E-T-A Thermal Circuit Breaker 1120

Description

Double pole combined circuit breaker and ON/OFF switch with rocker actuation. Specially suited to single-phase applications. Snap-in front panel mounting. Thermal positively trip free mechanism ensures reliable overcurrent protection and safe physical isolation of the load circuit. Attractively styled, with rocker illumination optional. The status of the switching contacts is shown by the position of the rocker actuator.
For high volume requirements customer-specific designs can be offered for the front bezel and the rocker.
It meets the requirements of the CBE standard EN 60934 (IEC 60934): S type, TO.
Meets the requirements regarding fire resistance of EN 60335-1 : 2007-02 Safety of household and similar electrical appliances.

Minimum ordering quantities apply!

1120-..

without water splash protection | with water splash protection

Typical applications

Electrical motors, household appliances, office equiment, garden and hobby tools, power supplies, charging rectifiers, cable extension reels, multiple socket outlets.

Variants/Options

Type No.
1120 thermal circuit breaker
Configuration
F snap-in panel mounting
Size of frame
1 panel thickness 1 - 2.5 mm (without water splash protection)
2 panel thickness 1 - 2 mm (with water splash protection)
Number of poles
0 double pole without protection
5 double pole, one pole thermally protected
Design
0 standard
1 with water splash protection
Terminal design
P1 blade terminals 6.3x0.8
P2 blade terminals 6.3x0.8, 90° angled
Characteristic curve
Q0 without
T1 thermal
Actuator style
U rocker (momentary switch)
W rocker (latching switch)
Actuator colour
A black opaque
B white opaque
E blue opaque
C red translucent
D green translucent
F blue translucent
other colours upon request
Actuator markings
00 "I" and "O" moulded in
Illumination
0 without illumination
B filament bulb
Illumination voltage range
0 without illumination
3 AC 90 V - 140 V
4 AC 185 V - 275 V
DC illumination upon request
Current ratings
3, 4, 5, 6, 8, 10, 12, 14, 16 A

1120 - F 1 5 0 - P1 T1 - W B 00 0 0 - 10 A ordering example

Technical data

Voltage rating	AC 240 V; DC 32 V DC 50 V (only double pole)
Current ratings	3...16 A
Typical life	20,000 operations at I_N, inductive
Ambient temperature	-20 °C...+60 °C
Insulation co-ordination (IEC 60664-1)	2,5 kV/2 reinforced insulation in operating area
Dielectric strength operating area terminal area pole/pole	 test voltage AC 3,000 V test voltage AC 1,500 V test voltage AC 1,500 V
Insulation resistance	> 100 MΩ (DC 500 V)
Switching capacity I_{cn}	AC 240 V: 200 A, 1 and 2 pole DC 50 V: 200 A, 2 pole DC 32 V: 200 A, 1 and 2 pole
Switching capacity (UL 1077)	AC 277 V: 3,500 A, 1 and 2 pole DC 50 V: 2,000 A, 2 pole DC 32 V: 2,000 A, 1 and 2 pole
Degree of protection (IEC 60529)	operating area IP40 with water splash protection IP66 terminal area IP00
Vibration	8 g (57-500 Hz), ± 0,61 mm (10-57 Hz) test to IEC 60068-2-6, test Fc, 10 frequency cycles/axis
Shock	20 g (11 ms) test to IEC 60068-2-27, test Ea
Corrosion	48 hrs in 5% salt mist, test to IEC 60068-2-11,test Ka
Humidity	96 hrs in 95% RH, test to IEC 60068-2-3, test Cab
Mass	approx. 20 g

Illumination voltage/power consumption

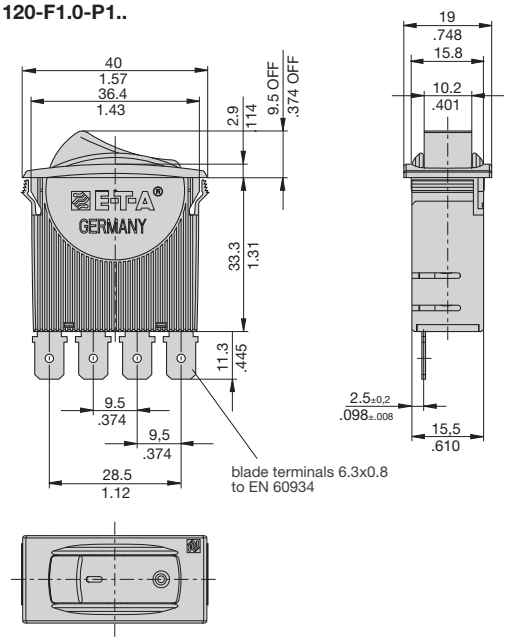
operating voltage	filament/neon
AC 115 V	< 1,5 mA
AC 230 V	< 1,5 mA

Approvals

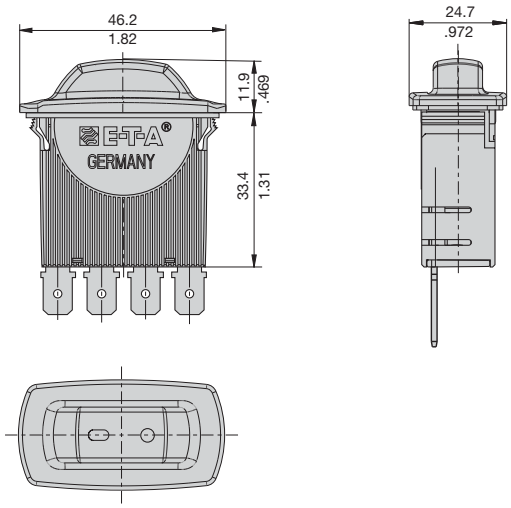
Authority	Voltage ratings	Current ratings
VDE (EN 60934)	AC 240 V, DC 32 V DC 50 V	3...16 A 1 + 2 pole 3...16 A 2 pole
UL, CSA, CCC	AC 277 V, DC 32 V DC 50 V	3...16 A 1 + 2 pole 3...16 A 2 pole

Dimensions single pole

1120-F1.0-P1..

