

## Description

Single pole high performance thermal circuit breaker, with push-to-reset tease free, trip-free snap action mechanism (R-type TO CBE to EN 60934). Designed for threadneck panel mounting and for applications with a high fault current switching requirement. Approved to CBE standard EN 60934 (IEC 60934).

**US patent number:** US 6,040,747

## Typical applications

Motors, transformers, solenoids, battery chargers, power supplies, appliances, machinery, extra low voltage systems.

## Ordering information

### Type No.

4130 single pole thermal circuit breaker

#### Mounting

**G2** M12x1, knurled nut (bulk shipped with 5 pcs plus)

**G4** M12x1, hex nut and knurled nut (bulk shipped with 5 pcs plus)

#### Number of poles

**1** single pole, thermally protected

#### Actuator configuration

**1** black push button

#### Terminal design

**K4** terminal M6x8

screw and washer bulk shipped

#### Characteristic curve

**M1** medium delay

#### Current ratings

**20... 80 A**

4130 - G2 1 1 - K4 M1 - 20 A ordering example

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

## Preferred types

Preferred types	Standard current ratings (A)									
	20	25	30	35	40	45	50	60	70	80
4130-G211-K4M1-	x	x	x	x	x	x	x	x	x	
4130-G411-K4M1-	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)
20	< 0.02	40	< 0.01
25	< 0.02	50	< 0.01
30	< 0.02	60	< 0.01
35	< 0.02	70	< 0.01
35	< 0,02	80	< 0,01



4130-...

## Technical data

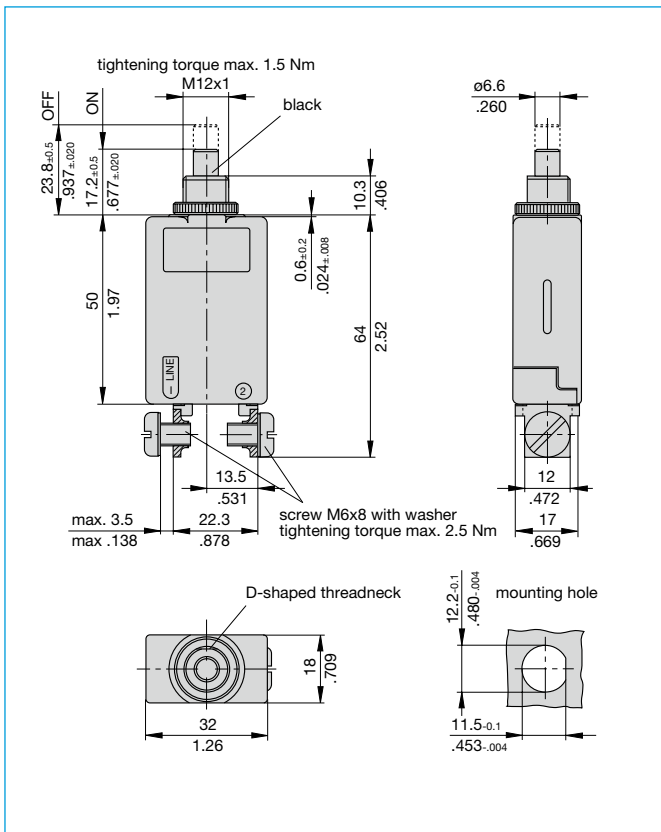
For further details please see: [http://www.e-t-a.de/ti\\_e](http://www.e-t-a.de/ti_e)

Voltage rating	AC 240 V; DC 50 V		
Current rating range	20...80 A		
Typical life	AC 240 V: 20...70 A	100 operations at 2 x I <sub>N</sub> , inductive 500 operations at 2 x I <sub>N</sub> , resistive	
	DC 50 V: 20...80 A	500 operations at 2 x I <sub>N</sub> , inductive	
Ambient temperature	-30...+60 °C (-22...+140 °F)		
Insulation co-ordination (IEC 60664)	rated impulse withstand voltage 2.5 kV (reinforced insulation in the mounting area)	pollution degree 2	
Dielectric strength operating area	test voltage AC 3,000 V		
Insulation resistance	> 100 MΩ (DC 500 V)		
Interrupting capacity I <sub>cn</sub>	800 A		
Interrupting capacity (UL 1077)	I <sub>N</sub>	U <sub>N</sub>	
	20...80 A	AC 240 V	1,000 A
	20...60 A	AC 120 V	3,500 A
	80 A	AC 120 V	2,000 A
	20...50 A	DC 50 V	3,500 A
	60...80 A	DC 50 V	2,000 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	25 g (11 ms) to IEC 60068-2-7, 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. 55 g		

