

Circuit Protector

CP30F Series

Full Model Change for CP-F Series model circuit protector in conformity with Japanese and major overseas standards
No terminal cover required - Finger protection (IP20 equivalent) design

■ Features

- Ultra-slim 17.5 mm per pole width
- Standard types conform to Japanese and major overseas standards IEC/EN (CE), GB (CCC), UL/CSA, KC (South Korea), JIS, PSE (Japan)
- AC/DC compatible (1P and 2P)
- Screw lift-up terminals offer finger protection (IP20 equivalent) structure without terminal cover
- Revised terminal arrangement of auxiliary circuit improves ease of wiring
- Auxiliary/alarm switch (1NO or 1NC) can be integrated (1P: 1 switch, 2P, 3P: 2 switches), standard types provided with terminal cover for auxiliary circuit
- Shunt trip equipped devices also available

■ Application example

- Protection of control circuits and devices in various control panels

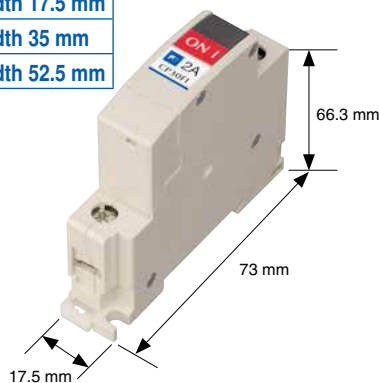


■ Specifications

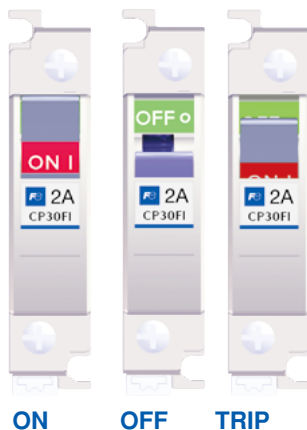
Type		CP30F□-1P	CP30F□-2P	CP30F□-3P
No. of poles		1	2	3
Rated insulation voltage (V)		250 V AC (50/60 Hz) 65 V DC compatible	250 V AC (50/60 Hz) 125 V DC compatible	250 V AC (50/60 Hz) AC only
Rated current (A)		0.1, 0.3, 0.5, 1, 2, 3, 5, 7, 10, 15, 20, 25, 30		
Rated breaking capacity	250 V AC	2,500 A	2,500 A	2,500 A
	125 V DC	—	2,500 A	—
	65 V DC	2,500 A	—	—
Operating characteristic (AC/DC compatible)		Long time delay (S), medium time delay (M) and instantaneous (I) types		
Tripping mechanism		Hydraulic magnetic type		
Reference temperature		+40°C		
Operational ambient temperature		-10 to +60°C (storage: -40 to +60°C)		
Make/break durability		10,000 operations min. (rated current supplied)		
Terminal	Main circuit	M5 screw (over 20 A)/M4 screw (up to 20 A): screw lift-up		
	Auxiliary circuit	M3.5 screw: self-lifting		
Mounting method	Front mounting type	M4 screw/IEC35 mm rail compatible		
Accessories (optional)	Auxiliary switch	Can be integrated: 1NO or 1NC contact (low-level circuit type acceptable)		
	Alarm switch	Can be integrated: 1NO or 1NC contact (low-level circuit type acceptable)		
	Delay device	Can be integrated: (long time delay and medium time delay) AC only		
Dimensions (W x L x H)		17.5 x 73 x 66.3	35 x 73 x 66.3	52.5 x 73 x 66.3
Standard conformity and certification		    		

