

Description

Single, two and three pole rocker switch/thermal trip free circuit breakers (S-type TO CBE to EN 60934) of compact design for snap-in panel mounting. Available either with protection on one/both/all poles or, in the case of the double pole version, protection on one pole only. Illumination is optional and there is a choice of rocker colours. Approved to CBE standard EN 60934 (IEC 60934).

Typical applications

Motors, transformers, solenoids, household and office machines, electrical tools, mobile homes, boating, construction vehicles, medical equipment to EN 60601.

Standard current ratings and typical internal resistance values

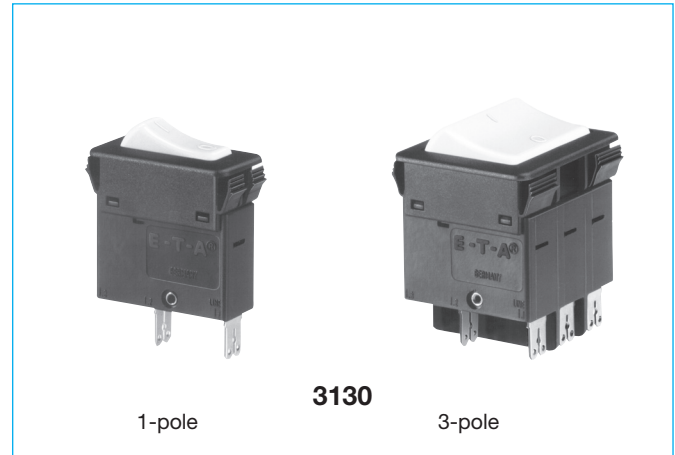
Current rating (A)	Internal resistance per pole (Ω)	Current rating (A)	Internal resistance per pole (Ω)
0.1	94	4	0.0435
0.2	24	5	0.0325
0.3	12	6	0.0215
0.4	5.30	7	0.0165
0.5	4.20	8	0.0165
0.8	1.50	10	< 0.02
1	0.9	12	< 0.02
1.2	0.80	14	< 0.02
1.5	0.45	15	< 0.02
2	0.27	16	< 0.02
2.5	0.0785	18	< 0.02
3	0.0595	20	< 0.02
3.5	0.0565		

Illumination voltage/power consumption

operating voltage	power consumption		
	1-pole	2-/3-pole Y+R	2-/3-pole G
12 V	9 mA	2 mA	3.5 mA
24 V	9 mA	2 mA	3.5 mA
48 V	9 mA	2 mA	3.5 mA
115 V	< 1 mA	0.9 mA	2.8 mA
230 V	< 1 mA	0.9 mA	2.8 mA
400 V	-	0.9 mA	2.8 mA

Approvals

Authority	Voltage ratings	Current ratings
VDE (EN 60934)	AC 240/415 V	0.1...20 A <i>single pole</i> 0.1...16 A <i>multipole</i>
	DC 50 V	0.1...8 A <i>single pole</i> 0.1...16 A <i>multipole</i>
	DC 28 V	0.1...20 A <i>single pole</i>
UL, CSA	AC 250 V; DC 50 V 3 AC 250 V	0.1...16 A <i>1-/2- pole</i> 0.1...12 A <i>3-pole</i>



Technical data

For further details please see chapter: **Technical Information**

Voltage rating	AC 240 V; 3 AC 415 V; DC 50 V (UL: AC 250 V; 3 AC 250 V; DC 50 V)		
Current ratings	0.1...20 A 1-pole 0.1...16 A 2- and 3-pole		
Typical life	1-pole AC 240 V: 0.1...20 A 30,000 operations at 1 x I _N , inductive DC 50 V: 0.1...4 A 30,000 operations at 1 x I _N , inductive 4.5...16 A 30,000 operations at 1 x I _N , resistive DC 28 V: 0.1...20 A 30,000 operations at 1 x I _N , inductive		
	2-pole AC 240 V: 0.1...16 A 50,000 operations at 1 x I _N , inductive DC 50 V: 0.1...16 A 50,000 operations at 1 x I _N , inductive		
	3-pole 3 AC 415 V: 0.1...16 A 30,000 operations at 1 x I _N , inductive		
Ambient temperature	-30...+60 °C (-22...+140 °F)		
Insulation co-ordination (IEC 60664 and 60664 A)	rated impulse withstand voltage 2.5 kV reinforced insulation in operating area	pollution degree 2	
Dielectric strength (IEC 60664 and 60664A)	test voltage operating area AC 3,000 V current path/current path AC 1,500 V		
Insulation resistance	> 100 MΩ (DC 500 V)		
Interrupting capacity I _{cn}	0.1...2 A 2.5...20 A 2.5...16 A 2.5...12 A 14 + 16 A	10 x I _N 150 A 250 A 150 A 130 A	1-pole 2-pole 3-pole 3-pole
Interrupting capacity (UL 1077)			
	I _N	U _N	I _{nc}
1, 2-pole	0.1...16 A	AC 250 V	3500 A
3-pole	0.1...12 A	3 AC 250 V	5000 A
1,2-pole	0.1...16 A	DC 50 V	2000 A
Degree of protection (IEC 60529/DIN 40050)	operating area IP40 terminal area IP00		
Vibration	5 g (57-500 Hz) ± 0.38 mm (10-57 Hz) to IEC 60068-2-6, test Fc 10 frequency cycles/axis		
Shock	1-pole: 25 g (11 ms) 2 + 3-pole: 20 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. 45 g (three pole) approx. 31 g (double pole) approx. 17 g (single pole)		