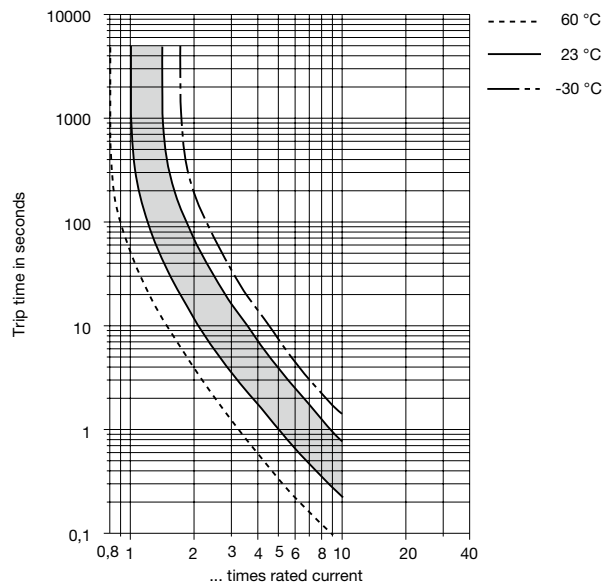
## Approvals

Authority	Standard	Rated voltage	Current ratings
VDE	IEC/EN 60934	AC 240 V DC 50 V	20 A...70 A 20 A...80 A
UL	UL 1077	AC 240 V DC 50 V	20 A...80 A 20 A...80 A
CSA	C22.2 No 235	AC 240 V DC 50 V	20 A...80 A 20 A...80 A

## Dimensions



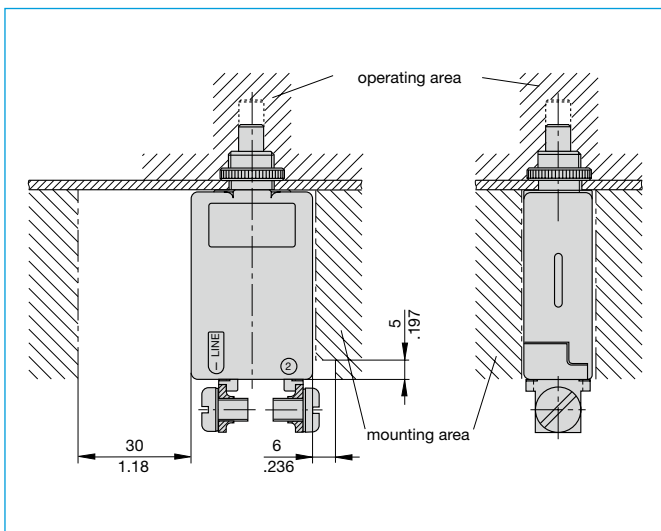
## Typical time/current characteristics



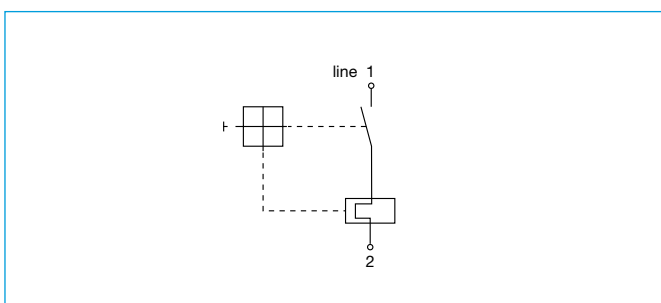
The time/current characteristic curve depends on the ambient temperature prevailing. In order to eliminate nuisance tripping, please multiply the circuit breaker current ratings by the derating factor shown below. See also section Technical information.

Ambient temp. °F	-22	-4	+14	+32	+73.4	+104	+122	+140
°C	-30	-20	-10	0	+23	+40	+50	+60
Derating factor	0.68	0.76	0.84	0.92	1	1.08	1.16	1.24

## Installation drawing



## Internal connection diagram

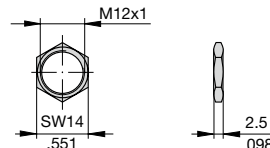


## Accessories

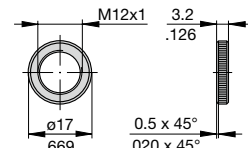
- Hex nut with splash cover, black X 201 296 01 without O ring (IP64)
- Water splash cover, transparent with knurled nut and O ring (IP64) X 210 663 01
- Hex nut with splash cover, transparent X 200 801 08 with O ring (IP66/IP67)



Separate hardware  
Hex nut Y 300 116 02



Knurled nut  
Y 302 065 01



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.