

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

Type No.	
1170	plug-in
Design standard	
21	blade terminals for automotive fuse blocks (standard) with retaining clips
22	blade terminals for automotive fuse blocks, without retaining clips
Current ratings	
3...25 A	
1170 - 21 - 15 A ordering example	

Preferred types

Preferred types	Standard current ratings (A)									
	3	4	5	6	7.5	8	10	15	20	25
1170-21-	x	x	x	x	x	x	x	x	x	x
1170-22-	x	x	x	x	x	x	x	x	x	x

Standard current ratings, typical voltage drop values and actuator colours (manual release)

Current rating (A)	Voltage drop (mV)	Actuator colour
3	< 300	violet (approximating RAL 4008)
4	< 300	pink (approximating RAL 3015)
5	< 300	orange-brown (approximating RAL 8023)
6	< 150	mossy-green (approximating RAL 6005)
7.5	< 150	hazel (approximating RAL 8011)
8	< 150	honey (approximating RAL 1005)
10	< 150	red (approximating RAL 3020)
15	< 150	blue (approximating RAL 5012)
20	< 150	yellow (approximating RAL 1018)
25	< 150	pearl (approximating RAL 1013)

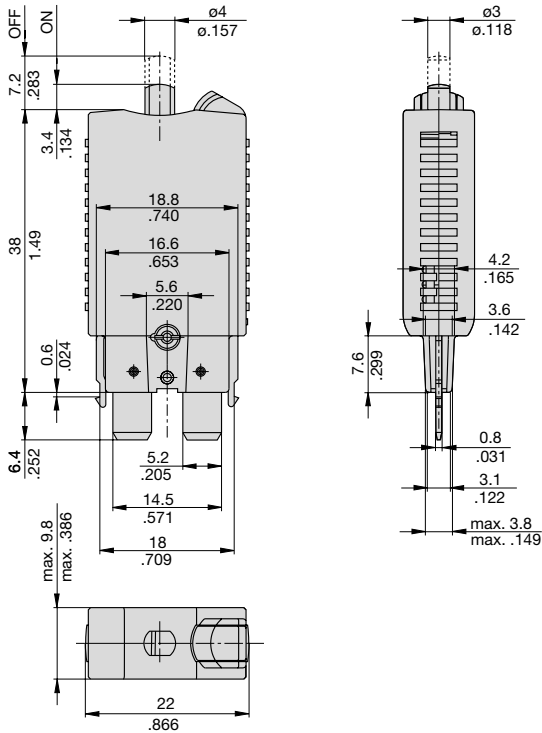


Technical data

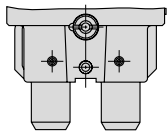
Voltage rating	DC 28 V
Current ratings	3...25 A (30 A upon request)
Typical life	at rated current: 3...25 A 6,000 operations at I_N 3...20 A 3,000 operations at $2 \times I_N$ 25 A 1,000 operations at $2 \times I_N$
Ambient temperature	-40...+85 °C (-40...+185 °F)
Interrupting capacity I_{cn}	400 A
Ultimate short-circuit breaking capacity	≥ 1 break operation at 2,000 A
Degree of protection (IEC 60529/DIN 40050)	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