Ordering information - 1-pole

Type No.	3130	single pole thermal circuit breaker
Mounting	F	snap in frame
Frame	1	standard
Number of poles	1	single pole, thermally protected
Frame mounting	0	panel thickness 1-2.5 mm (.039-.099 in)
Terminal design	P7	blade terminals DIN 46244-C-Ms-S (QC 2x.110)
	H7	for terminals 1.1, 2.1 3.1 terminal screws M 3.5 for terminals 1.2, 2.2, 3.2 blade terminals (QC 2x.110)
Characteristic curve	T1	thermal 1.05-1.4 I _N
Actuator style	W	rocker switch with marking „I“ and „O“ moulded in
Actuator colour	01 Q	black opaque without illumination
	02 Q	white opaque without illumination
	04 Q	red opaque without illumination
	14 Q R	red translucent with LED-illumination
	15 Q Y	orange translucent with LED-illumination
	19 Q G	green translucent with LED-illumination
Illumination voltage range*	2	10 - 14 V DC
	3	20 - 28 V DC
	6	90 - 140 V AC
	7	185 - 275 V AC
Current ratings	0,1...20 A	

3130 - F 1 1 0 - P7 T1 - W 14 Q R 3 - 5 A ordering example

* N/A for non-illuminated version

Ordering information - multipole

Type No.	3130	multipole thermal circuit breaker
Mounting	F	snap in frame
Frame	1	standard
Number of poles	2	2-pole thermally protected
	3	3-pole thermally protected
	5	2-pole, 1-pole thermally protected
Frame mounting	0	panel thickness 1-2.5 mm (.039-.099 in)
Terminal design	P7	blade terminals DIN 46244-C-Ms-S (characteristic curve T1)
	H7	for terminals 1.1, 2.1 3.1 terminal screws M 3.5 for terminals 1.2, 2.2, 3.2 blade terminals (QC 2x.110)
Characteristic curve	T1	thermal 1.05-1.4 I _N
Actuator style	W	rocker switch with marking „I“ and „O“ moulded in
Actuator colour	01 Q	black opaque without illumination
	02 Q	white opaque without illumination
	04 Q	red opaque without illumination
	14 Q R	red translucent with LED-illumination
	15 Q Y	orange translucent with LED-illumination
	19 Q G	green translucent with LED-illumination
Illumination voltage range*	2	10 - 14 V DC
	3	20 - 28 V DC
	6	90 - 140 V AC
	7	185 - 275 V AC
	8	320 - 450 V AC
Current ratings	0,1...16 A	

