

ETA® Thermal Overcurrent Circuit Breaker 1658-...

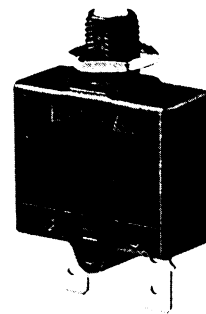
Description

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

- Manual Reset, trip free mechanism
- Extremely small and lightweight
- UL, CSA, VDE approved

Typical applications

Battery chargers, consumer products, power supplies, motors.



1658-...

Accessories

Y 306 671 01	PAL nut 3/8", 27-thread
Y 303 200 01	PAL nut 7/16", 28-thread
Y 300 190 03	Knurled nut 3/8", 27-thread
Y 302 294 03	Knurled nut 7/16", 28-thread
Y 300 192 01	Hex nut 3/8", 27-thread
Y 302 295 01	Hex nut 7/16", 28-thread
Y 301 059 02	Press to Reset Plate for 3/8", 27-thread, aluminium
Y 302 732 01	Press to Reset Plate for 7/16", 28-thread, aluminium
Y 303 051 01	Black Plastic Knurled Nut for 3/8", 27-thread
X 200 799 01	Reset Button Seal - long, 3/8", 27-thread
X 201 285 01	Reset Button Seal - short, 3/8", 27-thread

Ordering information

Type No.	
1658	single pole thermal circuit breaker
Threadneck design	
G21	manual reset type, 3/8"-27 threadneck
G41	manual reset type, 7/16"-32 threadneck
A21	auto reset type, 3/8"-27 threadneck
A41	auto reset type, 7/16"-28 threadneck
A00	auto reset type, without threadneck
Hardware	
00	no hardware
01	one PAL nut, bulk
02	one PAL nut, one knurled nut, bulk
06	one knurled nut, bulk
07	one hex nut, bulk
08	two hex nuts, bulk
Terminals	
P10	.250 quick connect
P13	.250 quick connect 90°
S80	straight screw terminals* 6-32 UNC
S83	90° bent screw terminals* 6-32 UNC
Current ratings	
	5 ... 25 A

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

* Screws and lockwashers bulk shipped

Approvals

Authority	Voltage rating	Current ratings
VDE (EN 60934)	AC 240 V, DC 28 V	5...25 A
UL, CSA	AC 250 V	5...15 A 1658-G...
	AC 125 V	18...25 A 1658-G...
	AC 125 V	5...25 A 1658-A...

Technical data

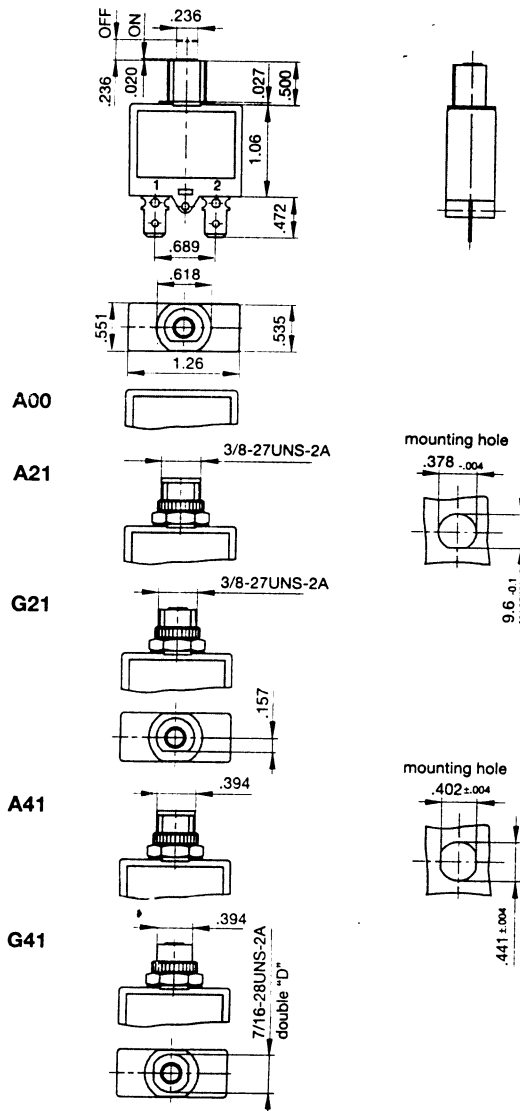
Voltage rating	AC 250 V; DC 28 V		
Current ratings	5...25 A		
Typical life	1000 operations at 2 x I _N		
Temperature range	-20...+60 °C (-4...+140 °F)		
Insulation co-ordination (IEC 664 and 664 A)	Rated impulse withstand voltage	Pollution degree	
	2.5 kV	2	reinforced insulation in operating area
Dielectric strength (IEC 664 and 664A) operating area	Test voltage		
	AC 3000 V		
Insulation resistance	> 100 MΩ (DC 500 V)		
Interrupting capacity I _{cn}	200 A		
Interrupting capacity (UL 1077)	I _N	U _N	
	5...15 A 18...25 A	AC 250 V AC 125 V	2000 A 2000 A
Degree of protection (IEC 529/DIN 40050)	operating area IP 40 terminal area IP 00		
Vibration	8 g (57-500 Hz) ±0.61 mm (10-57 Hz), to IEC 68-2-6, Test Fc, 10 frequency cycles/axis		
Shock	30 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		
Weight	approx. 16 g		

