Description

Compact single pole thermal circuit breaker with push-to-reset, tease free, trip free, snap action mechanism and separate (colour coded) manual release. Combining full feature circuit breaker protection and convenience with low cost of ownership benefits. Fitted with blade terminals for plug-in mounting.

Type III to SAE J 553.

Version 1176 is available especially for the automotive industry (current ratings correspond to those of blade fuses).

Typical applications

Extra low voltage wiring systems on all types of vehicles and marine craft.

Ordering information

<table>
<thead>
<tr>
<th>Type No.</th>
<th>Design standard</th>
<th>Current ratings</th>
<th>1170 - 21 - 15 A ordering example</th>
</tr>
</thead>
<tbody>
<tr>
<td>1170 plug-in</td>
<td>21 blade terminals for automotive fuse blocks (standard) with retaining clips, to DIN 72581, part 3</td>
<td>3...25 A</td>
<td></td>
</tr>
<tr>
<td></td>
<td>22 blade terminals for automotive fuse blocks, without retaining clips, to DIN 72581, part 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Preferred types

<table>
<thead>
<tr>
<th>Preferred types</th>
<th>Standard current ratings (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1170-21-</td>
<td>3 x 4 x 5 x 6 x 7.5 x 8 x 10 x 15 x 20 x 25 x</td>
</tr>
<tr>
<td>1170-22-</td>
<td>x x x x x x x x x x x x</td>
</tr>
</tbody>
</table>

Technical data

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

Voltage rating (U_N) DC 12 V / 24 V / 48 V

Max. voltage (U_{max}) DC 58 V

Current ratings 3...25 A

Typical life at rated current:
- U_N DC 24 V 3...25 A 6 000 operations att 1 x I_N
- U_N DC 24 V 3...20 A 3 000 operations at 2 x I_N
- U_N DC 48 V 25 A 1 000 operations at 2 x I_N
- U_N DC 48 V 3...25 A 500 operations at 1 x I_N

Ambient temperature -40...85 °C (-40...+185 °F)

Interrupting capacity (I_{cr}, to ISO10924)

- U_N DC 24 V
  - 3...10 A at 75 A
  - 15 A at 100 A
  - 20 A at 135 A
  - 25 A >100x at 200 A

Absolute breaking capacity to ISO 10924 ≥ 1 break operation at 2 000 A (L/R = 2.5 ms)

Degree of protection (IEC 60529)
- operating area IP40
- terminal area IP00

Vibration 10 g (57-500 Hz) ± 0.76 mm (10-57 Hz), to IEC 60068-2-6, test Fc, 10 frequency cycles/axis

Shock 50 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 approx. 10 g
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.

<table>
<thead>
<tr>
<th>Ambient temperature °F</th>
<th>-40</th>
<th>-22</th>
<th>-4</th>
<th>+14</th>
<th>+32</th>
<th>+50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient temperature °C</td>
<td>-40</td>
<td>-30</td>
<td>-20</td>
<td>-10</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>Derating factor</td>
<td>0.77</td>
<td>0.80</td>
<td>0.84</td>
<td>0.89</td>
<td>0.94</td>
<td>0.96</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ambient temperature °F</th>
<th>+73.4</th>
<th>+104</th>
<th>+122</th>
<th>+140</th>
<th>+158</th>
<th>+185</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient temperature °C</td>
<td>+23</td>
<td>+40</td>
<td>+60</td>
<td>+70</td>
<td>+85</td>
<td></td>
</tr>
<tr>
<td>Derating factor</td>
<td>1</td>
<td>1.08</td>
<td>1.16</td>
<td>1.24</td>
<td>1.33</td>
<td>1.42</td>
</tr>
</tbody>
</table>

This is a metric design and millimeter dimensions take precedence (mm) over inch.
Thermal Automotive Circuit Breaker 1170...

### Accessories

**Socket 12-P10**
- Weidmüller style label (not supplied)
- Blade terminal: DIN 46244-A6.3-0.8 (QC .250)
- Symmetrical hat rail: EN 50022-35x7.5

**Socket 12-J20**
- Weidmüller style label (not supplied)
- Terminal screw: 6-32 UNC
- Tightening torque: max. 1.2 Nm
- Spring washer
- Symmetrical hat rail: EN 50022-35x7.5

**Socket 12-A10**
- Terminal screw: 6-32 UNC
- Tightening torque: max. 1.2 Nm
- Weidmüller style label (not supplied)
- Blade terminal: DIN 46244-A6.3-0.8 (QC .250)
- Spring washer
- Symmetrical hat rail: EN 50022-35x7.5

### Ordering information Mounting socket 12

**Type No.**
- **12** Mounting socket

**Terminal design**
- **P10** blade terminals A6.3-0.8 (QC .250)
- **J20** screw terminals 6-32 UNC
- **A10** 1 blade terminal A6.3-0.8 (QC .250)/1 screw terminal 6-32 UNC

**Version**
- blank: single socket
- 20: two-way
- 30: three-way
- 40: four-way
- 60: six-way

**12 - P10 - 20 ordering example**

### Accessories for mounting socket 12

**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)

**Bus bar (supplied as a complete package)**
- (up to 100 A max. load)
  - X 211 157 01 with terminal
  - X 211 157 02 without terminal

**Dimensions for surface mounting**

**Other sockets available to special order**
- **Labels:** Weidmüller, D-33102 Paderborn

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