

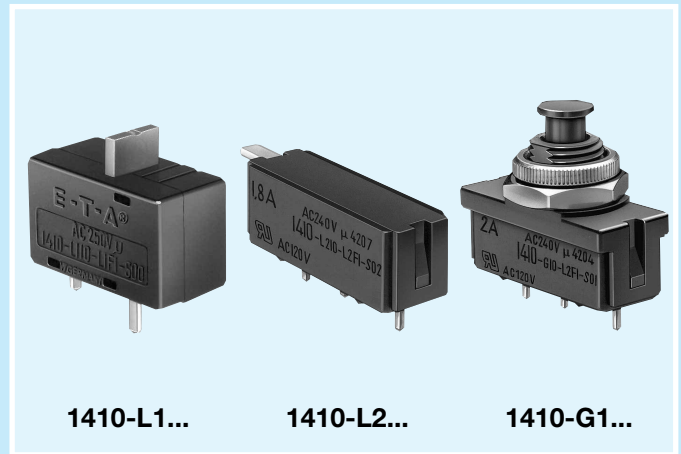
ETA® Thermal Overcurrent Circuit Breaker 1410-L/G...

Description

Single pole press-to-reset thermal circuit breaker with extremely fast overload switching performance (R-type TO CBE to EN 60934). Single hole threadneck, PCB or integral mounting with a choice of designs. Miniaturised construction minimises PCB real estate required. Type 1410-L2 and 1410-G1 versions feature changeover contacts suitable for providing status output signals.

Typical applications

Motors, transformers, solenoids, PCBs, hand-held machines, appliances, instrumentation.



1410-L1...

1410-L2...

1410-G1...

Ordering information

| Type No. | |
|----------------------|---|
| 1410 | single pole circuit breaker |
| Configuration | |
| L | PCB mounting |
| G | threadneck panel mounting |
| Mounting | |
| 1 | threadneck 3/8-27 UNS-2A (1410-G) |
| 1 | PCB 16.3x4.6 grid (1410-L) |
| 2 | PCB 10.15x7.62 grid (1410-L) |
| Number of poles | |
| 1 | 1 pole, thermally protected |
| Hardware | |
| 0 | without |
| 1 | with hex nut and knurled nut (1410-G only) bulk shipped |
| Terminal design | |
| L1 | solder pins 1.8x0.8 silver-plated (-L1 only) |
| L2 | solder pins 1x0.8 silver-plated (-L2 and -G1 only) |
| P2 | blade terminals A2.8-0.8 silver-plated (-G1 only) |
| Characteristic curve | |
| F1 | fast acting |
| Actuator | |
| S | manual re-set |
| Actuator colour | |
| 01 | black (for -G1.. and -L1..) |
| 02 | white (for -L2..) |
| Current ratings | |
| 0.63 ... 10 A | |

1410- L 1 1 0 - L1 F1 - S 01 - 0.8 A ordering example

Standard current ratings and typical internal resistance values

| Current rating (A) | Internal resistance (Ω) | Current rating (A) | Internal resistance (Ω) |
|--------------------|-------------------------|--------------------|-------------------------|
| 0.63 | 1.2 | 3.15 | < 0.1 |
| 0.8 | 1.0 | 4 | < 0.1 |
| 1 | 0.7 | 4.5 | < 0.1 |
| 1.25 | < 0.8 | 5 | < 0.1 |
| 1.5 | < 0.8 | 6.3 | < 0.1 |
| 1.8 | < 0.8 | 8 | < 0.1 |
| 2 | < 0.8 | 10 | < 0.1 |
| 2.5 | < 0.5 | | |

Technical data

| | | |
|---|---|--------------------|
| Max. voltage rating | AC 250 V; DC 28 V (DC 48 V UL/CSA) | |
| Current rating range 1-2 | 0.63...10 A | |
| Auxiliary circuit 1-3 | 0.2 x I _N max. 1 A, AC 250 V, cosφ= 1 style -L2 and -G1 only | |
| Protection class (IEC 730-1) | I (II when mounted to the installation drawing) | |
| Typical life | 300 operations at 2 x I _N (-L2..) 500 operations at 2 x I _N (-L1../-G1..) | |
| Temperature range | -20...+100 °C | |
| Creepage resistance | PTI 400 to IEC 112 | |
| Insulation co-ordination (IEC 664 and 664 A) operating area | Rated impulse withstand voltage 4 kV | Pollution degree 2 |
| Dielectric strength (IEC 664 and 664A) operating area | Test voltage AC 2000 V | |
| Insulation resistance | > 100 MΩ (DC 500 V) | |
| Interrupting capacity | 0.63...2.5 A 12 x I _N 3.15...10 A 8 x I _N , max. 50 A, 200 A at AC 125 V | |
| UL 1077/EN 60934 PC1 | operating area IP 40 terminal area IP 00 | |
| Environmental protection (IEC 529/DIN 40050) | operating area IP 40 terminal area IP 00 | |
| Vibration | 8 g (57-500 Hz) ±0.61 mm (10-57 Hz), to IEC 68-2-6, Test Fc, 10 frequency cycles/axis | |
| Shock | 20 g (11 ms) to IEC 68-2-27, test Ea | |
| Corrosion | 48 hours at 5 % saltspray, to IEC 68-2-11, test Ka | |
| Humidity | 96 hours at 95 % RH to IEC 68-2-3, test Ca | |
| Mass | approx. 5 g | |

