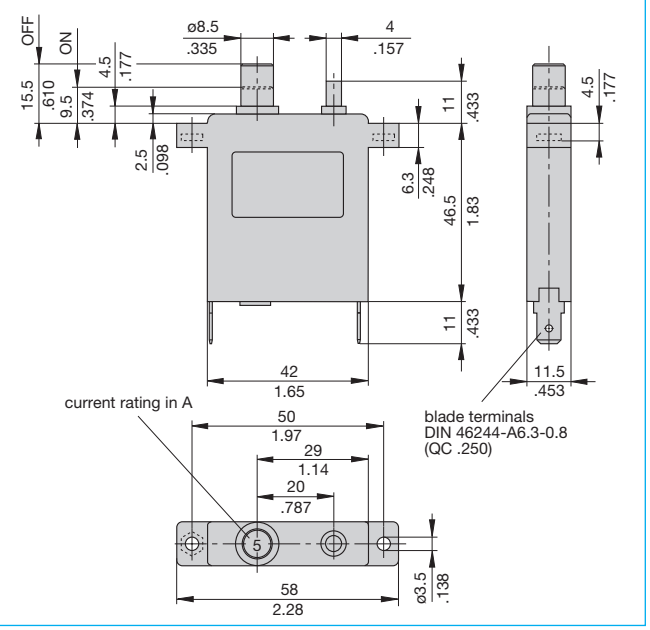
Technical data

For further details please see chapter: Technical Information

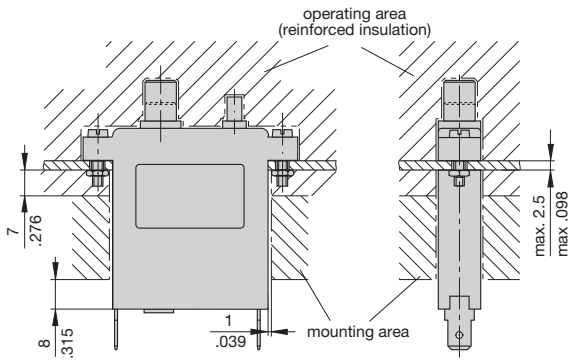
Voltage rating	AC 240 V, 50/60 Hz; DC 65 V (UL: AC 250 V; DC 80 V)
Current rating range	0.05...16 A
Auxiliary circuit	1 A, AC 240 V / DC 65 V
Typical life	5,000 operations at 1 x I_N, inductive 5,000 operations at 2 x I_N, resistive
Ambient temperature	-30...+60 °C (-22...+140 °F)
Insulation co-ordination (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 main/aux. circuit aux. circuit 4-5/6-7	test voltage AC 3,000 V AC 1,500 V AC 840 V
Insulation resistance	> 100 MΩ (DC 500 V)
Interrupting capacity I_{cn}	0.05...0.8 A self-limiting 1...2 A 200 A 2.5...16 A 400 A
Interrupting capacity (UL 1077)	I_N U_N 0.05...16 A AC 250 V 1,000 A 0.05...16 A DC 80 V 1,000 A
Degree of protection (IEC 60529/DIN 40050)	operating area IP40 terminal area IP00
Vibration	5 g (57-500 Hz), ± 0.38 mm (10-57 Hz) to 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 60068-2-78, test Cab
Mass	approx. 40 g

Dimensions

Version -P10

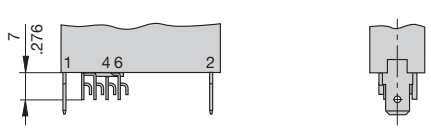


Installation drawing



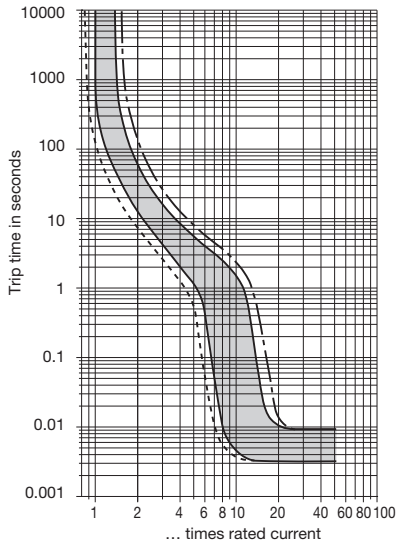
Terminal design

-P10-Si

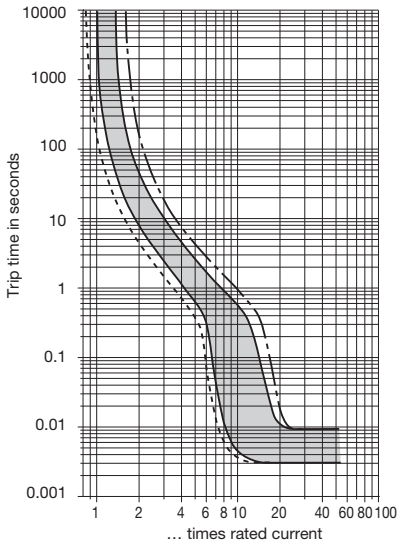


Typical time/current characteristics

3500 0.05...7 A **AC** [1]



3500 8...16 A **AC** [1]



[1] Magnetic tripping currents are increased by 20 % on DC supplies.

[2] Magnetic tripping currents are decreased by 20 % on AC supplies.

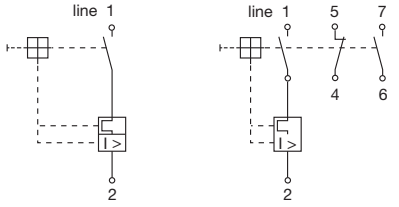
+60 °C +140 °F — +23 °C +73.4 °F — -30 °C -22 °F

Ambient temperature °F °C	-22 -30	-4 -20	+14 -10	+32 0	+73.4 +23	+104 +40	+122 +50	+140 +60
Derating factor	0.76	0.79	0.83	0.88	1	1.08	1.16	1.24

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 Technical information.

Internal connection diagrams

with auxiliary contacts (-Si)



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.