

Description

Single pole circuit breaker in a miniaturised design.

Features

- For integral- and solder mounting, actuator design: reset button. For other mounting and actuator designs, please refer to the additional 1410 data sheets.
- Current rating range 0.63...10 A
- Rated voltage range AC 240 V, DC 28 V, DC 50 V
- Very fast trip curve through globally unique hot wire principle
- Reliable switching behaviour through snap action mechanism
- Trip behaviour is independent from the ambient temperature

Benefits

- Perfect replacement for blade fuses thanks to its compact design and suitable current ratings
- Maximum device availability: after an overcurrent trip, the circuit breaker can be immediately reset, no fuse replacement required
- Fast trip curve ensures on-time disconnection and protection of sensitive components especially on printed circuit boards

Typical applications

Overcurrent protection of

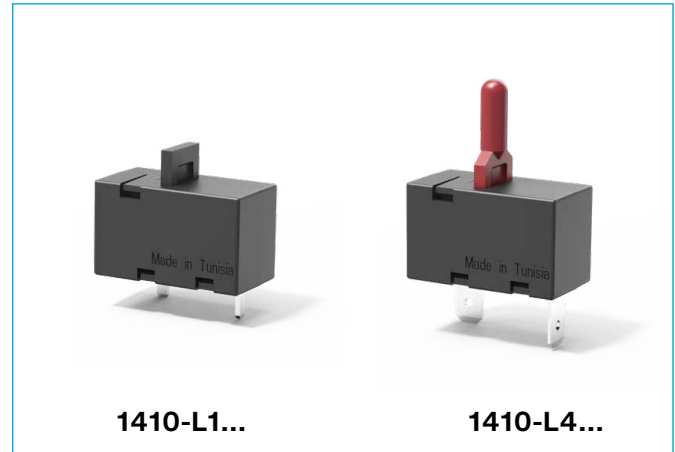
- electronic components on PCBs
- motors and transformers in small devices (measuring and control technology, HiFi systems etc.)

Compliance



Approvals

Approval authority	Standard	Rated voltage	Current rating range
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



Technical data

For detailed technical information please see www.e-t-a.de/ti_en

Rated voltage AC 240 V, DC 28 V, DC 50 V
AC 250 V (UL)

Current rating range 0.63 ... 10 A
1-2

Typical life

AC 240 V 0.63...2.25 A 500 disconnections at $2 \times I_N$, inductive
2.5...10 A 500 disconnections at $2 \times I_N$, resistive

DC 50 V 0.63...2.25 A 500 disconnections at $2 \times I_N$, inductive

DC 28 V 2.5...10 A 500 disconnections at $2 \times I_N$, inductive

Ambient temperature -20 ... +70 °C

Insulation coordination Overvoltage category II (Rated impulse voltage 2.5 kV), pollution degree 2

Dielectric strength

Degree of protection II at actuating area, test voltage AC 3000 V

Insulation resistance > 100 MOhm (DC 500 V)

Interrupting capacity I_{cn} (o-o-o)	0.63 ... 2 A	$12 \times I_N$
	2.5 ... 8 A	$8 \times I_N$ AC, max. 50 A
10 A	$6 \times I_N$	
3.15 ... 10 A	$10 \times I_N$ DC	

Rupture capacity	0.63 ... 10 A	2,000 A	at AC 250 V
	UL 1077	0.63 ... 8 A	200 A

Degree of protection (IEC 60529) Actuating area IP40
IP00 terminal area

Vibration resistance 8 g (57-500 Hz), ± 0.61 mm (10-57 Hz), Test according to IEC 60068-2-6, test Fc
10 frequency cycles/axis

Shock resistance 20 g (11 ms)
Test according to IEC 60068-2-27, test Ea

Corrosion 48 hours at 5 % salt mist,
Test according to IEC 60068-2-11, test Ka

Humidity test 96 hrs 95 % RH,
test according to IEC 60068-2-78, test Cab

Mass approx. 5 g

Current ratings I_N 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		

Preferred types

Preferred types	Preferred 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

Ordering number code

Type number

1410 Circuit breaker with thermal trip principle

Mounting method

L Integral mounting or PCB mounting

Fixation

1 Grid 16.3 x 5 mm

4 Grid 17.5 x 4.6 mm (blade terminal)

Number of poles

1 1-pole thermally protected

Design version, accessories

0 none

Terminal design

L1 Soldering pins 1.8 x 0.8 silver-plated

P3 Blade terminals IEC 61210 4.8 x 0.5 mm, silver-plated

Characteristic curve

F1 Fast trip curve

Actuator, type and colour

S01 Reset button, black

E03 Reset slide switch, round, long, white (fixation 4 only)

