

E-T-A® Thermal Overcurrent Circuit Breaker 1410-L1

Description

Single pole press-to-reset thermal circuit breaker with extremely fast overload switching performance (R-type TO CBE to EN 60934). Miniaturised construction minimises PCB real estate required. PCB mounting or integral mounting. Largely temperature-insensitive.

Typical applications

Motors, transformers, solenoids, PCBs, hand-held machines, appliances, instrumentation.

Ordering information

Type No.	1410	single pole circuit breaker
Configuration	L	integral mounting or PCB mounting
Mounting	1	footprint 16.3x4.6
Number of poles	1	1-pole, thermally protected
Hardware	0	without
Terminal design	L1	solder pins 1.8x0.8 silver-plated
Characteristic curve	F1	fast acting
Actuator, Type and Colour	S01	reset button, black
Current ratings	0.63...10 A	
1410 - L 1 1 0 - L1 F1 - S01 - 0.8 A ordering example		

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

Preferred types

Preferred types	Standard current ratings (A)											
	0.63	0.8	1	1.5	2	2.5	3.15	4	5	6.3	8	10
1410-L110-L1F1-S01-	x	x	x	x	x	x	x	x	x	x	x	x

Standard current ratings and typical internal resistance values

Current rating (A)	Internal resistance (Ω)	Current rating (A)	Internal resistance (Ω)
0.63	1.8	3.15	< 0.12
0.8	1.7	4	< 0.1
1	1.3	5	< 0.1
1.5	< 1	6.3	< 0.1
1.8	< 1	8	< 0.1
2	< 1	10	< 0.1
2.5	< 0.15		



1410-L1...

Technical data

For further details please see: http://www.e-t-a.de/ti_e

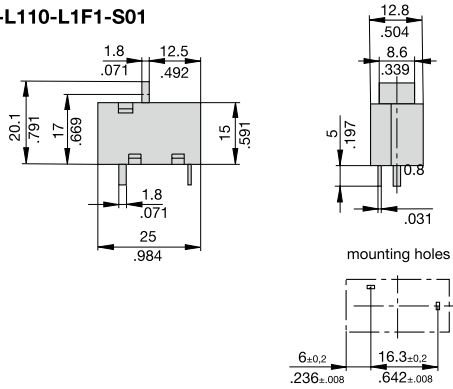
Voltage rating	AC 240 V; DC 28 V (UL: AC 250 V; DC 50 V)	
Current rating range 1-2	0.63...10 A	
Typical life	AC 240 V: 0.63...2.25 A 500 break operations at 2 x I _N , inductive 2.5...10 A 500 break operations at 2 x I _N , resistive DC 50 V: 0.63...2.25 A 500 break operations at 2 x I _N , inductive DC 28 V: 2.5...10 A 500 break operations at 2 x I _N , inductive	
Ambient temperature	-20...+70 °C (-4...+158 °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 1,500 V
Insulation resistance	> 100 MΩ (DC 500 V)	
Interrupting capacity I _{cn} (o-o-o)	0.63...2 A 2.5...8 A 10 A 3.15...10 A	12 x I _N 8 x I _N , AC max. 50 A 6 x I _N , AC 10 x I _N , DC
Interrupting capacity (UL 1077)	0.63...10 A 0.63...10 A	2,000 A AC 250 V 200 A DC 50 V
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	20 g (11 ms) to IEC 60068-2-27, test Ea	
Corrosion	48 hours at 5 % salt mist, to IEC 60068-2-11, test Ka	
Humidity	96 hours at 95 % RH to IEC 60068-2-78, test Cab	
Mass	approx. 5 g	

Approvals

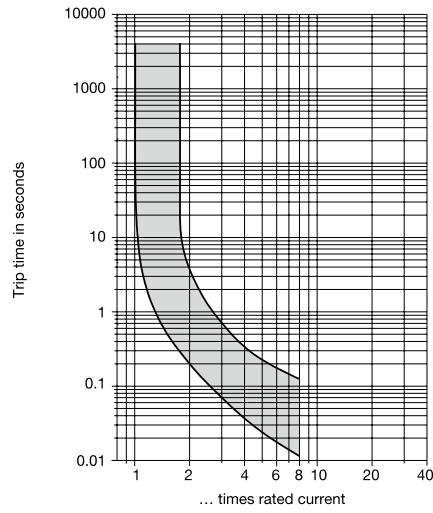
Authority	Standard	Rated voltage	Current ratings
VDE	IEC/EN 60934	AC 240 V DC 50 V DC 28 V	0.63 A...6.3 A 0.63 A...2.25 A 2.5 A...10 A
UL	UL 1077	AC 250 V DC 50 V	0.63 A...10 A 0.63 A...10 A
CSA	C22.2 No 235	AC 125 V DC 48 V	0.63 A...8 A 0.63 A...8 A

Dimensions

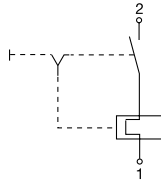
1410-L110-L1F1-S01



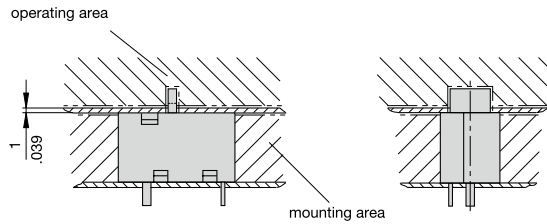
Typical time/current characteristics at +23 °C/+73.4 °F



Internal connection diagram



Installation drawings



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.

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