

Description

An extremely versatile range of rocker switch/thermal circuit breakers (S-type TO CBE to EN 60934 with trip free mechanism) offering the choice of single pole, double pole with single pole protection, and double pole with protection on both poles. Designed for snap-in panel mounting with versions available for three different panel cut-out sizes. Illumination is optional and there is a range of colours and markings for the rocker.

Add on modules:

- Under voltage release coil (for double pole versions only).
- Magnetic trip coil for short circuit protection.
- Magnetic trip coil for remote relay trip.
- Auxiliary contacts for status signalling.

Approved to CBE standard EN 60934 (IEC 60934).

Meets the requirements regarding fire resistance of EN 60335-1 : 2007-02
Safety of household and similar electrical appliances.

Typical applications

Motors, transformers, solenoids, extra low voltage wiring systems, office machines, electro-medical equipment, power supplies, communications systems, 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	4.5	0.0435
0.3	12	5	0.0325
0.4	5.30	6	0.0215
0.5	4.20	7	0.0165
0.6	2.90	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		
	Y	R	G

Ordering information

Type No.

3120 rocker switch/circuit breaker

Mounting

F snap in frame

Size of frame

- 3 to fit mounting cut-out 50.5 x 21.5 mm
panel thickness: 1-6.35 mm (.039-.250 in)
- 5 to fit mounting cut-out 44.5 x 22 mm
panel thickness: 1-4 mm (.039-.157 in)
- 7 to fit mounting cut-out 44.5 x 22 mm
panel thickness: 1-4 mm (.039-.157 in)

Number of poles

- 0 2-pole, unprotected, switch only
- 1 1-pole, thermally protected
- 2 2-pole, thermally protected
- 5 2-pole, 1-pole thermally protected

Mounting frame design (F3 & F5)

- 1 collar height 1 mm
- 3 collar height 9 mm
- 4 collar height 2 mm with water splash protection (IP54)

Mounting frame design (F7)

- R black
- T black with snap-on splash cover

Terminal configuration

- P7 blade terminals, standard for curve T1
(thermal circuit breaker)
- H7 as P7, terminals 11 and 21 with flat head screws M3.5
– standard for units with undervoltage release module
- N7 as P7, but with additional shunt terminals 12(I) and 22(I) –
standard for version Q1 (switch only)

Characteristic curve

- T1 thermal 1.01 - 1.4 x I_N
- Q1 switch only

Actuator style

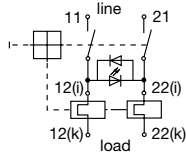
- W standard rocker (F3 & F5)
- A specially designed rocker (F7)

Colour and illumination

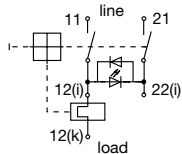
- 01

Internal connection diagrams

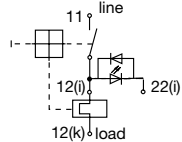
**2-pole,
thermally protected on both poles**



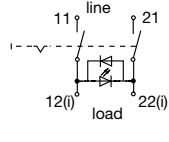
**2-pole,
thermally protected on one pole only**



