Description

Miniaturised single pole press-to-reset cycling trip free thermal circuit breaker designed for automotive fuse block installation. Extends the benefits of circuit breaker performance and convenience to applications which are cost critical. Colour-coded housing caps or manual release buttons available.

Version 1616 is available especially for the automotive industry (current ratings correspond to those of blade fuses).

US patent number: US 6,590,489 B1 (1610-H2)

Typical applications

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

Ordering information

Type No.
1610 single pole automotive circuit breaker

Voltage rating
21 DC 24 V, with reset button
H2 DC 24 V, with reset button and manual release facility
92 DC 12 V, autoreset (type I to SAE J 553)

Current ratings
5 6 8 10 15 20 25 30 A

1610-21 - 8 A ordering example

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

Preferred types

Preferred types Standard current ratings (A)
1610-21-
5 6 8 10 15 20 25 30
x x x x x x x x

Current ratings, typical voltage drop values and colour coding

<table>
<thead>
<tr>
<th>Current rating (A)</th>
<th>Voltage drop (mV)</th>
<th>Actuator colour manual release (1610-H2) or housing cap colour (1610-21)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>&lt; 150</td>
<td>light-brown</td>
</tr>
<tr>
<td>6</td>
<td>&lt; 150</td>
<td>green</td>
</tr>
<tr>
<td>8</td>
<td>&lt; 150</td>
<td>golden yellow</td>
</tr>
<tr>
<td>10</td>
<td>&lt; 150</td>
<td>red</td>
</tr>
<tr>
<td>15</td>
<td>&lt; 150</td>
<td>blue</td>
</tr>
<tr>
<td>20</td>
<td>&lt; 150</td>
<td>yellow</td>
</tr>
<tr>
<td>25</td>
<td>&lt; 150</td>
<td>pearl</td>
</tr>
<tr>
<td>30</td>
<td>&lt; 150</td>
<td>light-green</td>
</tr>
</tbody>
</table>

Approvals

<table>
<thead>
<tr>
<th>Authority</th>
<th>Standard</th>
<th>Rated voltage</th>
<th>Current ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>UL</td>
<td>UL 1500</td>
<td>DC 24 V</td>
<td>5 A...30 A</td>
</tr>
</tbody>
</table>
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>Derating factor</td>
<td>0.73</td>
<td>0.78</td>
<td>0.82</td>
<td>0.86</td>
<td>0.91</td>
<td>0.95</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ambient temperature °C</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>Derating factor</td>
<td>+23</td>
<td>+40</td>
<td>+50</td>
<td>+60</td>
<td>+70</td>
<td>+85</td>
</tr>
</tbody>
</table>

Please leave space for button travel

This is a metric design and millimeter dimensions take precedence (mm).
**Thermal Automotive Circuit Breaker 1610-...**

**Accessories**

**Socket 12-P10**

- Terminal screw 6-32 UNC
- Tightening torque max. 1.2 Nm
- Blade terminal DIN 46244-A6.3-0.8 (QC .250)
- Wedmuller style label (not supplied)

**Socket 12-J20**

- Terminal screw 6-32 UNC
- Tightening torque max. 1.2 Nm
- Blade terminal DIN 46244-A6.3-0.8 (QC .250)
- Wedmuller style label (not supplied)

**Socket 12-A10**

- Terminal screw 6-32 UNC
- Tightening torque max. 1.2 Nm
- Blade terminal DIN 46244-A6.3-0.8 (QC .250)
- Wedmuller style label (not supplied)

**Dimensions for surface mounting**

**Other sockets available to special order**

**Labels:** Wedmuller, D-33102 Paderborn

**Ordering information Mounting socket 12**

**Type No.**

- **12** Mounting socket

**Terminal design**

- **P10** blade terminals A 6.3-0.8 (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

**Labels:** Weidmüller, D-33102 Paderborn

**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

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.