

E-T-A® Thermal Automotive Circuit Breaker 1610-...

Description

Miniaturised single pole press-to-reset thermal circuit breaker designed for automotive fuse block installation. Extends the benefits of circuit breaker performance and convenience to applications which are cost critical. Manual release option.

Typical applications

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

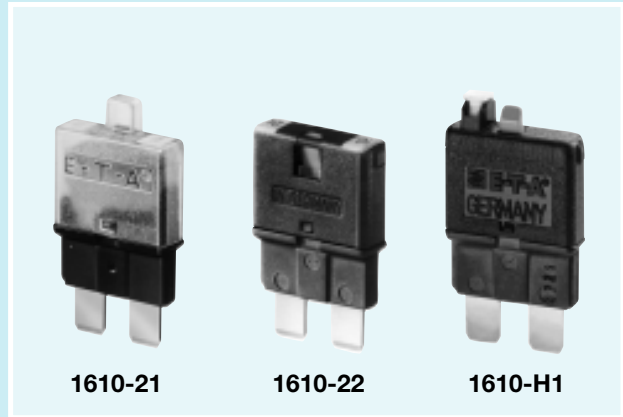
Ordering information

Type No.	
1610	single pole automotive circuit breaker
Voltage rating	
22	DC 12 V
H1	DC 12 V, with manual release facility
21	DC 24 V
H2	DC 24 V, with manual release facility
Current ratings	
6 8 10 15 20 25 A	
1610	- 21 - 8 A ordering example

Please enquire for packaging quantities.

Current ratings, typical voltage drop values and actuator colours

Current rating (A)	Voltage drop (mV)	Actuator colour (manual release)
6	< 200	mossy-green (approximating RAL 6005)
8	< 200	honey (approximating RAL 1005)
10	< 200	red (approximating RAL 3020)
15	< 200	blue (approximating RAL 5012)
20	< 200	yellow (approximating RAL 1018)
25	< 200	pearl (approximating RAL 1013)



Technical data

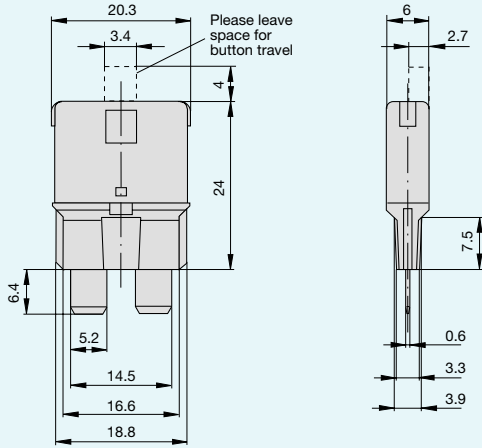
Voltage rating	1610-22/1610-H1: DC 12 V 1610-21/1610-H2: DC 24 V
Current ratings	6...25 A
Service short-circuit breaking capacity	1610-22/1610-H1: 500 operations at ≤ 50 A 1610-21/1610-H2: 300 operations at ≤ 50 A
Ambient temperature	-30...+60 °C
Degree of protection (IEC 529/DIN 40050)	operating area IP 30 terminal area IP 00
Ultimate short-circuit breaking capacity	1610-22/1610-H1:: ≥ 3 break operations at 200 A, or ≥ 1 break operation at 2,000 A 1610-21/1610-H2: ≥ 3 break operations at 150 A, or ≥ 1 break operation at 2,000 A
Vibration (with mounting socket)	5 g (57-500 Hz), ±0.38 mm (10-57 Hz) to IEC 68-2-6, Test Fc 10 frequency cycles/axis
Shock (with mounting socket)	25 g (11 ms) to IEC 68-2-27, Test Ea
Corrosion	96 hours at 5 % salt mist, to IEC 68-2-11, Test Ka
Humidity	240 hours at 95 % RH, to IEC 68-2-3, Test Ca
Mass	approx. 5 g

N.B.

