

Description

Three pole, aircraft style thermal circuit breaker with trip-free mechanism and push/pull on/off manual actuation. An indicator band on the push button clearly shows the tripped/off position. Threadneck panel mounted, temperature compensated, with optional auxiliary contacts. The robust design is well suited to extremely harsh conditions. In the event of an overload in one, two or three phases all three poles will be disconnected.

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.

5140 High performance thermal circuit breaker with temperature compensation

Mounting

G threadneck panel mounting

Threadneck design

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

2 M12x0.75x7 alu, blackened, 2 location pins

Number of poles

3 3-pole, protected

Hardware for threadneck

3 hex nut M12x0.75, alu, serrated lock-washer 12.1/17.2, bulk

Terminal design (main terminals)

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

J2 screw terminals with inch thread (8-32UNC-2B) on one side, busbar terminals on other side, with hole bent at 60 °

J3 screw terminals with inch thread (8-32UNC-2B) on one side, busbar terminals on other side, with hole bent at 40 °

Characteristic curve

M1 thermal 1.1 - 1.45 I_N

Accessories terminal screws & terminal washers

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

Z0 without accessories

Auxiliary contact

S0TN without auxiliary contact, with barrier, black

S5TG with aux. contact (N/C) (female contact for male contacts to EN3155-016M2018), with barrier, green

Current ratings

20...50 A

5140 - G 1 3 3 - J1 M1 - M6 S5TG-20 A ordering example

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



without auxiliary contact

with auxiliary contact

5140

Technical data

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

| | | |
|---------------------------------------|---|-----------------------|
| Voltage rating | 3 AC 200 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 _N | |
| 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 |
| | pole/pole | AC 1,500 V |
| | main to aux. circuit | AC 1,500 V |
| Insulation resistance | > 100 MΩ (DC 500 V) | |
| Interrupting capacity I _{cn} | 2,000 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 ² /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. 144 g with accessories and without auxiliary contact approx. 150 g with accessories and with auxiliary contact | |

E-T-A® High Performance Thermal Circuit Breaker 5140

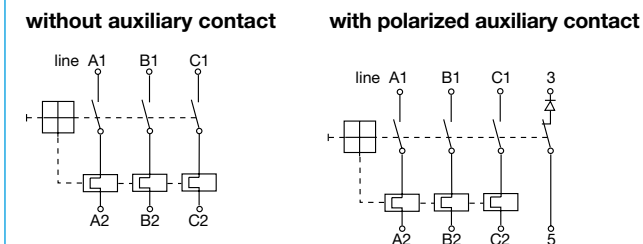
Standard current ratings and typical volt drop values

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

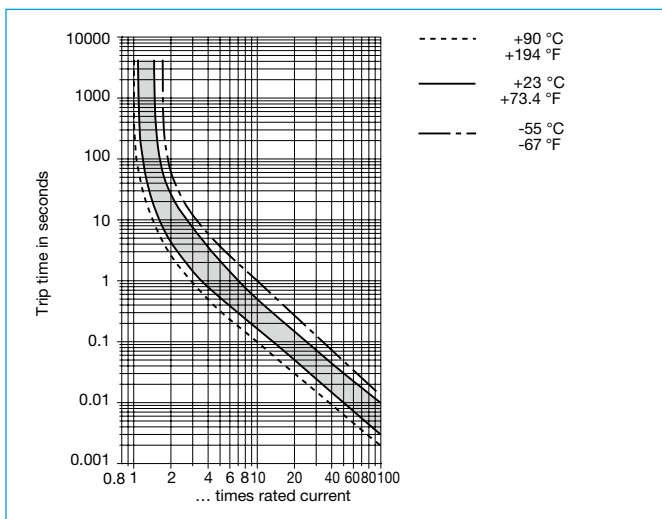
Approvals

| Authority | Standard | Voltage ratings | Current ratings |
|-----------|-------------|-----------------------------|------------------------|
| Airbus | EN 3662-005 | AC 115 V, 400 Hz DC 28 V | 20...50 A 20...50 A |
| | EN 3662-006 | AC 115 V, 400 Hz DC 28 V | 20...50 A 20...50 A |