**1-pole,
thermally protected**



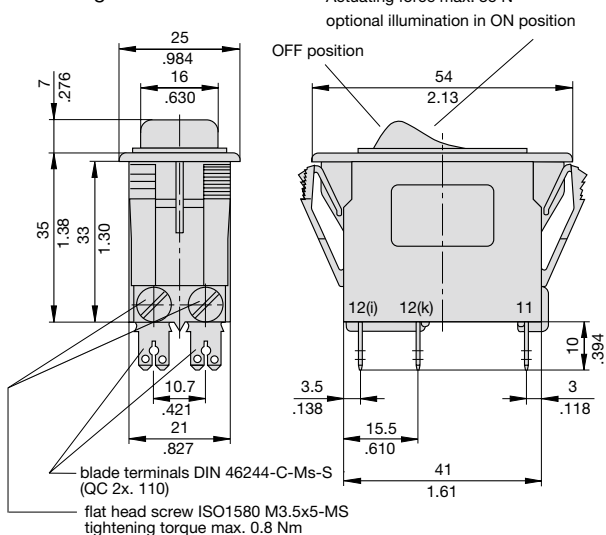
**2-pole,
unprotected**



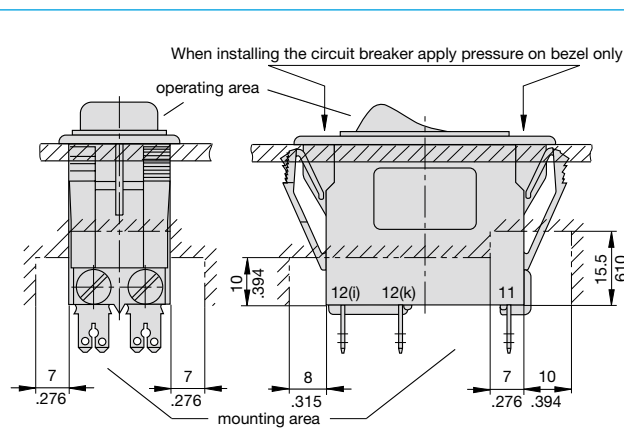
Dimensions

Style F3.1

collar height 1 mm/.039 in.



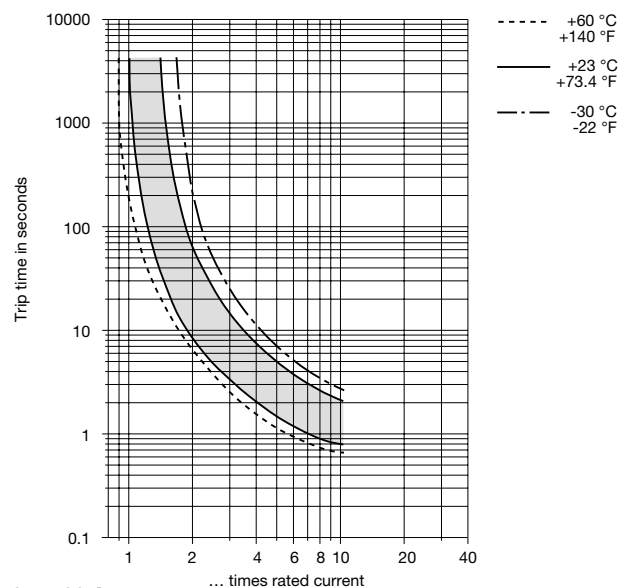
Installation drawing



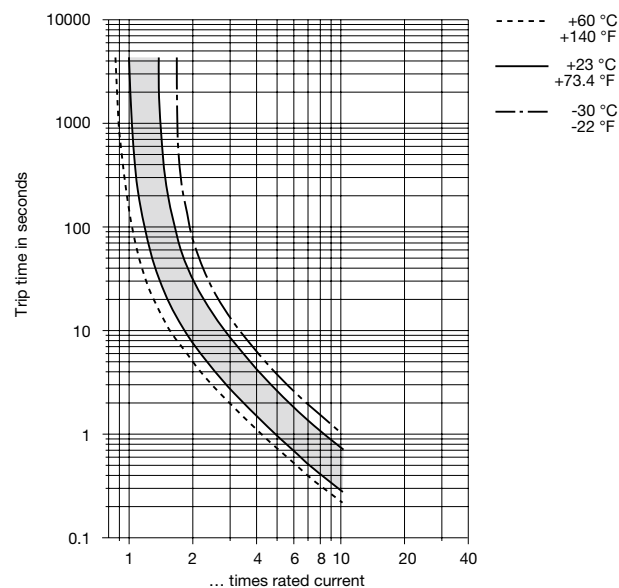
Typical time/current characteristics

single or double pole load

0.1...2 A



2.5...20 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. See also section Technical information.