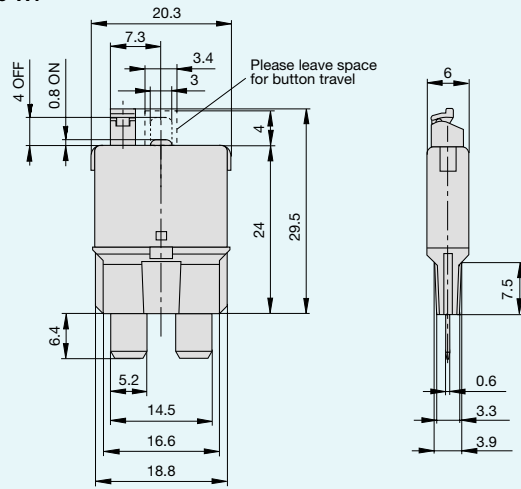
It is good practice to switch off the vehicle's ignition system before re-setting the circuit breaker.
Free travel of the actuator must be ensured.

Dimensions

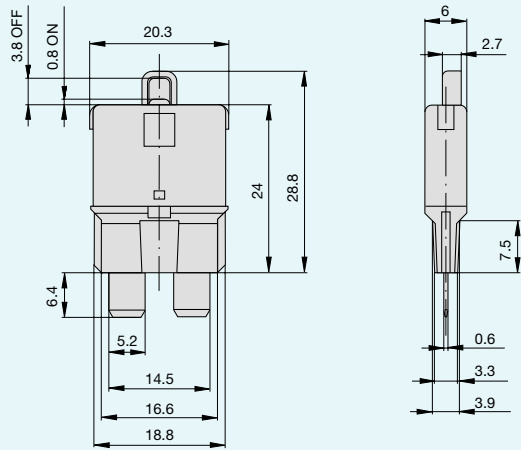
1610-22



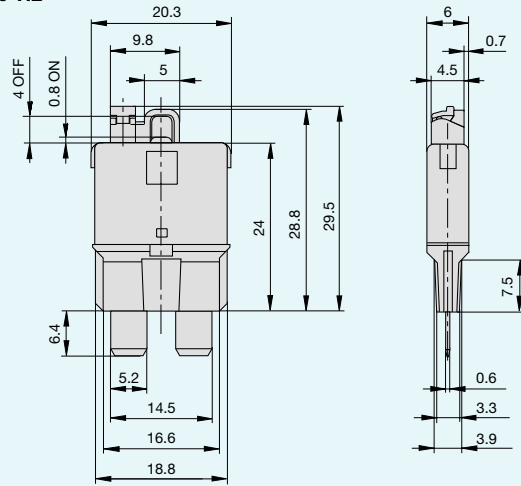
1610-H1



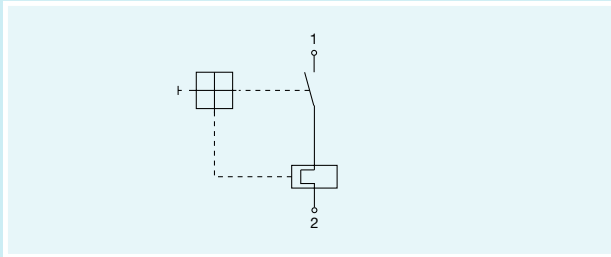
1610-21



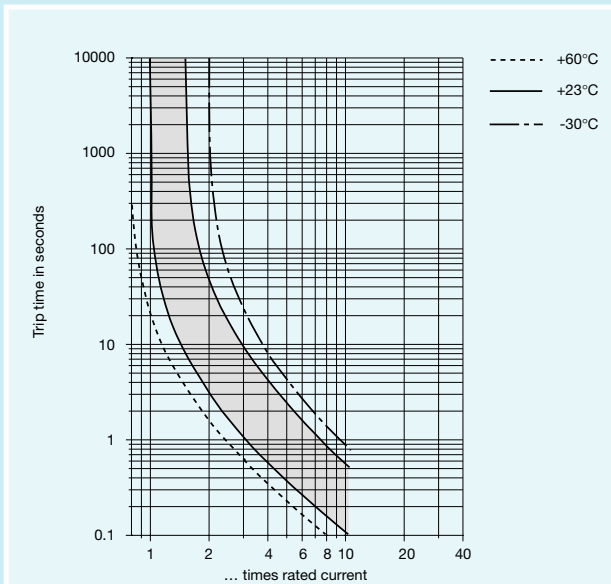
1610-H2



Internal connection diagram



Typical time/current characteristic curve

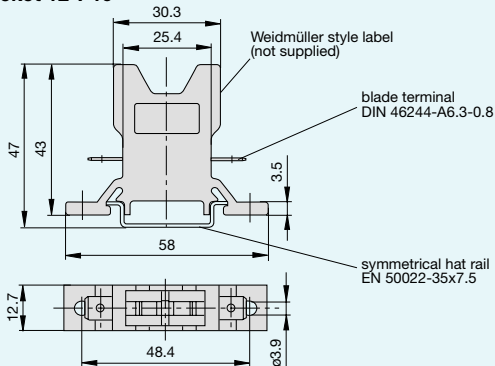


The time/current characteristic curve depends on the ambient temperature prevailing. In order to eliminate nuisance tripping, please multiply the circuit breaker current ratings by the derating factor shown below. See also section 9 - Technical information.

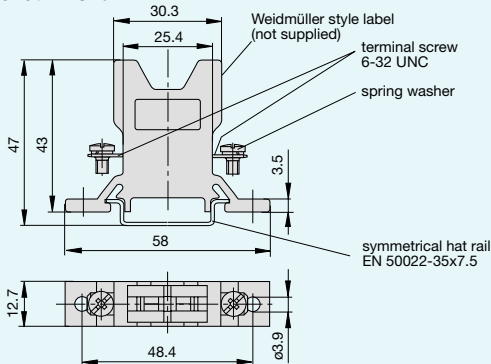
Ambient temperature °C	-20	-10	0	+23	+40	+50	+60
Multiplication factor	0.76	0.84	0.92	1	1.08	1.16	1.24

Accessories

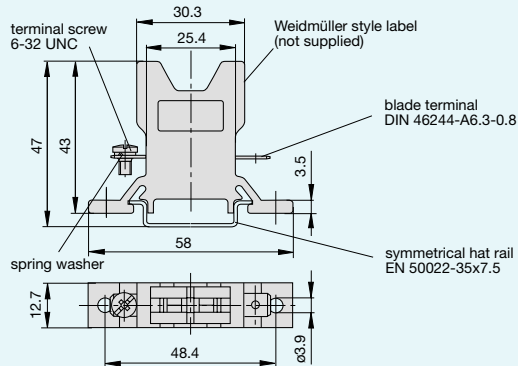
Socket 12-P10