3130 - F 1 3 0 - P7 T1 - W 14 Q R 7 - 5 A ordering example

* N/A for non-illuminated version

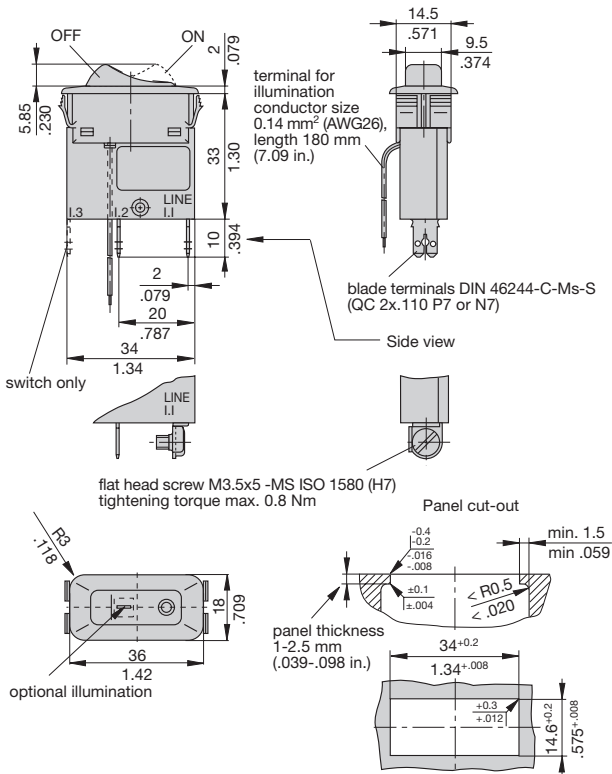
Preferred types

NEW

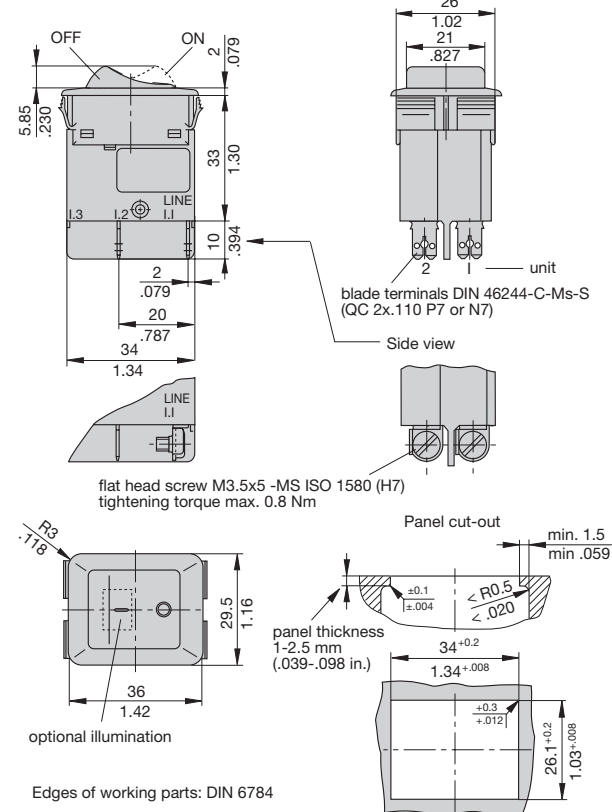
Preferred types 3130 1-pole	Standard current ratings (A)									
	1	2	3	4	5	8	10	15	16	20
3130-F110-P7T1-W01Q-	x	x	x	x	x	x	x	x	x	x

Dimensions

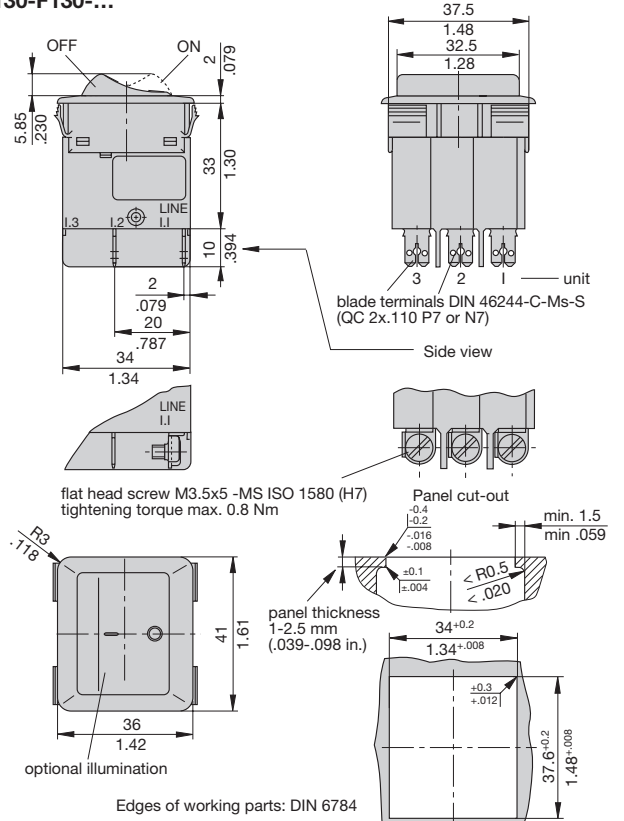
3130-F110-...



3130-F120-...

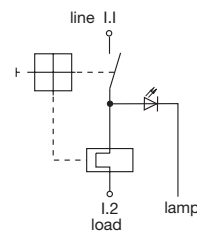


3130-F130-...

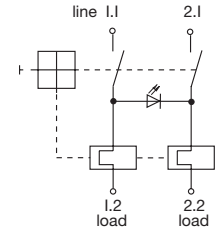


Internal connection diagrams

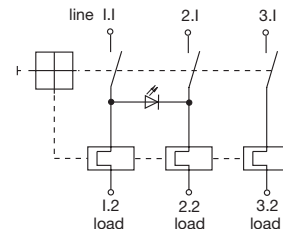
1-pole



2-pole



3-pole



This is a metric design and millimeter dimensions take precedence ($\frac{\text{mm}}{\text{inch}}$)

