



Description

Miniaturized single pole thermal circuit breaker with push-to-reset tease free, trip-free, snap action mechanism (R-type TO CBE to EN 60934). Available in versions for PCB or panel mounting, snap-in or threadneck, or as an integral type. For higher current ratings see type 1140, pages 43 to 46.

Typical applications

Motors, transformers, solenoids, printed circuit boards, hand-held machines and appliances.

Accessories

X 201 285 01 Water splash cover for type 41-06.

Ordering information

Type No.	
41-04	PCB mounting type (-PR), or integral type (-P30/P10)
41-05	snap-in panel mounting
41-06	threadneck panel mounting with hex and knurled nut
41-06-M1	threadneck mounting for standard fuseholder cutout
Terminal design	
P10	.250 quick connect (A6.3-0.8)
P30	.110 quick connect (A2.8-0.8)
PR	solder terminal pins for PCB mounting (horizontal)
Shunt terminal (optional)	
A3	same as main terminals (up to I_N 6 A/3 A max. load)
Auxiliary contacts (optional)	
Si51	N/C contacts (type 41-04 only)
Suffix (optional)	
014 014	PCB mounting (vertical)
Current ratings	
	0.05...10 A

41-06 - P30 - [] - [] - [] - 5 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	285	1.8	0.28
0.08	134	2	0.25
0.1	81	2.5	0.18
0.2	22	3	0.11
0.3	8.7	3.5	0.076
0.4	5.5	4	0.067
0.5	3.3	4.5	0.051
0.6	2.45	5	≤ 0.05
0.7	1.6	6	≤ 0.05
0.8	1.45	7	≤ 0.05
1	0.9	8	≤ 0.05
1.2	0.6	10	≤ 0.05
1.5	0.4		



Technical data

Max. voltage rating	AC 250 V, DC 48 V (UL/CSA); DC 28 V (VDE)	
Current ratings	0.05...10 A	
Auxiliary circuit	0.5 A, AC 250 V, DC 28 V, non-inductive	
Protection class (IEC 730-1)	I (II when mounted to the installation drawing)	
Typical life/contact rating	0.05...3 A: 5000 operations at $2 \times I_N$ 3.5 ...10 A: 1000 operations at 10 A	
Temperature range	0...55 °C (+32...+131 °F)	
Creepage resistance	PTI 125 to IEC 112	
Insulation co-ordination (IEC 664 and 664 A) operating area	Rated impulse withstand voltage 2.5 kV	Pollution degree 2
Dielectric strength (IEC 664 and 664A) operating area	Test voltage AC 4000 V (double insulation)	
Insulation resistance	>100 M Ω (DC 500 V)	
Interrupting capacity (VDE 0660, Part 101, P-2)	0.05 ... 2 A $6 \times I_N$ 2.5 ...10 A $5 \times I_N$	
Interrupting capacity (UL 1077/EN 60934 PC 1)	I_N	U_N
	0.05...4.5 A	AC 250 V 200 A
	5 A	AC 250 V 1000 A
	6...10 A	AC 250 V 2000 A
	0.05...10 A	DC 48 V 200 A
Environmental protection (IEC 529/DIN 40050)	operating area IP 40 terminal area IP 00	
Vibration	10 g (57-500 Hz), ± 0.76 mm (10-57 Hz), to IEC 68-2-6, test Fc, 10 frequency cycles/axis	
Shock	25 g (11 ms) to IEC 68-2-27, test Ea	
Corrosion	96 hours at 5 % saltspray. to IEC 68-2-11, test Ka	
Humidity	240 hours at 95 % RH, to IEC 68-2-3, test Ca	
Weight	approx. 10 g	

