Description

Miniaturised 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 panel mounting, snap-in or threadneck, or as an integral type. For lower current ratings see types 104, 105, 106. Approved to CBE standard EN 60934 (IEC 60934).

Typical applications

Motors, transformers, solenoids, hand-held machines and appliances.

Ordering information

Type No.

1140 single pole thermal circuit breaker

Mounting

- **E2** integral mounting
- **F1** snap-in panel mounting
- **G1** threadneck panel mounting 3/8-27UNS with hex nut and knurled nut*
- **G4** threadneck panel mounting 3/8-27UNS with knurled nut*

Number of poles

- **1** 1-pole protected

Actuator style

- **1** black push button (standard)

Terminal design

- **P1** blade terminals A6.3-0.8 (QC .250)

Characteristic curve

- **M1** medium delaye

Current ratings

- **3.5...16 A**

1140 - F1 1 1 - P1 M1 - 10 A = ordering example

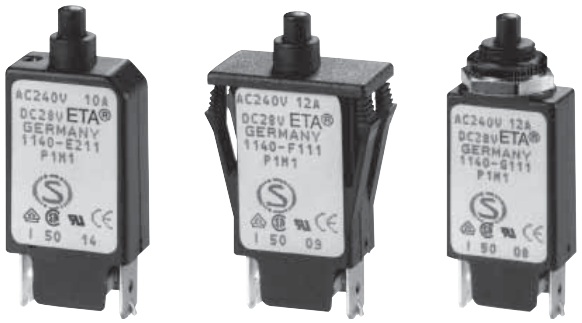
*mounting hardware bulk shipped

Standard current ratings and typical internal resistance values

Current rating (A)	Internal resistance (Ω)	Current rating (A)	Internal resistance (Ω)
3.5	0.06	10	< 0.02
4	0.04	12	< 0.02
5	0.03	13	< 0.02
6	0.02	15	< 0.02
7	< 0.02	16	< 0.02
8	< 0.02		

Approvals

Authority	Voltage ratings	Current ratings
VDE	AC 240 V; DC 48 V	3.5...16 A
CSA, UL	AC 250 V; DC 50 V	3.5...16 A



1140-E... **1140-F...** **1140-G.1.**

Technical data

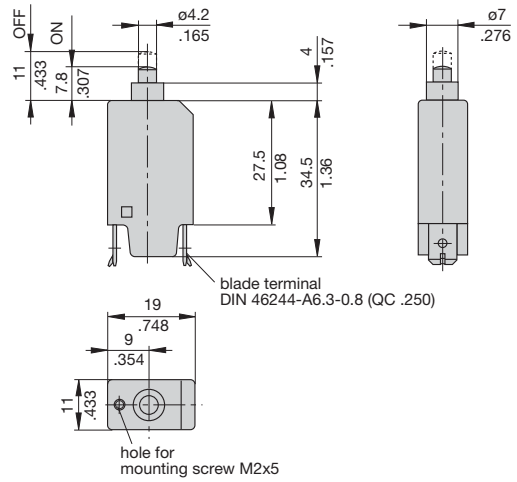
For further details please see chapter: Technical Information

Voltage rating		AC 240 V; DC 48 V (UL: AC 250 V; DC 50 V)
Current ratings		3.5...16 A
Typical life AC + DC	3.5...8 A	200 operations at 2 x I_N, inductive 1,000 operations at 2 x I_N, resistive
	9...16 A	100 operations at 2 x I_N, inductive
Ambient temperature		-20...+60 °C (-4...+140 °F) T 60
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	test voltage AC 3,000 V	
Insulation resistance		> 100 MΩ (DC 500 V)
Interrupting capacity I_{cn}	3.5...8 A 10...16 A	8 x I_N 120 A
Interrupting capacity (UL 10777)	I_N 3.5...16 A 3.5...16 A	U_N DC 50 V 2,000 A AC 250 V 2,000 A
Degree of protection (IEC 60529/DIN 40 050)	operating area IP40 terminal area IP00	
Vibration	10 g (57-500 Hz) ± 0.76 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. 10 g	