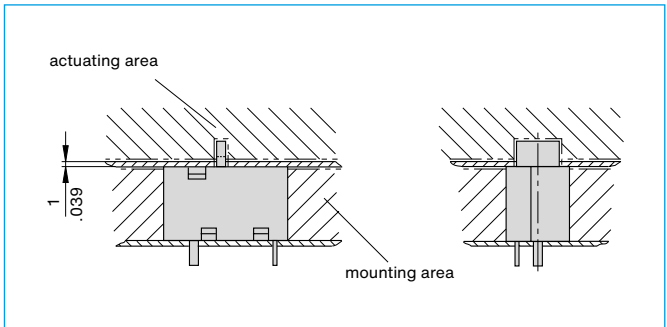
E04 Reset slide switch round, long, red (fixation 4 only/no TÜV/VDE approval)

Current rating range

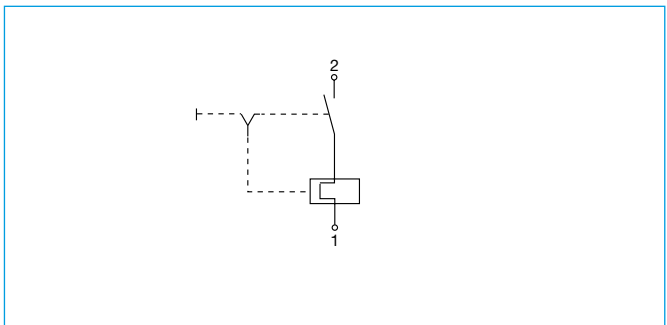
0.63 ... 10 A

1410- L 1 1 0 -L1 F1 - S01 0. A Ordering example

Installation drawing



Schematic diagram

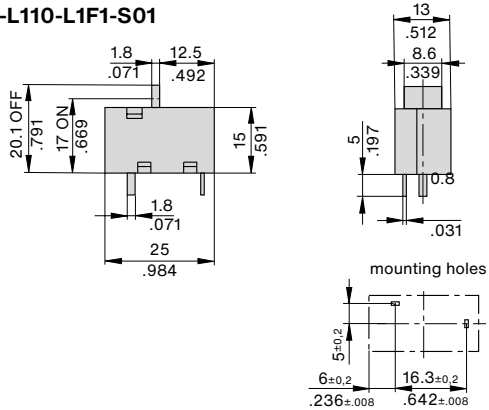


Please observe our minimum order quantities.

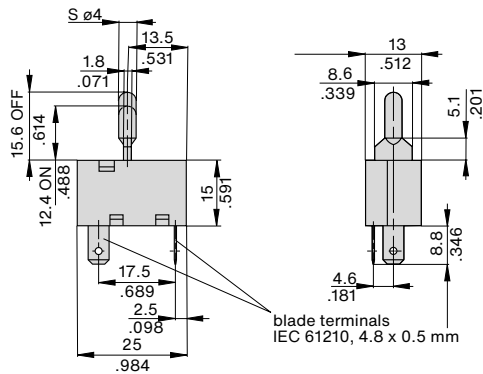
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Dimensions

1410-L110-L1F1-S01



1410-L410-P3F1-E04

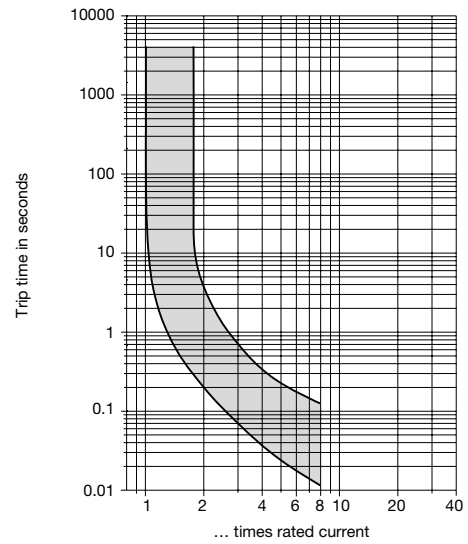


Note

- Avoid stronger pressure on the reset button in ON condition, as this may lead to interruptions
- For maximum service life, the circuit breaker must not be switched on under load

Time/current characteristics

Ambient temperature 23 °C



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