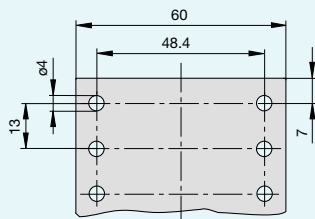
Socket 12-J20



Socket 12-A10



Dimensions for surface mounting



Other sockets available to special order

Labels: Weidmüller, D-33102 Paderborn

Ordering information Mounting socket 12

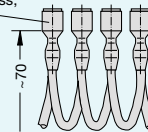
Type No.	
12	Mounting socket
Terminal design	
P10	blade terminals A 6.3-0.8
J20	screw terminals 6-32 UNC
A10	1 blade terminal A6.3-0.8 / 1 screw terminal 6-32 UNC
Version	
...	blank: single socket
20	two-way
30	three-way
40	four-way
60	six-way
12 - P10 - 20	ordering example

Accessories for mounting socket 12

Connector bus links -P10

- X 210 588 01/1.5 mm² (brown), up to 13 A max. load
- X 210 588 02/2.5 mm² (black), up to 20 A max. load
- X 210 588 03/2.5 mm² (red), up to 20 A max. load
- X 210 588 04/2.5 mm² (blue), up to 20 A max. load

100 quick-connect tabs 6.3
DIN 46247 tinned brass,
insulated



Bus bar X 210 588 02 (up to 100 A max. load)

- X 211 157 01 with terminal
- X 211 157 02 without terminal