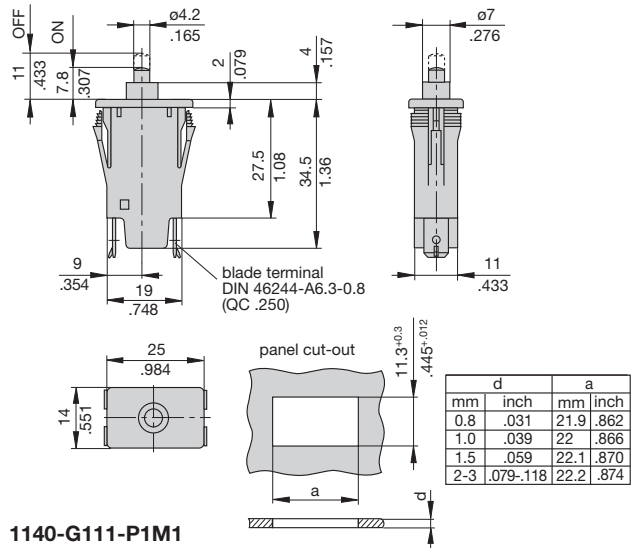
1

Dimensions

1140-E211-P1M1

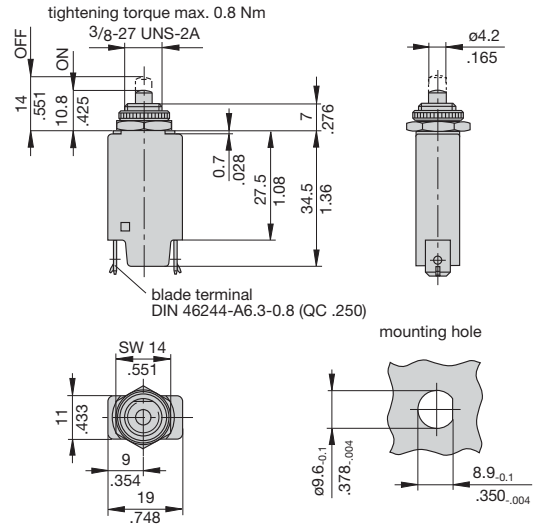


1140-F111-P1M1



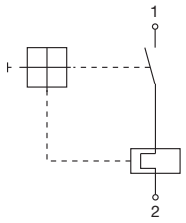
d		a	
mm	inch	mm	inch
0.8	.031	21.9	.862
1.0	.039	22	.866
1.5	.059	22.1	.870
2-3	.079-.118	22.2	.874

1140-G111-P1M1



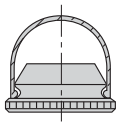
This is a metric design and millimeter dimensions take precedence ($\frac{mm}{inch}$)

Internal connection diagram

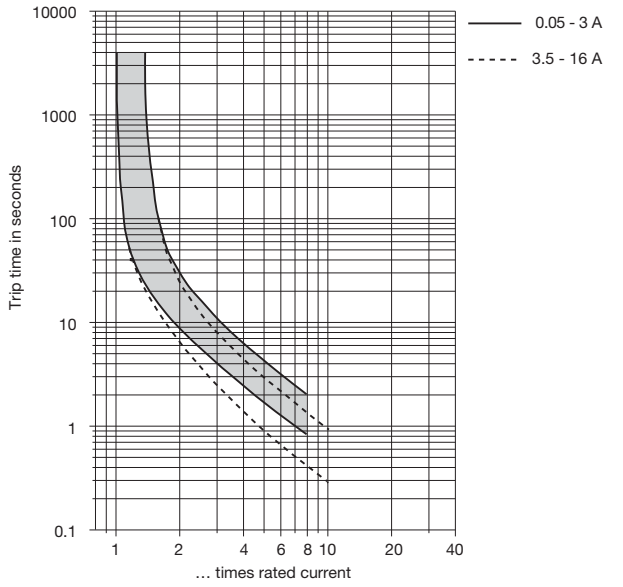


Accessory

Water splash cover/knurled nut assembly, transparent
X 201 285 01 (IP64)



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

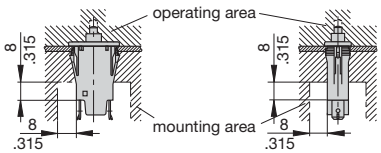


The time/current characteristic curve depends on the ambient temperature prevailing. In order to eliminate nuisance tripping, please multiply the circuit breaker current ratings by the derating factor shown below. See also section Technical information.

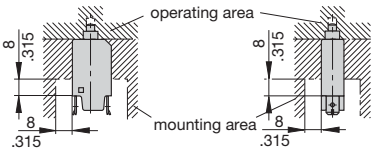
Ambient temperature	°F	-4	+14	+32	+73.4	+104	+122	+140
	°C	-20	-10	0	+23	+40	+50	+60
Derating factor		0.76	0.84	0.92	1	1.08	1.16	1.24

Installation drawings

1140-F...



1140-E...



1140-G...