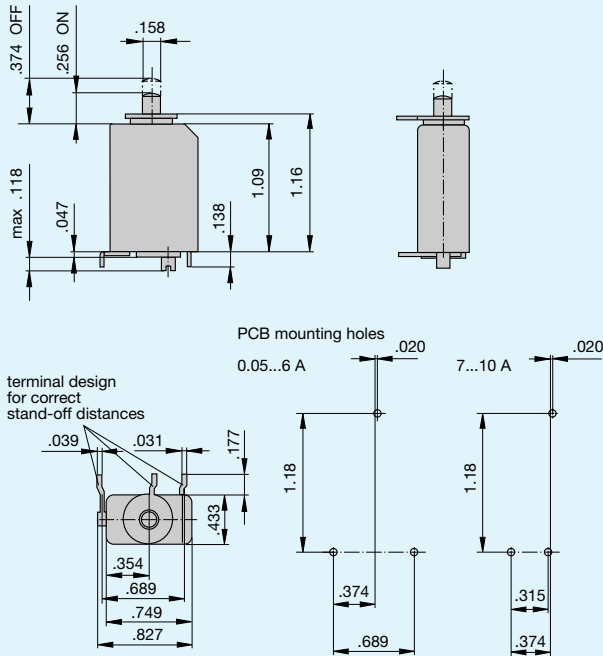
Approvals

Authority	Voltage ratings	Current ratings
VDE, Demko,	AC 250 V, DC 28 V	0.05...10 A
SEV, ÖVE	AC 250 V, DC 28 V	0.05...10 A
CSA, UL	AC 250 V, DC 48 V	0.05...10 A
Semko	AC 250 V, DC 48 V	0.1...10 A
Nemko	AC 250 V	0.05...10 A
Fimko	AC 250 V	0.1...10 A

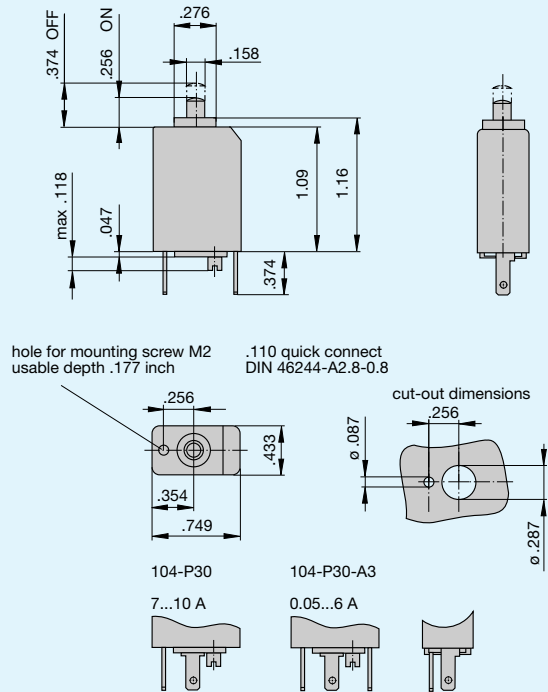
Circuit breakers with -Si51 not approved

