

## Description

Single pole compact high performance thermal circuit breaker with tease-free, trip-free, snap action mechanism and push/pull on/off manual actuation (M-type TO CBE to EN 60934). An indicator band on the push button clearly shows the tripped/off position. Threadneck panel mounted in tracked vehicle and aircraft/general purpose versions, with optional auxiliary contacts.

## Typical applications

Extra low voltage wiring systems on all types of vehicles for land, sea and air, battery powered machines, process control.

## Ordering information

|  |                   |  |
|--|-------------------|--|
| <b>Type No.</b>                          | 482               | single pole thermal circuit breaker          |
| <b>Mounting</b>                          | <b>G</b>          | threadneck panel mounting                    |
| <b>Threadneck design</b>                 | <b>1</b>          | M 12x1 nickel plated                         |
|  | <b>2</b>          | M 12x1 black                                 |
| <b>Hardware - washer for threadneck</b>  | <b>0</b>          | without hardware                             |
|  | <b>1</b>          | corrugated washer 12/15, fitted              |
| <b>Hardware - hex nut for threadneck</b> | <b>0</b>          | without hardware                             |
|  | <b>1</b>          | hex nut M12x1 nickel plated                  |
|  | <b>2</b>          | hex nut M12x1 black                          |
| <b>Terminal design (main terminals)</b>  | <b>K1</b>         | screw terminals with metric thread M4        |
| <b>Characteristic curve</b>              | <b>M1</b>         | thermal 1.15-1.4 I <sub>N</sub>              |
| <b>Terminal screws</b>                   | <b>A</b>          | flat head screw M4x6, ISO 1580, fitted       |
|  | <b>F</b>          | Phillips screw M4x6 (ISO 7045), bulk shipped |
|  | <b>Z</b>          | without                                      |
| <b>Terminal washers</b>                  | <b>0</b>          | without lock washer                          |
|  | <b>1</b>          | lock washer DIN 137-B4, fitted               |
|  | <b>6</b>          | lock washer DIN 137-B4, bulk shipped         |
| <b>Auxiliary contact</b>                 | <b>S0</b>         | without auxiliary contacts                   |
|  | <b>S1</b>         | with auxiliary contact (NC)                  |
| <b>Current ratings</b>                   | <b>0.1...50 A</b> |  |

**482 - G 1 1 1 - K1 M1 - A 1 S1 - 10 A** ordering example

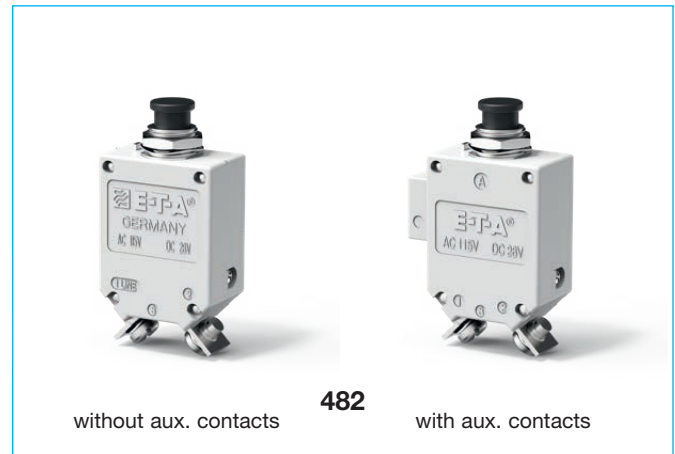
Please be informed that we have minimum ordering quantities to be observed.