Internal connection diagrams

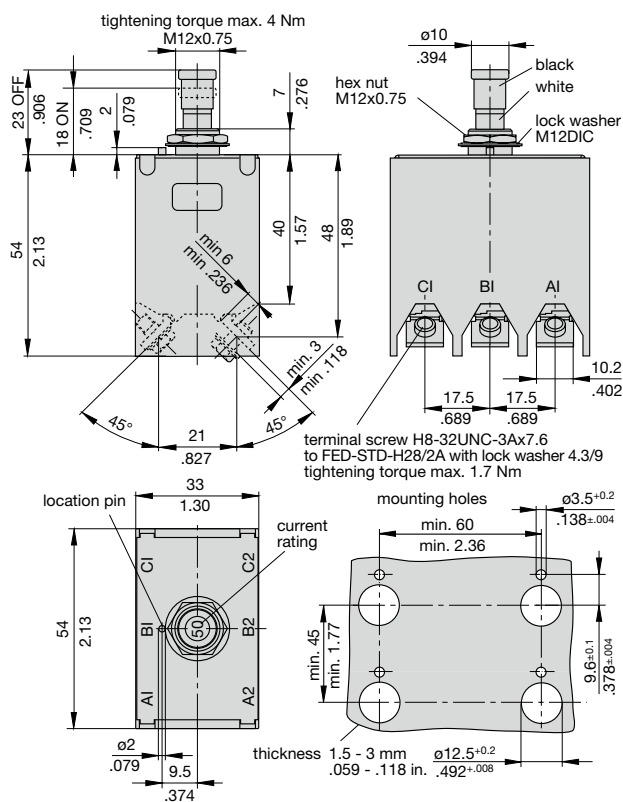


Typical time/current characteristics

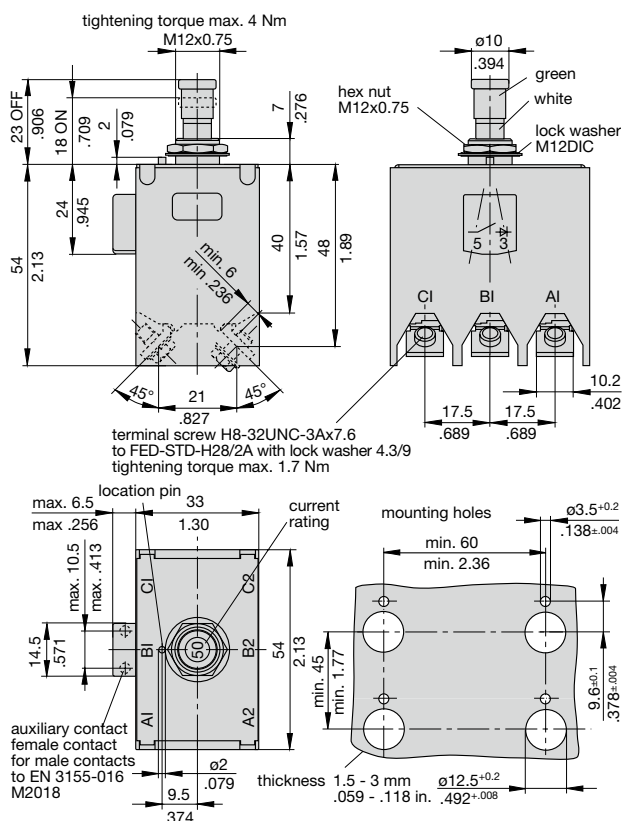


Dimensions

5140-G132-J1M1-Z0S0TN (NSA 931 323; prEN 2665-004)
5140-G132-J1M1-M6S0TN (NSA 931 323; prEN 2665-004)