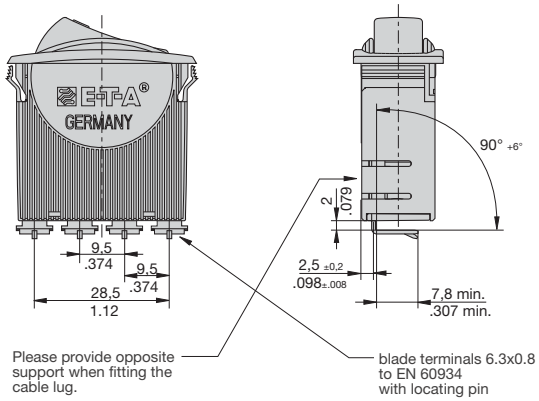


1120-F2.1-P1..



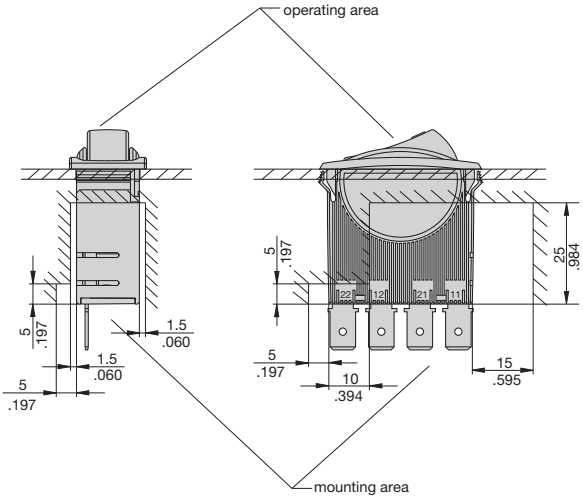
Dimensions double pole

1120-F...-P2

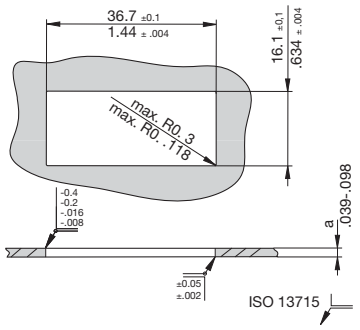


Applicable for nominal dimensions without direct tolerance indication:
DIN ISO 286 ± IT13

Installation drawing



Cut-out dimensions

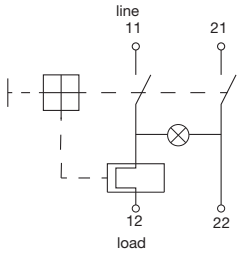


version	dimension “a”
1120-F1..-...	1 - 2.5 mm/ .039-.098
1120-F2..-...	1 - 2 mm/

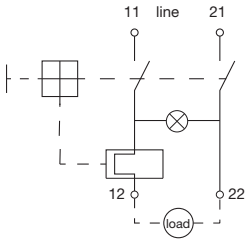
Applicable for nominal dimensions without direct tolerance indication:
DIN ISO 286 ± IT13

Internal connection diagrams

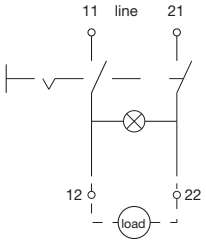
single pole connection
AC 240 V, DC 32 V



AC 240 V, DC 50 V
double pole
one pole thermally protected

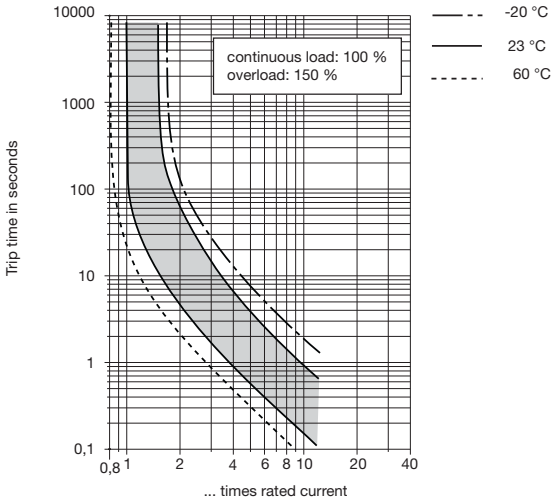


double pole
without protection

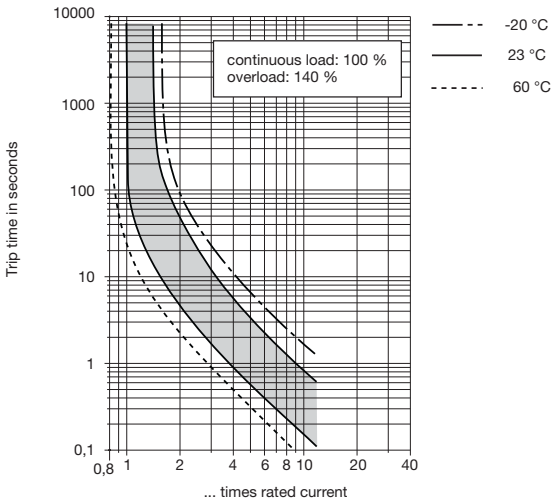


T1 - thermal characteristic curve

3 ... 6 A



8 ... 16 A



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 °C	-20	-10	0	+23	+ 40	+50	+60
Derating factor	0,84	0,88	0,92	1	1,08	1,14	1,23

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

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.