

## 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, to DIN 72581, part 3

22 blade terminals for automotive fuse blocks, without retaining clips, to DIN 72581, part 3

### Current ratings

3...25 A

1170 - 21 - 15 A ordering example

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

## 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	x
1170-22-	x	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
4	< 300	pink
5	< 300	light brown
6	< 150	mossy-green
7.5	< 150	brown
8	< 150	honey
10	< 150	red
15	< 150	blue
20	< 150	yellow
25	< 150	white



1170-...

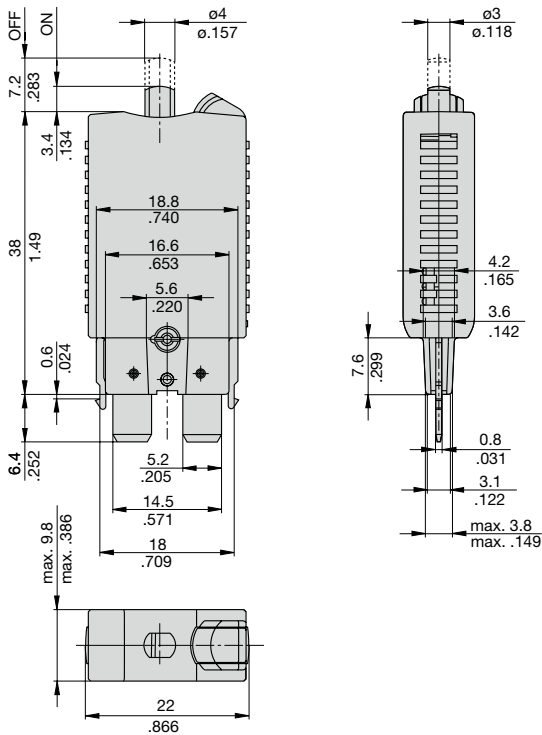
## Technical data

For further details please see: [www.e-t-a.de/ti\\_e](http://www.e-t-a.de/ti_e)

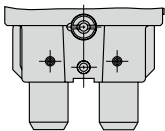
Voltage rating ( $U_N$ )	DC 12 V / 24 V / 48 V				
Max. voltage ( $U_{smax}$ )	DC 58 V				
Current ratings	3...25 A				
Typical life	at rated current:				
	$U_N$ DC 24 V	3...25 A	6 000 operations	at $1 \times I_N$	
	$U_N$ DC 24 V	3...20 A	3 000 operations	at $2 \times I_N$	
	$U_N$ DC 24 V	25 A	1 000 operations	at $2 \times I_N$	
$U_N$ DC 48 V	3...25 A	500 operations	at $1 \times I_N$		
Ambient temperature	-40...85 °C (-40...+185 °F)				
Interrupting capacity $I_{cn}$ to ISO10924	$I_N$	3...10 A	15 A	20 A	25 A
	$U_N$ DC 24 V	400 A (0-C0-C0)			
	$U_N$ DC 48 V	>100x at 75 A	>100x at 100 A	>100x at 135 A	>10x 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				

**Dimensions**

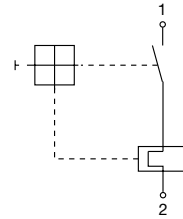
**1170-21**



**1170-22**

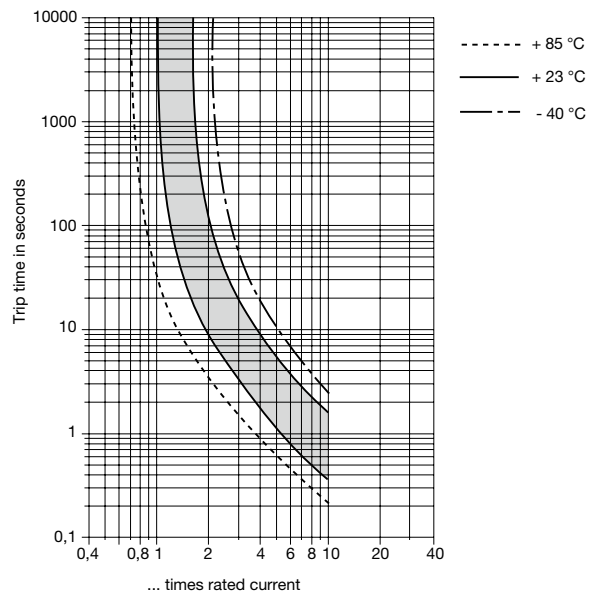


**Internal connection diagram**



**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 ( $\frac{\text{mm}}{\text{inch}}$ )