## Preferred types

| Preferred types     | Standard current ratings (A) |   |   |   |   |    |    |    |    |    |    |    |    |
|---------------------|------------------------------|---|---|---|---|----|----|----|----|----|----|----|----|
|                     | 1                            | 3 | 5 | 6 | 8 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 50 |
| 482-G111-K1M1-A1S0- | x                            | x | x | x | x | x  | x  | x  | x  | x  | x  | x  | x  |
| 482-G212-K1M1-A1S0- | x                            |   | x |   |   | x  | x  | x  | x  | x  | x  | x  | x  |

## Approvals

| Authority | Standard          | Rated voltage | Current ratings |
|-----------|-------------------|---------------|-----------------|
| UL        | UL 1077           | DC 72 V       | 0.1 A...50 A    |
| CSA       | C22.2 No 235      | DC 72 V       | 0.1 A...50 A    |
| Bw        | VG 95345, part 21 | DC 28 V       | 0.5 A...50 A    |



## Technical data

For further details please see: [www.e-t-a.de/ti\\_e](http://www.e-t-a.de/ti_e)

|   |   |  |
|---|---|--|
| Voltage rating                                  | AC 115 V (400 Hz); DC 28 V<br>AC 230 (50/60 Hz) to special order                        |  |
| Current rating range                            | 0.1...50 A  |  |
| Auxiliary circuit                               | 0.5 A, DC 28 V  |  |
| Typical life                                    | 10,000 operations mechanical<br>5,000 operations at I <sub>N</sub>                      |  |
| Ambient temperature                             | -55...+75 °C (-67...+167 °F)  |  |
| Insulation co-ordination (IEC 60664 and 60664A) | rated impulse withstand voltage<br>1.5 kV   | pollution degree<br>3  |
| Dielectric strength (IEC 60664 and 60664A)      | test voltage<br>operating area<br>main to aux. circuit                                  | AC 1,500 V<br>AC 1,500 V   |
| Insulation resistance                           | > 100 MΩ (DC 500 V)   |  |
| Interrupting capacity I <sub>cn</sub>           | 0.1...2.5 A<br>3...3.5 A<br>4...7 A<br>7.5...50 A<br>35...50 A                          | 15 x I <sub>N</sub><br>250 A DC / 150 A AC<br>500 A<br>6,000 A DC / 1,000 A AC<br>with auxiliary contact:<br>3,000 A DC / 1,000 A AC |
| Interrupting capacity (UL 1077)                 | I <sub>N</sub><br>0.1...50 A  | U <sub>N</sub><br>DC 72 V, 5,000 A   |
| Degree of protection (IEC 60529/DIN 40050)      | operating area IP40<br>terminal area IP00   |  |
| Vibration                                       | 10 g (55-2000 Hz), ± 0.76 mm (10-55 Hz)<br>to VG 95210, sheet 19/IEC 60068-2-6, test Fc |  |
| Shock   | 50 g (11 ms)<br>to VG 95210, sheet 28/IEC 60068-2-27, test Ea                           |  |
| Corrosion                                       | 48 hours at 5 % salt mist<br>to VG 95210, sheet 2/IEC 60068-2-11, test Ka               |  |
| Humidity  | 240 hours at 95 % RH<br>to VG 95210, sheet 7/IEC 60068-2-3, test C                      |  |
| Explosion                                       | to VG 95210, sheet 10/MIL-STD-202, meth. 109  |  |
| Mass  | approx. 43 g without auxiliary contact<br>approx. 46 g with auxiliary contact           |  |

Previous ordering codes:

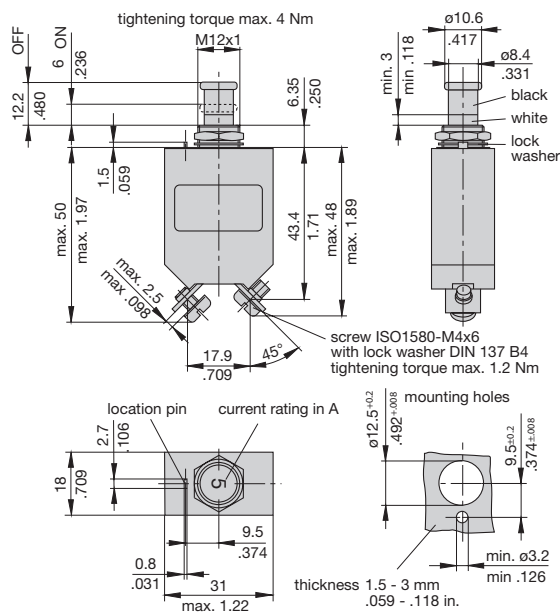
482-N-MS = 482-G111-K1M1-A1S0-...A  
482-MS = 482-G212-K1M1-A1S0-...A