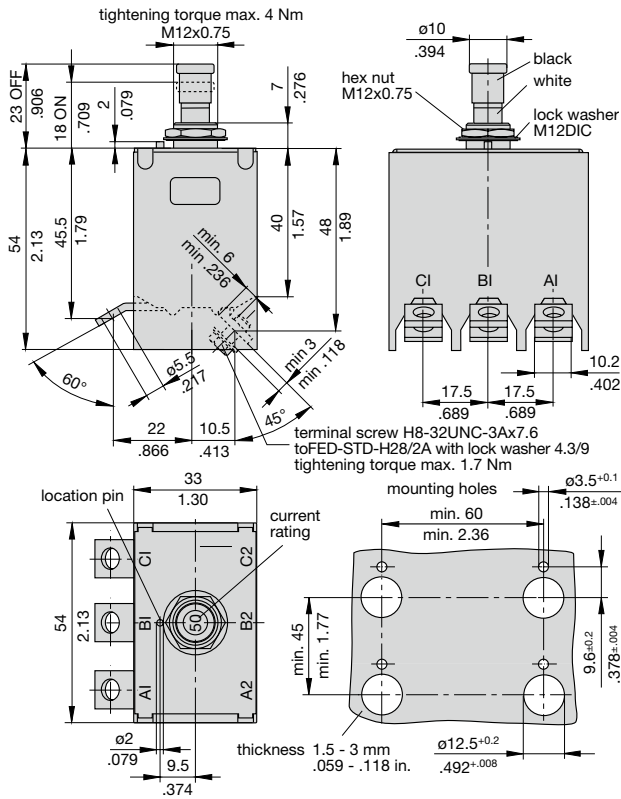
5140-G132-J1M1-Z0S5TG (ASNE 0733-005; EN 3662-005)
5140-G132-J1M1-M6S5TG (ASNE 0733-005; EN 3662-005)



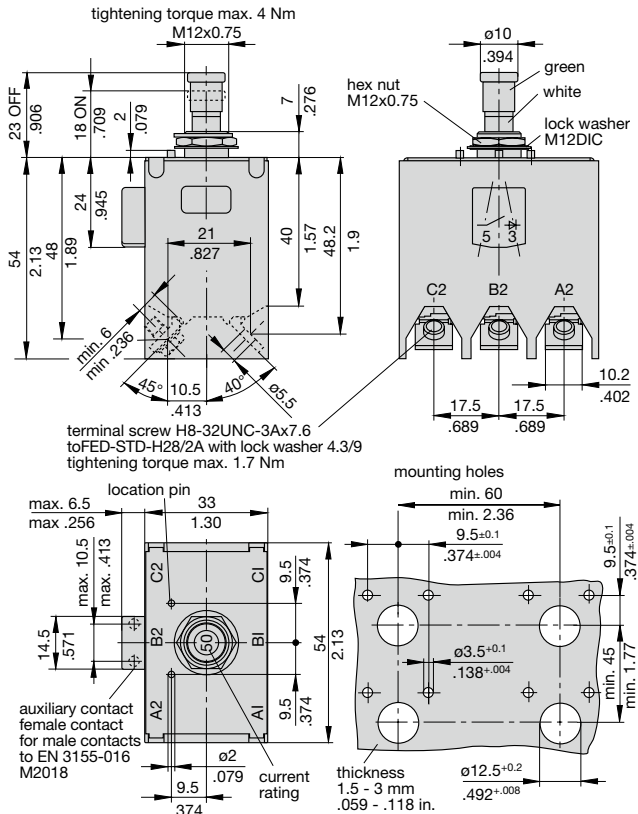
This is a metric design and millimeter dimensions take precedence ($\frac{\text{mm}}{\text{inch}}$)

Dimensions

5140-G132-J2M1-ZOS0TN (ASNE 0459)
5140-G132-J2M1-M6S0TN (ASNE 0459)



5140-G232-J3M1-ZOS5TG (ASNE 0733-006; EN 3662-006)
5140-G232-J3M1-M6S5TG (ASNE 0733-006; EN 3662-006)



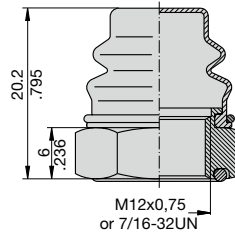
Accessories

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

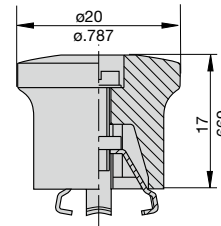
Splash cover/hex nut assembly with O ring (IP66 and IP67)
X 200 801 16 black anodised nut 7/16-32UNx6, black cover

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

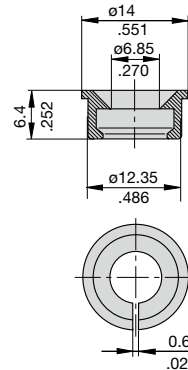


Actuator extension (black) to be fitted on the push button
X 200 803 01 (approved to VG 95345, part 23)



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.

