

## Description

Single pole, thermal circuit breaker with trip-free mechanism, push/pull on/off manual actuation (M-type TO CBE to EN 60934) and temperature compensation. An indicator band on the push button clearly shows the tripped/off position. The robust design makes type 4140 suitable for extremely harsh conditions.

Various dummies are available without protective function, allowing connection of pre-installed wiring without loads.

## Typical applications

Land vehicles, aircraft, watercraft, special vehicles.

## Ordering information

### Type No.

**4140** High performance thermal circuit breaker with temperature compensation

### Mounting

**G** threadneck panel mounting

### Threadneck design

**1** M12x0.75x7 alu., blackened, 1 location pin

### Number of poles

**1** 1-pole, protected

### Hardware for threadneck

**3** hex nut M12x0.75, alu., serrated lock-washer 12.1/17.2, supplied separately

### Terminal design (main terminals)

**J1** screw terminals with inch thread (8-32UNC-2B)

### Characteristic curve

**M1** thermal 1.1-1.45 x I<sub>N</sub>

### Accessories Terminal screws & Terminal washers

**M6** hex screw with Phillips head 8-32UNC-3Ax7.6 & lock washer 4.3/9 supplied separately

**Z0** without accessories

### Auxiliary contact, Barrier, Colour of the push button

**S0TN** without auxiliary contact, with barrier, black

**S5TG** with polarized aux. contact (female contact for male contacts to EN3155-016M2018), with barrier, green

### Current ratings

**20...50 A**

**4140 - G 1 1 3 - J1 M1 -M6 S5TG - 20 A** ordering example

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



## 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 (300 Hz to 800 Hz); DC 28 V	
Current rating range	20...50 A	
Auxiliary circuit	0.5 A, DC 28 V	
Typical life	5,000 operations mechanical and 2,500 operations at I <sub>N</sub>	
Ambient temperature	-55...+125 °C (-67...+257 °F)	
Temperature compensation	-55...+90 °C (-67...+194 °F)	
Insulation co-ordination (IEC 60664)	rated impulse withstand voltage 1.5 kV	pollution degree 3
Dielectric strength	test voltage operating area AC 1,500 V main to aux. circuit AC 1,500 V	
Insulation resistance	> 100 MΩ (DC 500 V)	
Interrupting capacity I <sub>cn</sub>	AC 115 V (400 Hz): 1,500 A DC 28 V: 4,000 A	
Degree of protection (IEC 60529)	operating area IP40 terminal area IP00	
Vibration (sinusoidal)	± 0.76 mm (5-80 Hz) 10 g (80-500 Hz), 5 g (500-2000 Hz) to EN 2350 para 5.3.1 and ISO 7137	
Vibration (random)	0.04 g <sup>2</sup> /Hz (40-500 Hz) 5.8 g rms (10-2000 Hz) to ISO 7137	
Acceleration	17 g, to EN 2350, para 5.3.3 and ISO 2669	
Shock	50 g (11 ms), to EN 2350 para 5.3.2 and ISO 7137	
Corrosion	48 hours at 5 % salt mist to EN 2350 para 5.4.2 and ISO 7137	
Humidity	240 hours at 95 % RH, to EN 2350 para 5.4.3 and ISO 7137	
Altitude	≤ 15,000 m above sea level	
Mass	approx. 57 g with accessories and without auxiliary contact approx. 60 g with accessories and with auxiliary contact	