Dimensions

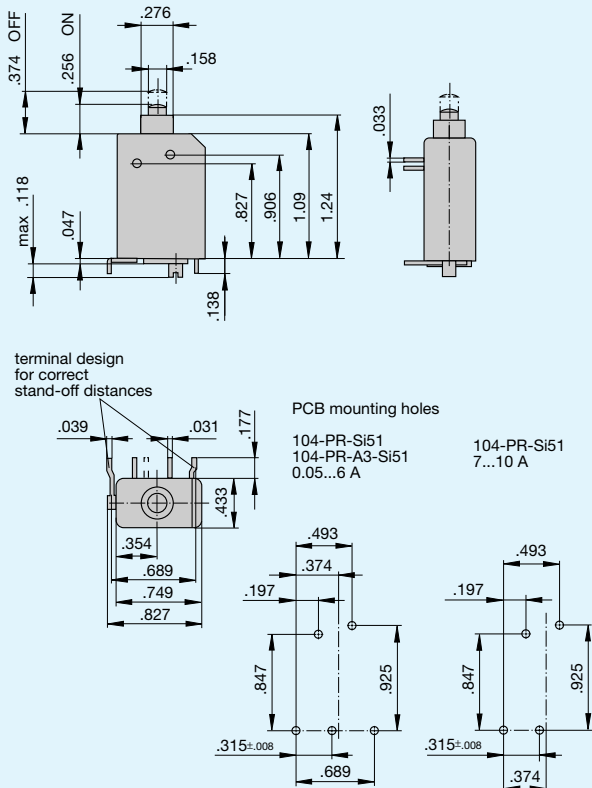
41-04-PR



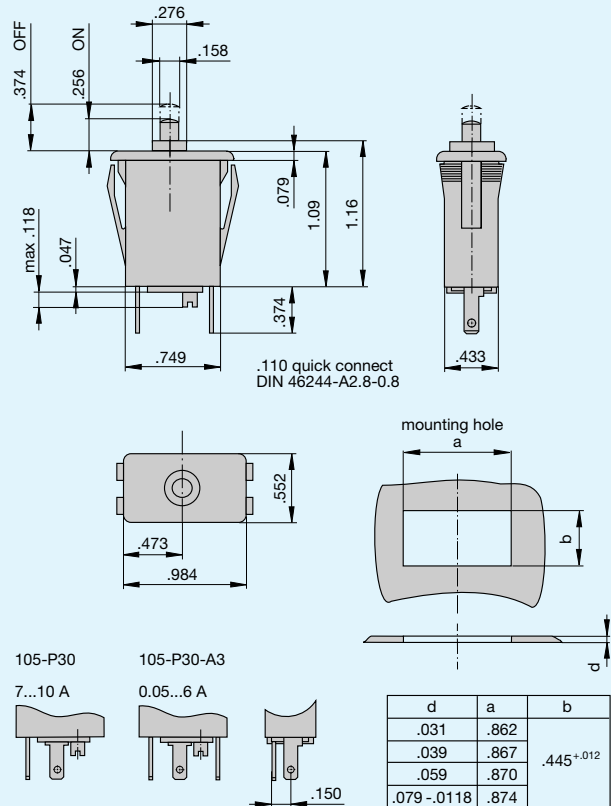
41-04-P30



41-04-PR-Si51



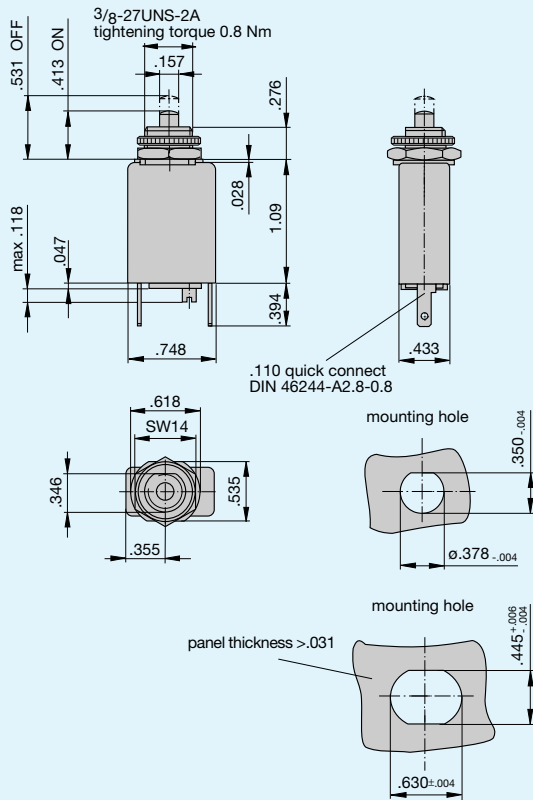
41-05-P30



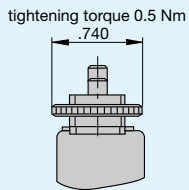


Dimensions

41-06-P30



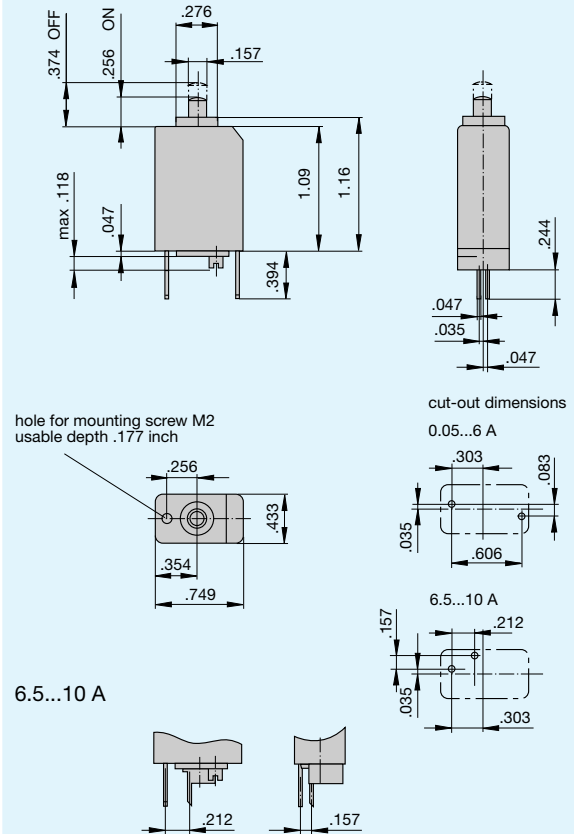
41-06-M1



Dimensions

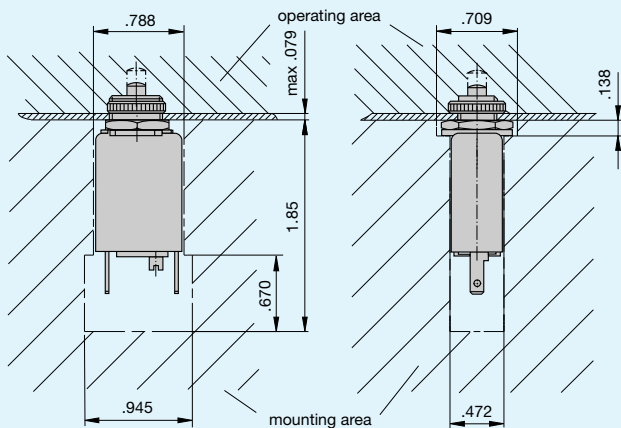
Special version 41-04-PR-014 014

0.05...6 A

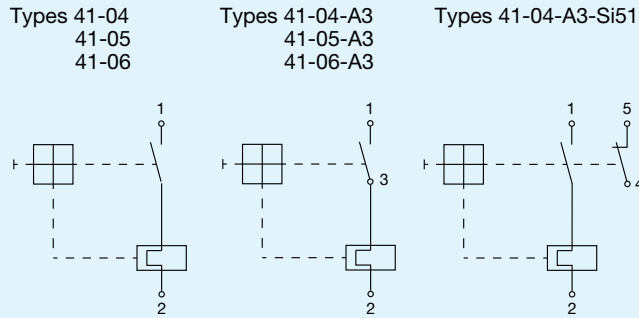


Installation drawing for type 41-06

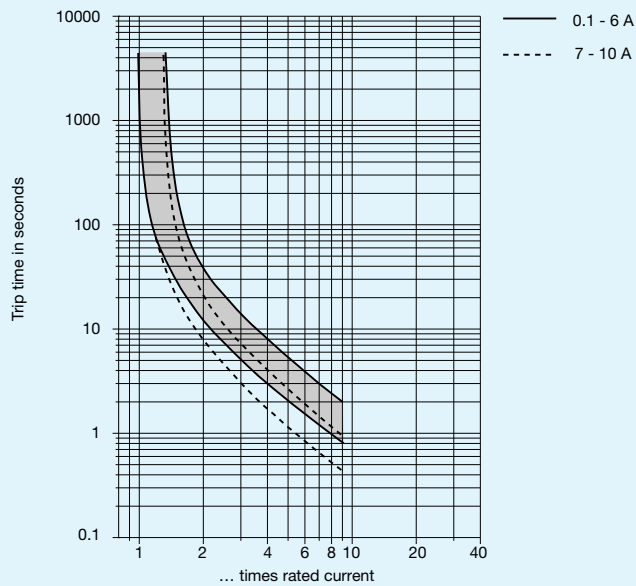
for protection class II (IEC 730-1)



Internal wiring diagrams



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

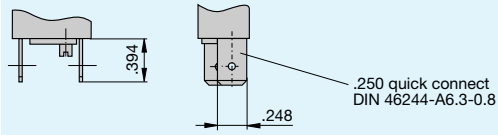


