

Description

Single pole thermal circuit breaker with push-to-reset, tease-free, trip-free, snap action mechanism (R-type TO CBE to EN 60934; M-type when fitted with optional manual release feature). Available in versions for plug-in or integral mounting, track mounting, or with a frame for snap-in panel mounting. The optional -KF housing is particularly suited to high humidity and other damp conditions. Approved to CBE standard EN 60934 (IEC 60934).

Typical applications

Motors, transformers, solenoids, battery chargers, extra low voltage systems.

Ordering information

Type No.

127

Mounting options

leave blank for integral/plug-in option

T12 track mounting with screw terminals M4

Terminal design (for use with and without flange -F)

P10 blade terminals A6.3-0.8 (QC .250)

Manual release

H manual release facility

Special housing

KF for tropical and high humidity conditions

Current ratings

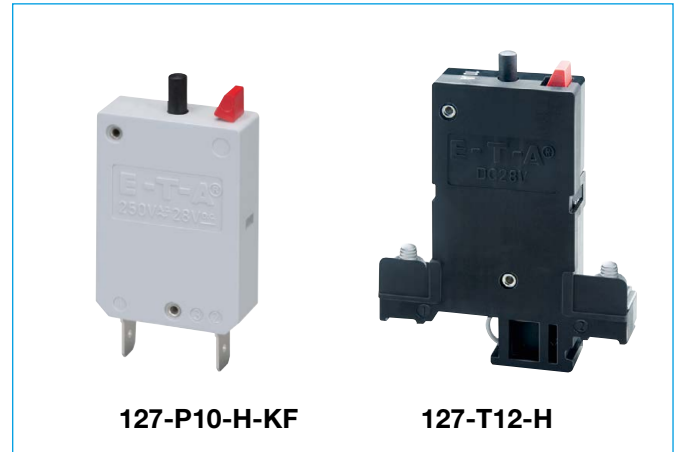
0.05...25 A

127 - F - P10 - H - KF - 10 A ordering example

Please be informed that we have minimum ordering quantities to be observed.

Standard current ratings and typical internal resistance values

| Current rating (A) | Internal resistance (Ω) | Current rating (A) | Internal resistance (Ω) |
|--------------------|-------------------------|--------------------|-------------------------|
| 0.05 | 280 | 1.5 | 0.6 |
| 0.08 | 100 | 1.8 | 0.4 |
| 0.1 | 110 | 2 | 0.3 |
| 0.15 | 56 | 2.5 | 0.2 |
| 0.2 | 29 | 3 | 0.1 |
| 0.25 | 18 | 3.5 | 0.06 |
| 0.3 | 14 | 4 | 0.06 |
| 0.35 | 9.8 | 4.5 | 0.05 |
| 0.4 | 7 | 5 | 0.05 |
| 0.45 | 5.9 | 6 | 0.02 |
| 0.5 | 4.9 | 7 | 0.02 |
| 0.6 | 3.4 | 8 | 0.02 |
| 0.7 | 2.5 | 10 | < 0.02 |
| 0.8 | 1.8 | 15 | < 0.02 |
| 0.9 | 1.5 | 16 | < 0.02 |
| 1 | 1.2 | 20 | < 0.02 |
| 1.2 | 0.8 | 25 | < 0.02 |