## Standard current ratings and typical volt drop values

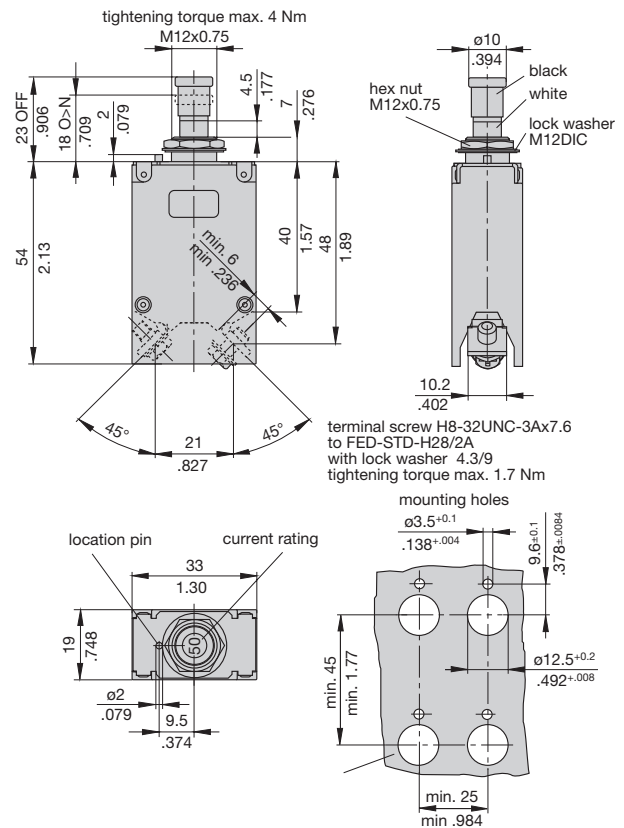
Current rating (A)	Volt drop per pole (mV)
20	150
25	150
30	150
35	150
40	120
45	120
50	120

## Approvals

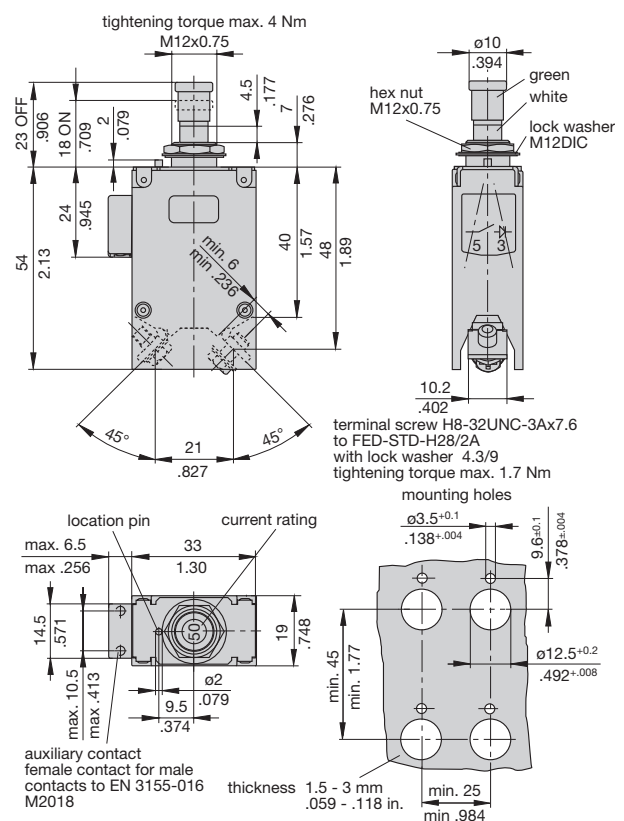
Authority	Standard	Voltage ratings	Current ratings
Airbus	EN 3661-005	AC 115 V, 400 Hz DC 28 V	20...50 A 20...50 A

