

## Description

Very cost effective design to meet international requirements. No exposed metal parts which are, or could become, current-carrying except for terminals. R-type TO CBE to EN 60934.

- Manual reset, cycling trip free mechanism
- Extremely small and lightweight
- UL, CSA, VDE and EN 60934 (IEC 60934) approved

## Typical applications

Battery chargers, consumer products, power supplies, motors.

## Ordering information

### Type No.

1658 single pole thermal circuit breaker

### Threadneck design

G21 manual reset type, 3/8"-27 threadneck

A00 auto reset type, without threadneck

### Hardware

00 no hardware

01 one PAL nut Y306 671 01, bulk

02 one PAL nut Y306 671 01,  
one knurled nut Y307 117 02, bulk

### Terminals

P10 blade terminals A6.3-0.8 (QC .250)

P13 blade terminals A6.3-0.8 (QC .250), 90°

### Current ratings

5 ...30 A

1658 - G21 - 02 - P10 - 5 A Ordering example

\* Screws and lock washers bulk shipped

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

## Compliances



## Preferred types

Preferred types	Standard current ratings (A)											
	5	6	7	8	9	10	12	15	16	20	25	30
1658-G21-02-P10-	x	x	x	x	x	x	x	x	x	x	x	x
1658-G21-02-P13-	x	x	x	x	x	x	x	x	x			
1658-A00-00-P10-	x	x	x	x	x	x	x	x	x			

## Standard current ratings and typical voltage drop values

Current rating (A)	voltage drop values (mV)	Current rating (A)	voltage drop values (mV)
5	≤ 250	12	≤ 250
6	≤ 250	15	≤ 250
7	≤ 250	16	≤ 250
8	≤ 250	20	≤ 250
9	≤ 250	25	≤ 250
10	≤ 250	30	≤ 250



1658-...

## Technical data

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

Voltage rating	AC 240 V; DC 28 V		
Current ratings	5...30 A		
Typical life	5...16 A	1,000 operations at 2 x I <sub>N</sub> , inductive	
AC + DC	17...25 A	1,000 operations at 2 x I <sub>N</sub> , resistive	
Behaviour at rated switching capacity (EN 60934; test sequence D)	operat.	I <sub>N</sub>	U <sub>N</sub>
40	5...16 A	AC 240 V	6 x I <sub>N</sub> ind
40	5...16 A	DC 28 V	4 x I <sub>N</sub> ind
40	17...25 A	AC 240 V	120 A resistive
40	17...25 A	DC 28 V	120 A resistive
Ambient temperature	-20...+60 °C (-4...+140 °F), ≤ 7 A max. +40 °C (+104 °F)		
Insulation co-ordination (IEC 60664 and 60664 A)	rated impulse withstand voltage	2.5 kV	pollution degree 2 reinforced insulation in operating area
Dielectric strength (IEC 60664 and 60664A)	test voltage operating area	AC 3,000 V	
Insulation resistance	> 100 MΩ (DC 500 V)		
Interrupting capacity I <sub>cn</sub>	5...7 A	180 A	
	8...30 A	200 A	
Interrupting capacity (UL 1077/EN 60934 PC1)	I <sub>N</sub>	U <sub>N</sub>	
	5...16 A	AC 240 V	1 000 A, C, 1
	5...30 A	AC 125 V	2 000 A, C, 1
	5...30 A	DC 32 V	2 000 A, C, 1
	5...30 A	AC 125 V	2 000 A, C, 1
		DC 28 V	(1658-A...)
Degree of protection (IEC 60529/DIN 40050)	operating area IP40 terminal area IP00		
Vibration	8 g (57-500 Hz) ± 0.61 mm (10-57 Hz), to IEC 60068-2-6, test Fc, 10 frequency cycles/axis		
Shock	30 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. 16 g		