## Standard current ratings and typical volt drop values

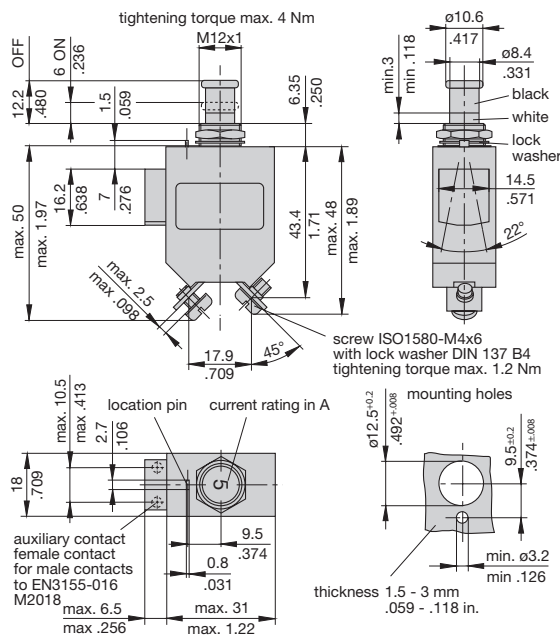
| Current rating (A) | Volt drop (mV) | Current rating (A) | Volt drop (mV) |
|--------------------|----------------|--------------------|----------------|
| 0.1                | 16,000         | 5                  | 350            |
| 0.2                | 8,000          | 7.5                | 230            |
| 0.5                | 3,000          | 10                 | < 200          |
| 0.8                | 2,000          | 15                 | < 200          |
| 1                  | 1,500          | 20                 | < 200          |
| 1.2                | 1,200          | 25                 | < 200          |
| 1.5                | 1,000          | 30                 | < 200          |
| 1.8                | 850            | 35                 | < 200          |
| 2                  | 800            | 40                 | < 200          |
| 2.5                | 700            | 45                 | < 200          |
| 3                  | 600            | 50                 | < 200          |
| 4                  | 430            |                    |                |

## Dimensions 482-G1...

### 482-G111-K1M1-A1S0 (VG 95345 T21)

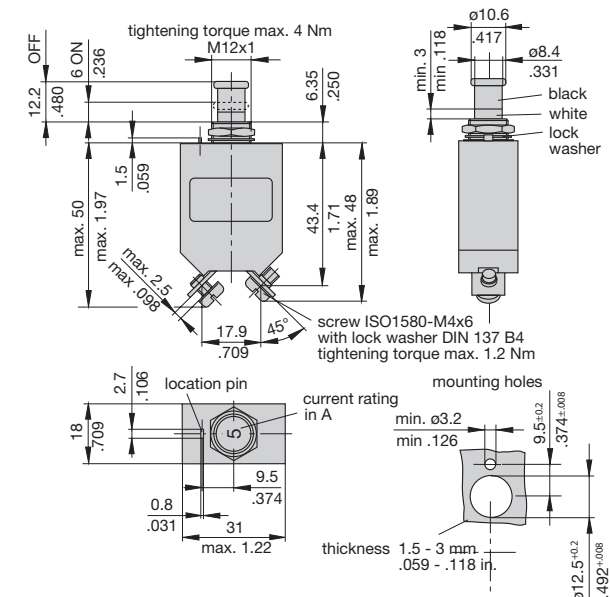


### 482-G111-K1M1-A1S1 (VG 95345 T21)



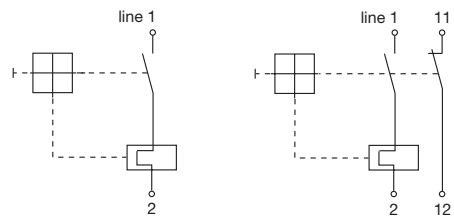
## Dimensions 482-G2../-G6../-G7...

### 482-G212-K1M1-A1S0 (VG 95345 T21)



## Internal connection diagrams

### with auxiliary contact



This is a metric design and millimeter dimensions take precedence (mm/inch)