## Dimensions

**4140-G113-J1M1-Z0S0TN-..** (NSA 931321, prEN 2794-004)  
**4140-G113-J1M1-M6S0TN-..** (NSA 931321, prEN 2794-004)

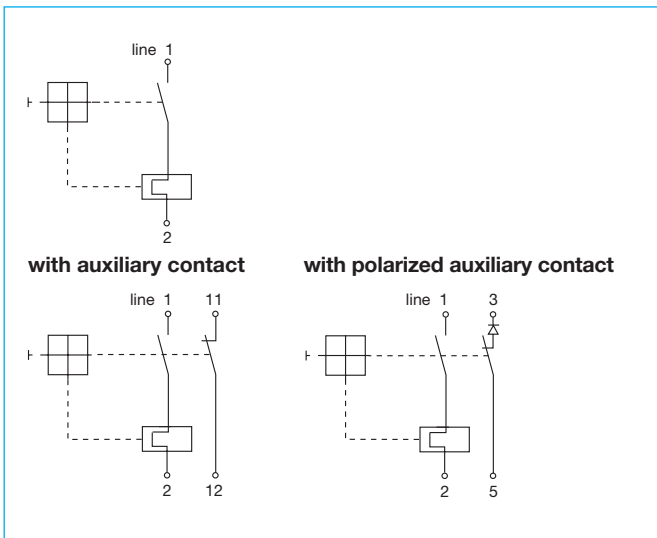


**4140-G113-J1M1-Z0S5TG-..** (ASNE 0732-005, EN 3661-005)  
**4140-G113-J1M1-M6S5TG-..** (ASNE 0732-005, EN 3661-005)

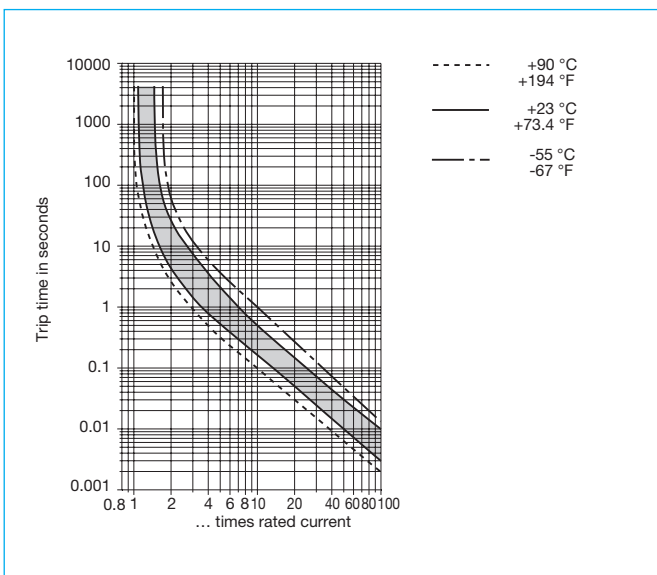


This is a metric design and millimeter dimensions take precedence  $\left(\frac{\text{mm}}{\text{inch}}\right)$

## Internal connection diagrams



## Typical time/current characteristics



## Mounting instructions

The devices must not be aligned in tightened state! There is a risk of permanent damage at the circuit mechanics and the housing may break! The devices must be counteracted during mounting on the threadneck!

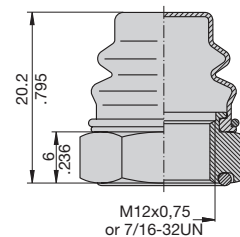
## Accessories

**Splash cover/hex nut assembly with O ring (IP66 and IP67)**  
**X 200 801 15** black anodised nut M12x0.75x6, black cover

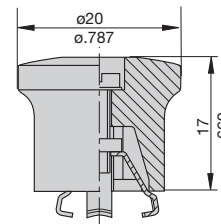
**Splash cover/hex nut assembly with O ring (IP66 and IP67)**  
**X 200 801 16** black anodised nut 7/16-32UNx6, black cover

**Splash cover/hex nut assembly with O ring (IP66 and IP67)**  
**X 200 801 17** black anodised nut 7/16-32UNx6, transparent cover

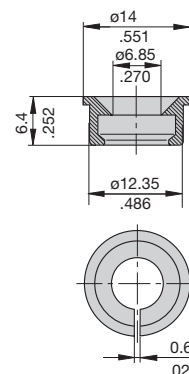
**Splash cover/hex nut assembly with O ring (IP66 and IP67)**  
**X 200 801 18** black anodised nut M12x0.75x6, transparent cover



**Actuator extension (black) to be fitted on the push button**  
**X 200 803 01** (approved to VG 95345, part 23)



**Identification collar to be snapped on the push button**  
**Y 307 004 01** black  
**Y 307 004 02** white  
**Y 307 004 03** red  
**Y 307 004 04** green  
**Y 307 004 05** blue



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

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.