The time/current characteristic curve depends on the ambient temperature prevailing. In order to eliminate nuisance tripping, please multiply the circuit breaker current ratings by the derating factor shown below.

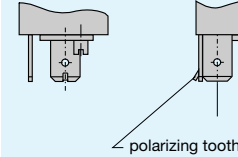
Ambient temperature °C	-10	0	+10	+20	+30	+40	+50	+60
Multiplication factor	0.84	0.92	1	1	1	1.08	1.16	1.23

Terminal design

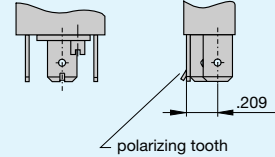
41-04/41-05/41-06-P10
0.05...6 A



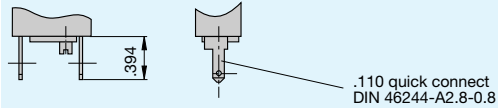
41-04/41-05/41-06-P10
7...10 A



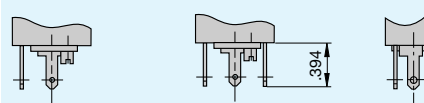
41-04/41-05/41-06-P10-A3
0.05...6 A



41-04/41-05/41-06-P30
0.05...6 A



41-04/41-05/41-06-P30
7...10 A



41-04/41-05/41-06-P30-A3

Accessories

Water splash cover transparent (type 41-06-... only)
X 201 285 01
 Environmental protection IP64