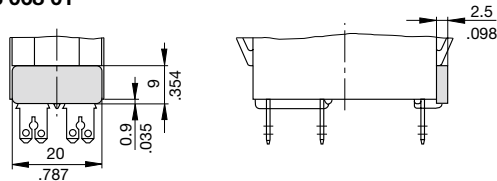
Ambient temperature	°F	-22	-4	+14	+32	+73.4	+104	+122	+140
temperature	°C	-30	-20	-10	0	+23	+40	+50	+60
Derating factor		0.8	0.76	0.84	0.92	1	1.08	1.16	1.24

Approvals

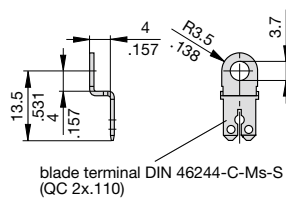
Authority	Standard	Rated voltage	Current ratings
VDE	IEC/EN 60934	3 AC 415 V AC 240 V DC 50 V DC 28 V	0.1 A...16 A (2-pole) 0.1 A...20 A 0.1 A...20 A (2-pole) 0.1 A...4 A (1-pole) 0.1 A...20 A
UL	UL 1077	AC 250 V DC 50 V AC 250 V	0.1 A...20 A 0.1 A...20 A 30 A (2 poles in parallel)
CSA	C22.2 No 235	AC 250 V DC 50 V AC 250 V	0.1 A...20 A 0.1 A...16 A 30 A (2 poles in parallel)
CQC	GB 17701	AC 240 V DC 50 V	0.1 A...20 A 0.1 A...20 A

Accessories

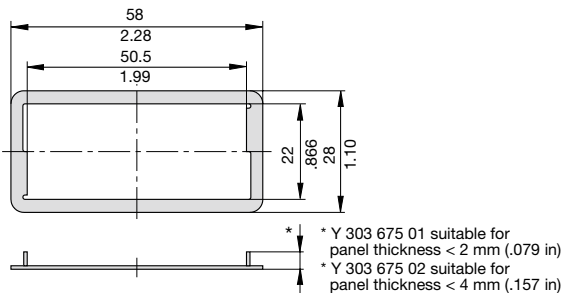
Insulated cover Y 303 068 01



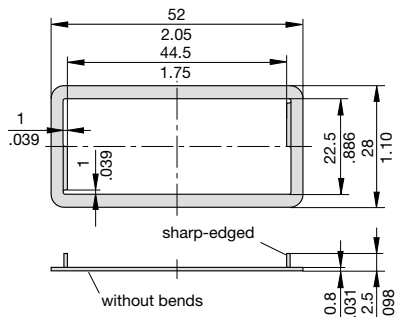
Terminal adapter Y 303 862 01



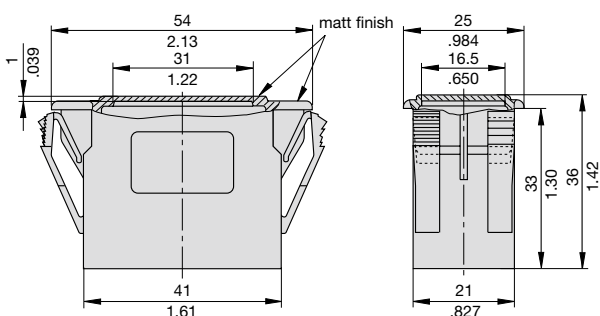
Spacer for 3120-F3... Y 303 675 01/02



Spacer for 3120-F5... Y 303 676 01



Blanking piece in -F3 frame Y 303 885 31



Description

The appliance inlet module X3120 with circuit breaker type 3120-F5/-F7/-F8 combines three functions within a single component: A C20 appliance inlet, a rocker-actuated or push button switch and resettable overcurrent protection. Screw-type mounting from the front or from the rear.

Typical applications

Electrical medical apparatus, laboratory equipment, professional audio equipment and office machines.

Order numbering code

Type No.

X3120 Appliance inlet module for circuit breaker type 3120

Module

B appliance inlet C20

Version

04 screw-type mounting

Accessories

00 without

Version

00 not wired; mounting position 3120: ON position to connector

01 not wired; mounting position 3120: OFF position to connector (standard)

Assembly status

M module supplied with circuit breaker 3120 fitted

X3120-B 04 00 01 M ordering example

Approvals

ENEC, UL, CCC

Technical Data

Rated voltage	AC 240 V
Current rating	16 A (IEC) 20 A (UL/CSA)
Ambient temperature	-25°C ...+ 70°C
Number of poles	L, N + earth
Protection class:	I
Mounting method:	screw-type mounting (front or rear)
Connection:	blade terminals DIN 46244 6.3mm x 0.8mm
Housing material:	thermoplastics, black UL94V-0
Appliance inlet:	C20 according to IEC/EN