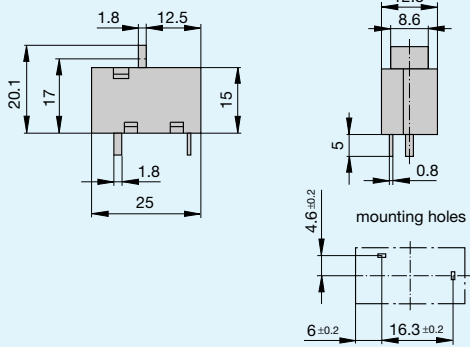
Approvals

| Authority | Voltage rating | Current ratings |
|-----------|-------------------|-----------------|
| VDE | AC 250 V; DC 28 V | 0.63...8 A |
| UL, CSA | AC 125 V; DC 48 V | 0.63...8 A |

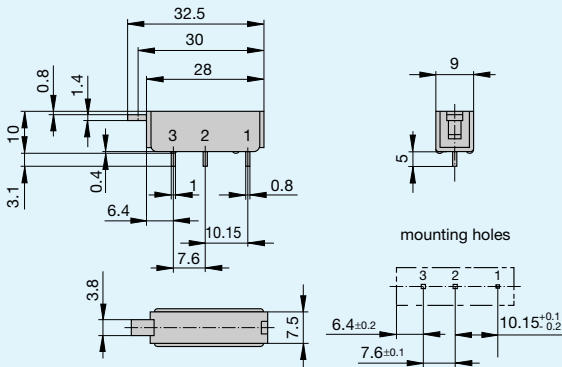
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Dimensions

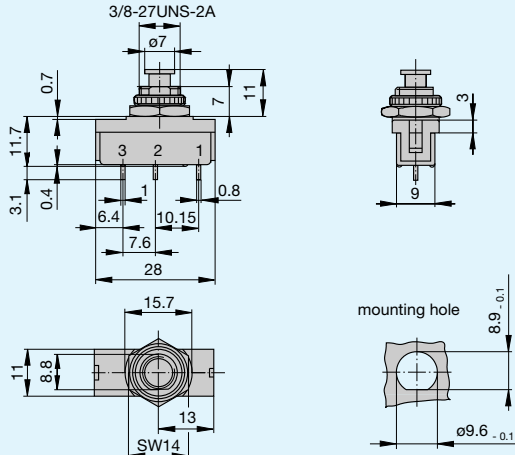
1410-L110-L1F1-S01



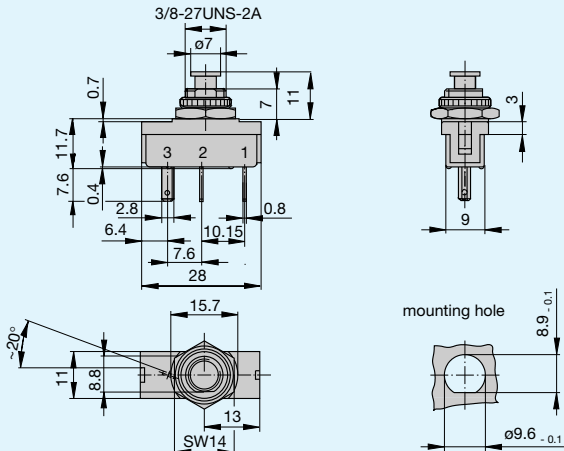
1410-L210-L2F1-S02



1410-G111-L2F1-S01

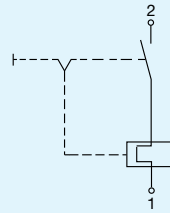


1410-G111-P2F1-S01

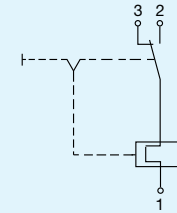


Internal wiring diagrams

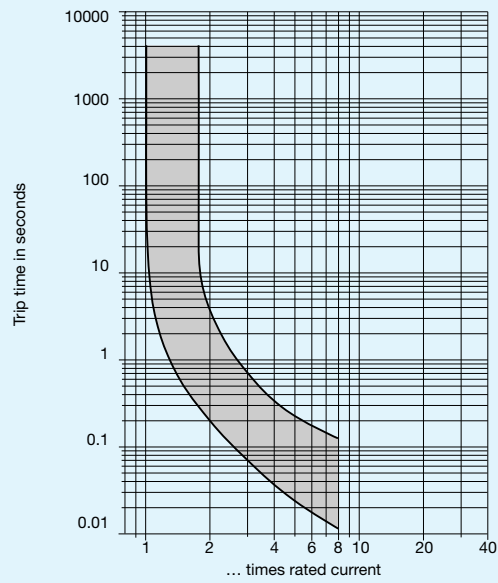
1410-L11...



1410-L21... 1410-G11...

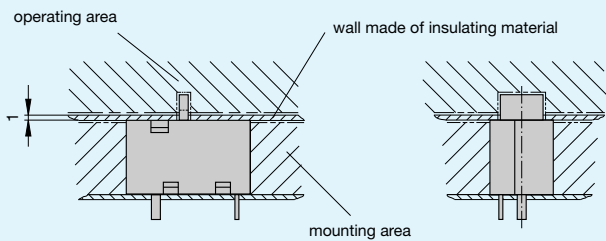


Typical time/current characteristics at 23°C



Installation drawings for protection class II (IEC 730-1/DIN 40014)

1410-L11...



1410-G...

