

## 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

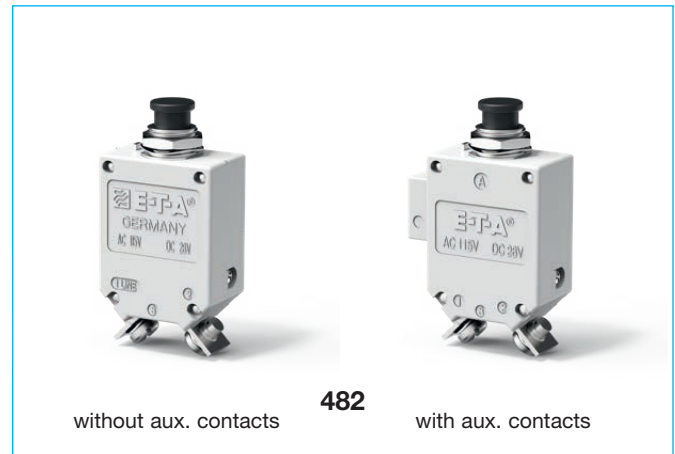
Please be informed that we have minimum ordering quantities to be observed.

## 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 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 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 1.5 kV	pollution degree 3
Dielectric strength (IEC 60664 and 60664A)	test voltage operating area main to aux. circuit	AC 1,500 V AC 1,500 V
Insulation resistance	> 100 MΩ (DC 500 V)	
Interrupting capacity I <sub>cn</sub>	0.1...2.5 A 3...3.5 A 4...7 A 7.5...50 A 35...50 A	15 x I <sub>N</sub> 250 A DC / 150 A AC 500 A 6,000 A DC / 1,000 A AC with auxiliary contact: 3,000 A DC / 1,000 A AC
Interrupting capacity (UL 1077)	I <sub>N</sub> 0.1...50 A	U <sub>N</sub> DC 72 V, 5,000 A
Degree of protection (IEC 60529/DIN 40050)	operating area IP40 terminal area IP00	
Vibration	10 g (55-2000 Hz), ± 0.76 mm (10-55 Hz) to VG 95210, sheet 19/IEC 60068-2-6, test Fc	
Shock	50 g (11 ms) to VG 95210, sheet 28/IEC 60068-2-27, test Ea	
Corrosion	48 hours at 5 % salt mist to VG 95210, sheet 2/IEC 60068-2-11, test Ka	
Humidity	240 hours at 95 % RH 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 approx. 46 g with auxiliary contact	

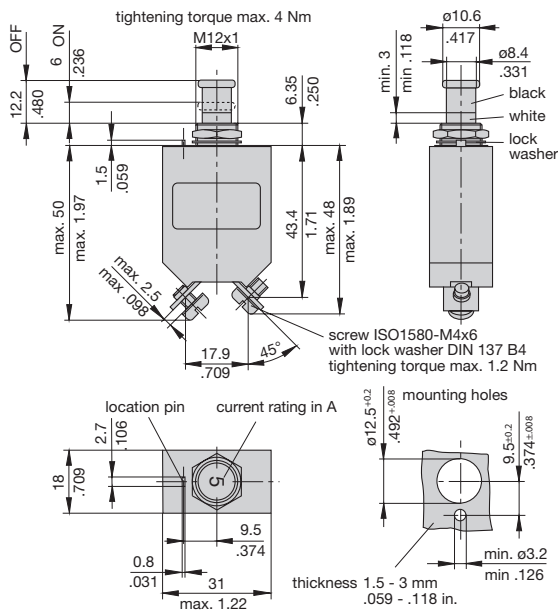
Previous ordering codes:  
 482-N-MS = 482-G111-K1M1-A1S0-...A  
 482-MS = 482-G212-K1M1-A1S0-...A

## Standard current ratings and typical volt drop values

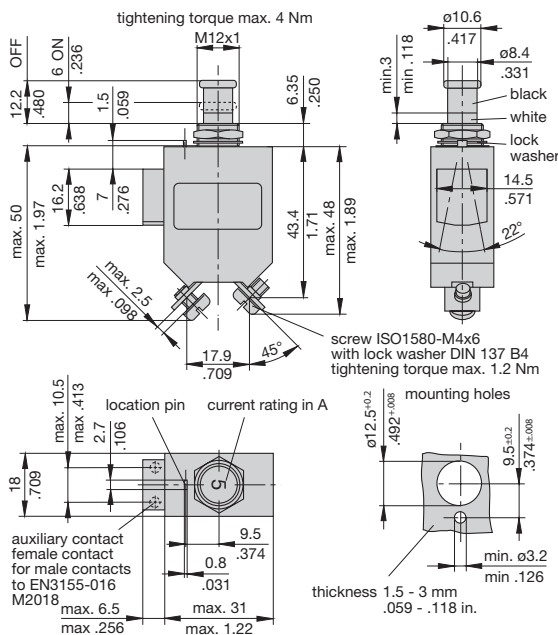
Current rating (A)	Volt drop (mV)	Current rating (A)	Volt drop (mV)
0.1	16,000	5	350
0.2	8,000	7.5	230
0.5	3,000	10	< 200
0.8	2,000	15	< 200
1	1,500	20	< 200
1.2	1,200	25	< 200
1.5	1,000	30	< 200
1.8	850	35	< 200
2	800	40	< 200
2.5	700	45	< 200
3	600	50	< 200
4	430		

## Dimensions 482-G1...

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

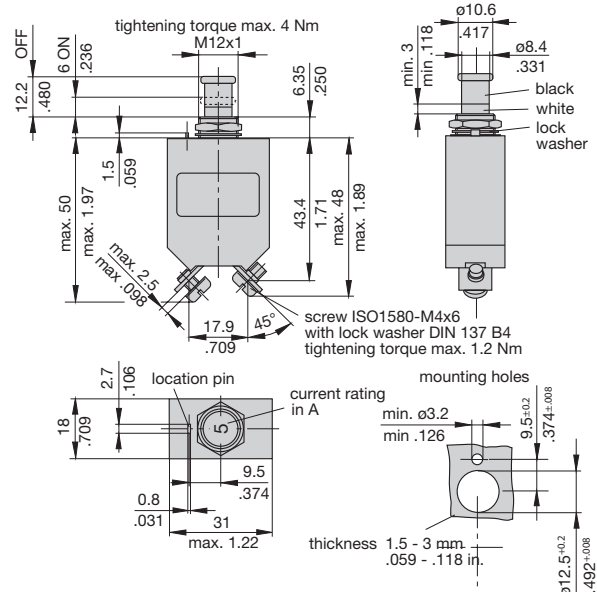


### 482-G111-K1M1-A1S1 (VG 95345 T21)



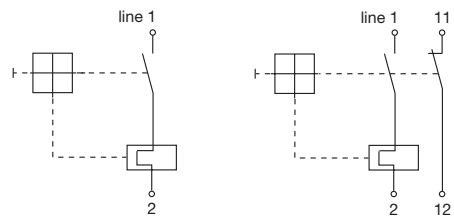
## Dimensions 482-G2../-G6../-G7...

### 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)