Technical data

For further details please see: www.e-t-a.de/ti_e

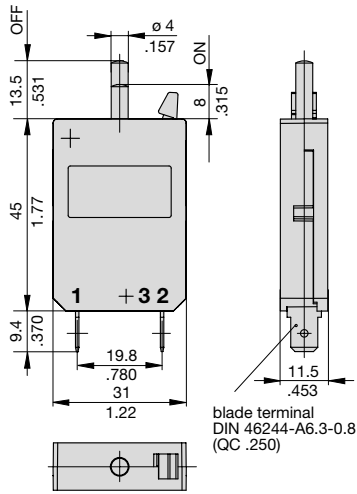
| | | | |
|--|--|--|---------|
| Voltage rating | AC 250 V; DC 28 V (UL: AC 250 V; DC 50 V) | | |
| Current ratings | 0.05...25 A | | |
| Typical life | 0.05...16 A | 5,000 operations at 2 x I _N , inductive | |
| | 17...25 A | 5,000 operations at 2 x I _N , resistive | |
| Ambient temperature | -20...+60 °C (-4...+140 °F) | | |
| Insulation co-ordination (IEC 60664 and 60664 A) | rated impulse withstand voltage | pollution degree | |
| | 2.5 kV | 2 | |
| | reinforced insulation in operating area | | |
| Dielectric strength (IEC 60664 and 60664A) | test voltage | operating area | |
| | AC 3,000 V | | |
| Insulation resistance | > 100 MΩ (DC 500 V) | | |
| Interrupting capacity I _{cn} | 0.05...2.5 A | 8 x I _N | |
| | 3...5 A | 20 x I _N | |
| | 6...12 A | 200 A | |
| | 13...25 A | 300 A | |
| Interrupting capacity (UL 1077) | I _N | U _N | |
| | 0.05...20 A | AC 250 V | 2,000 A |
| | 0.05...25 A | DC 50 V | 2,500 A |
| Degree of protection (IEC 60529/DIN 40050) | operating area IP40 terminal area IP00 | | |
| Vibration | 8 g (57-500 Hz) ± 0.61 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 | 127-P10-...: approx. 20 g 127-T...: approx. 35 g | | |

Approvals

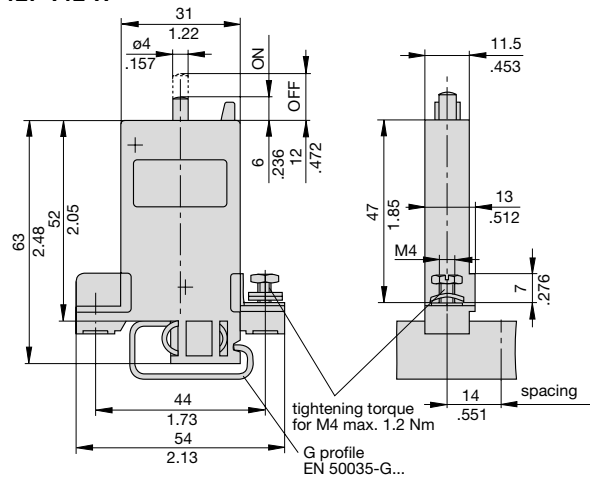
| Authority | Standard | Rated voltage | Current ratings |
|-----------|----------------|---------------------|--------------------------------|
| VDE | IEC / EN 60934 | AC 250 V DC 28 V | 0.05 A...25 A 0.05 A...25 A |
| UL | UL 1077 | AC 250 V DC 50 V | 0.05 A...20 A 0.05 A...25 A |
| CSA | C22.2 No 235 | AC 250 V DC 50 V | 0.05 A...20 A 0.05 A...25 A |
| CQC | GB 17701 | AC 250 V DC 28 V | 0.05 A...25 A 0.05 A...25 A |