Standard current ratings and typical voltage drop values

Current rating (A)	Voltage drop (mV)	Current rating (A)	Voltage drop (mV)
5	≤ 150	12	≤ 140
6	≤ 150	15	≤ 240
7	≤ 150	18	≤ 240
8	≤ 150	20	≤ 240
9	≤ 150	25	≤ 240
10	≤ 140		

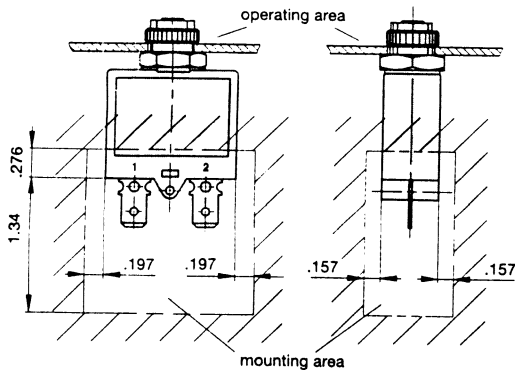
E-T-A Thermal Overcurrent Circuit Breaker 1658-...

Dimensions

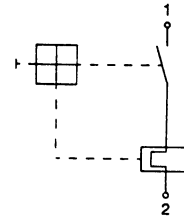


See ordering information for mounting hardware

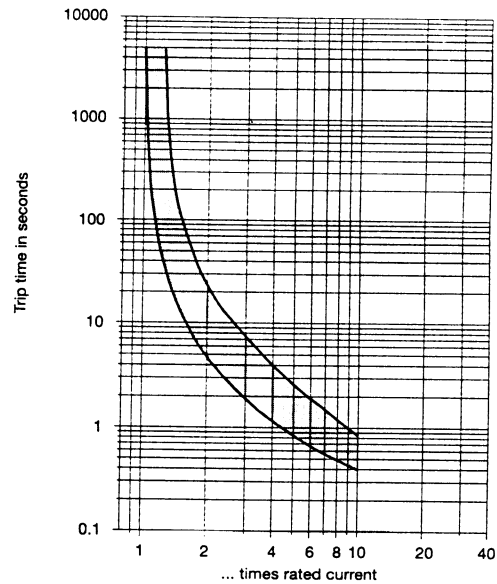
Installation drawings



Internal connection diagrams



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



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.

Ambient temperature °F	-4	+14	+32	+73.4	+104	+122	+140
°C	-20	-10	0	+23	+40	+50	+60
Multiplication factor	0.76	0.84	0.92	1	1.08	1.16	1.24