Dimensions

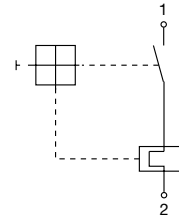
1170-21



1170-22

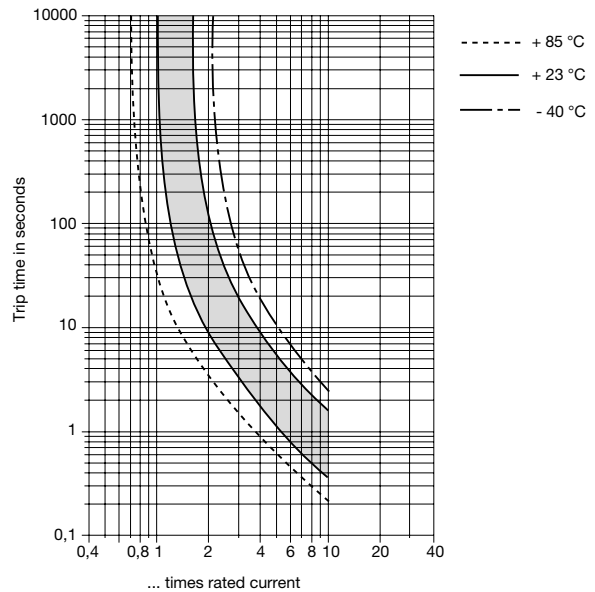


Internal connection diagram



Typical time/current characteristics at +23°C/73.4°F

3...25 A



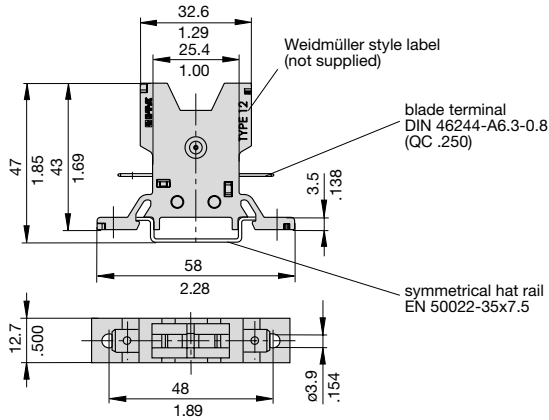
The time/current characteristic curve depends on the ambient temperature prevailing. In order to eliminate nuisance tripping, please multiply the circuit breaker current ratings by the derating factor shown below. See also section Technical information.

Ambient temperature °F	-40	-22	-4	+14	+32	+50
Ambient temperature °C	-40	-30	-20	-10	0	+10
Derating factor	0,77	0,80	0,84	0,89	0,94	0,96
Ambient temperature °F	+73.4	+104	+122	+140	+158	+185
Ambient temperature °C	+23	+40	+50	+60	+70	+85
Derating factor	1	1,08	1,16	1,24	1,33	1,42

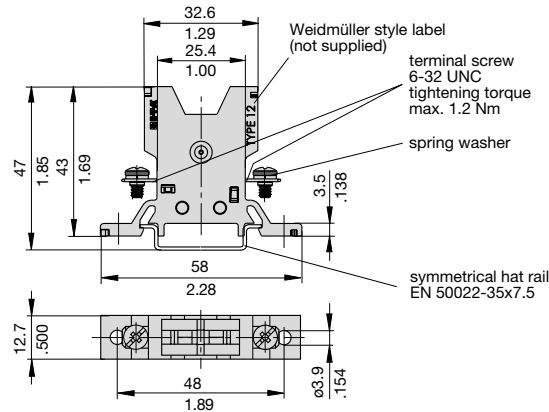
This is a metric design and millimeter dimensions take precedence ($\frac{\text{mm}}{\text{inch}}$)

Accessories

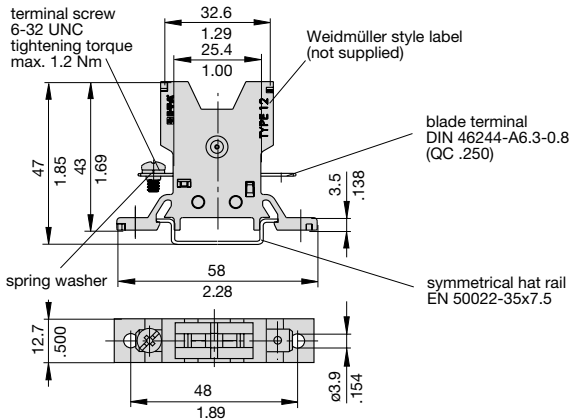
Socket 12-P10



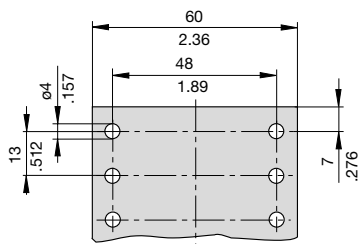
Socket 12-J20



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.

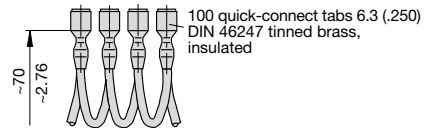
12	Mounting socket
Terminal design	
P10	blade terminals A6.3-0.8 (QC .250)
J20	screw terminals 6-32 UNC
A10	1 blade terminal A6.3-0.8 (QC .250)/1 screw terminal 6-32 UNC
Version	
(blank)	single socket
20	two-way
30	three-way
40	four-way
60	six-way

12 - P10 - 20 ordering example

Accessories for mounting socket 12

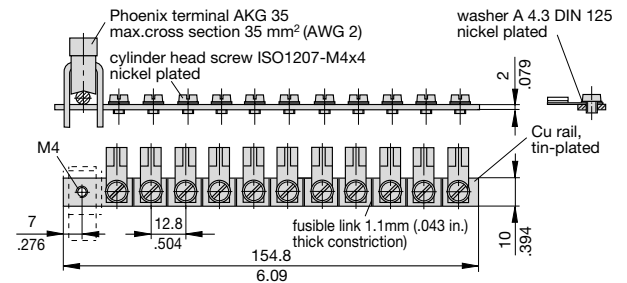
Connector bus links -P10

- 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



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.