Dimensions

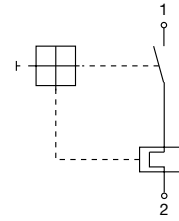
127-P10-H-KF 0.05...25 A



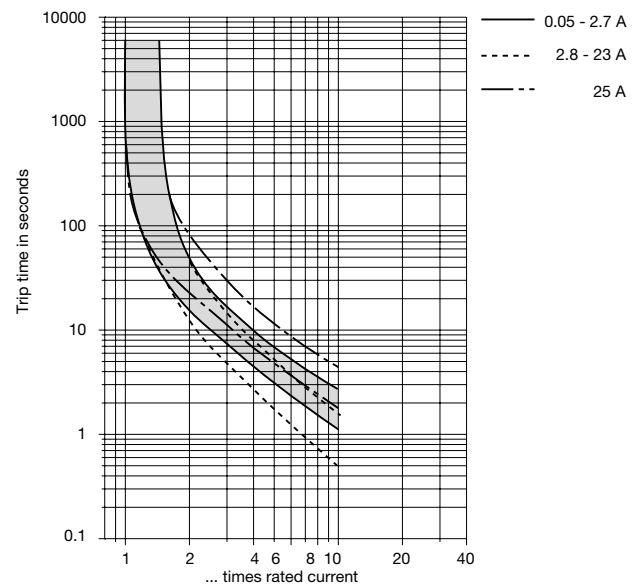
127-T12-H



Internal connection diagram



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

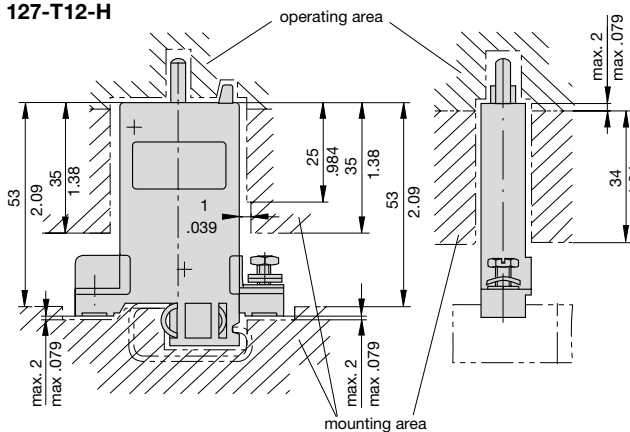


The time/current characteristic curve depends on the ambient temperature prevailing. In order to eliminate nuisance tripping, please multiply the circuit breaker current ratings by the derating factor shown below. See also section Technical information.

| 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

127-T12-H

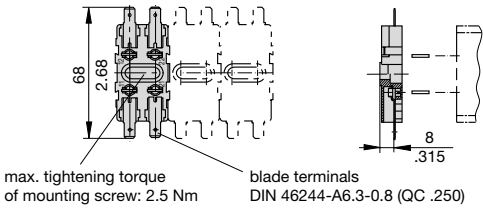


This is a metric design and millimeter dimensions take precedence ($\frac{\text{mm}}{\text{inch}}$)

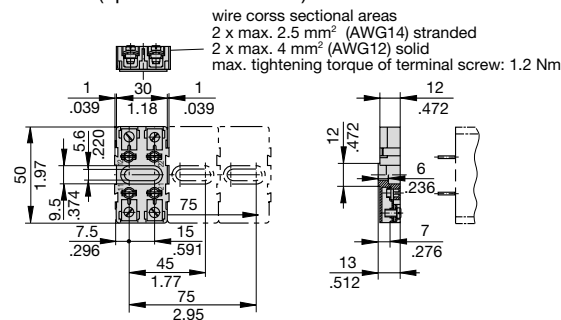
Accessories

Mounting sockets

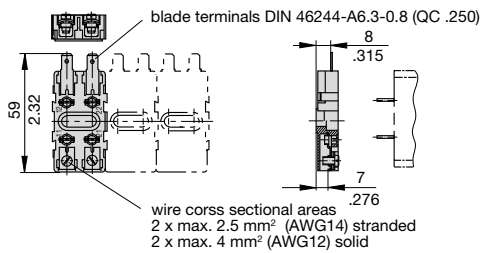
10F-P10 (up to 16 A max. load)



10F-K10 (up to 20 A max. load)

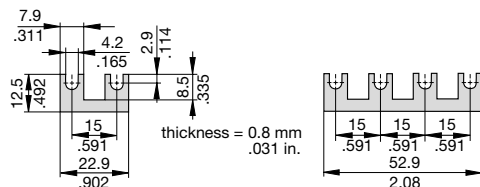


10F-A10 (up to 16 A max. load)



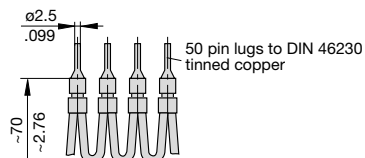
Accessories for sockets (up to 20 A max. load)

2-way bus bar Y 301 166 02 4-way bus bar Y 301 166 01



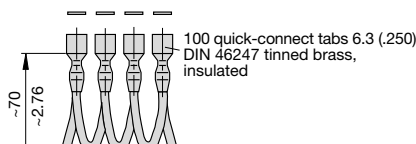
Connector bus links -K10

- X 210 589 01/2.5 mm² (AWG 14), black (up to 20 A max. load)
- X 210 589 02/1.5 mm² (AWG 16), brown (up to 13 A max. load)



Connector bus links -P10

- X 210 588 01/1.5 mm² (AWG 16), brown (up to 13 A max. load)
- X 210 588 02/2.5 mm² (AWG 14), black (up to 20 A max. load)
- X 210 588 03/2.5 mm² (AWG 14), red (up to 20 A max. load)
- X 210 588 04/2.5 mm² (AWG 14), blue (up to 20 A max. load)



This is a metric design and millimeter dimensions take precedence (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.