NA Series Technical Data

Description

Single pole auto reset thermal circuit breaker.

More steady-state function by the extremely compact instruction and simple action.

Mini size with high performance and high quality.

Ultra low current rating available from 0.3 amp.

Typical applications

Motors, hand-held tools, UPS, Speakers (Crossover) and appliances.

Ordering code

Type Name	
NA1	PC Board solder
NA2	.110 (2.9mm) Quick connect

Current ratings: 0.3 ... 12A

NA1 - 1.25A - ordering example

Standard current rating & typical internal resistance

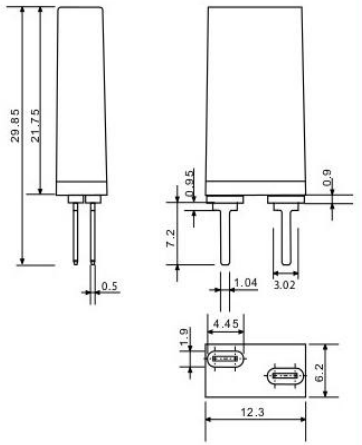
Current rating (A)	Internal resistance (Ω)	Current rating (A)	Internal resistance (Ω)
0.3	≤ 0.75	2.25	≤ 0.1
0.4	≤ 0.75	2.5	≤ 0.08
0.5	≤ 0.6	2.75	≤ 0.08
0.6	≤ 0.6	3.0	≤ 0.06
0.7	≤ 0.15	4.0	≤ 0.06
0.85	≤ 0.15	5.0	≤ 0.04
1.0	≤ 0.15	6.0	≤ 0.04
1.25	≤ 0.15	7.0	≤ 0.04
1.4	≤ 0.15	8.0	≤ 0.04
1.5	≤ 0.12	9.0	≤ 0.04
1.6	≤ 0.12	10.0	≤ 0.03
2.0	≤ 0.12	12.0	≤ 0.03

Technical data

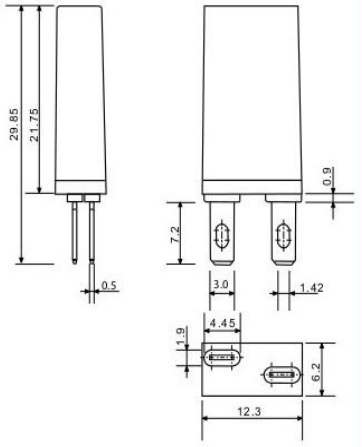
Current ratings	0.3 A ... 12 A
Voltage ratings	AC 125 V / 250 V DC 6 V / 12 V / 24 V / 48 V
Insulation resistance	> 100 MΩ (DC 500 V)
Typical life	
Protection circuit 1	30,000 break operations at 2 x I_N
Ambient temperature	-20 ... +60 °C (-4 ... +140 °F) T 60
Insulation co-ordination (IEC 60664 and 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
Interrupting capacity I_{CN}	0.3 A ... 0.85 A 12 x I_N, AC/DC 1.0 A ... 5.0 A 8 x I_N, AC/DC 6.0 A ... 12.0 A 6 x I_N, AC/DC
Vibration	8 g (57-500 Hz) ± 0.61 mm (10-57 Hz), to IEC 60068-2-6, test Fc, 10 frequency cycles/axis
Shock	20 g (11 ms) to IEC 60068-2-27, test Ea
Corrosion	48 hours at 5 % salt mist, to IEC 60068-2-11, test Ka
Humidity	96 hours at 95 % RH to IEC 60068-2-3, test Ca
Heat-resistant	96 hours at ambient temp. : 60 ± 2°C (140 ± 3.6°F) Re-testing after 30 min at : normal temperature/normal humidity (IEC 60943)
Cold-resistant	96 hours at ambient temp. : -20 ± 2°C (-4 ±3.6°F) Re-testing after 30 min at : normal temperature/normal humidity (IEC 60943)
Weight	approx. 2.0 g

Dimensions

NA1 APPEARANCE & MEASUREMENT DRAWING

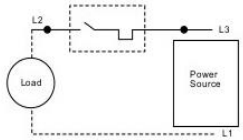


NA2 APPEARANCE & MEASUREMENT DRAWING



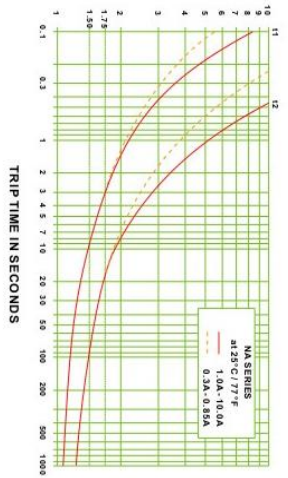
Internal connection diagrams

NA CIRCUIT DIAGRAM



Typical time/current characteristics

NA TRIPPING CURVE DIAGRAM



The time/current characteristic depends on the ambient temp. prevailing. Proper current rating determination for change from 25°C ambient temp. can be obtained by multiply rated current by about 0.46% per degree (°C) change from -20°C to +60°C. In order to eliminate nuisance tripping, please multiply the circuit breaker current ratings by the following multiplication factor.

Ambient temperature °F	-4	+14	+32	+77	+104	+122	+140
°C	-20	-10	0	+25	+40	+50	+60
Multiplication factor	0.76	0.84	0.92	1	1.08	1.16	1.24