17.5 mm/pole width slim body

1P	Width 17.5 mm
2P	Width 35 mm
3P	Width 52.5 mm



Easily identifiable ON/OFF/TRIP indication



Intermediate position between ON and OFF for TRIP state

Finger protection structure

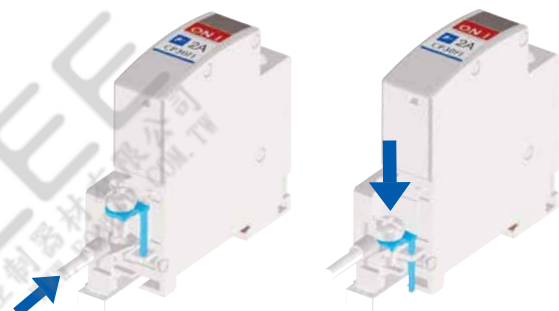
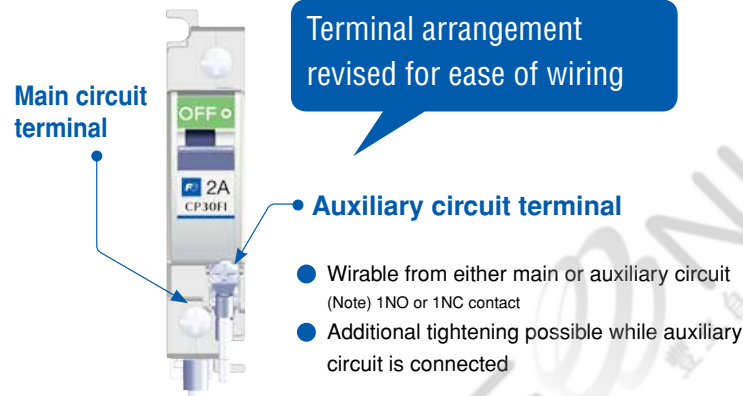
Auxiliary circuit terminal
Main circuit terminal gives IP20-equivalent protection without terminal cover



Conformity with major multi-standards

Country	International organization	Europe	Certification authority	U.S.	Canada	China	South Korea	Japan
Standard	IEC	CE mark	TÜV (Germany)	UL	CSA	GB	KC	JIS

Easy wiring



Structured to prevent screws from falling off during wiring, easy wiring with round crimp terminals.

Type number nomenclature

CP 30 F M - 1P 005 WA D

Basic type

Code	Product classification
CP	Circuit protector

Frame

Code	Description
30	30AF

Breaking capacity classification

Code	Breaking capacity
F	2.5 kA

Operating characteristic

Code	Description
S	Long time delay
M	Medium time delay
I	Instantaneous

No. of poles

Code	Description
1P	1-pole
2P	2-pole
3P	3-pole

Rated current

Example: 0.1A: 0P1 5A: 005 10A: 010

Delay device

Code	Description
Blank	Without delay device
D	With delay device

Accessories

Description	Code	Code (Combination)
Without auxiliary or alarm switch	-	-
Standard load		
With auxiliary switch (NO contact)	WA	WAWA
With auxiliary switch (NC contact)	WB	WBWB
With alarm switch (NO contact)	KA	WAKA
With alarm switch (NC contact)	KB	WAKB
Low level circuit		
With auxiliary switch (NO contact)	W1A	W1AW1A
With auxiliary switch (NC contact)	W1B	W1BW1B
With alarm switch (NO contact)	K1A	W1AK1A
With alarm switch (NC contact)	K1B	W1AK1B

Auxiliary and alarm switch mounting specification

	Standard		Nonstandard		Remarks
	W (W1)	K (K1)	WW (W1W1)	WK (W1K1)	
1P					
2P					The alarm switch can be mounted on the left pole as seen from the handle. The auxiliary switch can be mounted on the right pole as seen from the handle.
3P					The mounting position of the auxiliary/alarm switch is as shown in the figure on the left.

Accessories

Auxiliary switch (W)

The auxiliary switch operates in conjunction with the switching of the circuit protector and is used for purposes such as electrical indication of the ON-OFF state of the circuit protector.

Alarm switch (K)

The alarm switch operates only when the circuit protector is automatically interrupted and electrically indicates the automatic breaking.

* For low level circuits, auxiliary and alarm switches with high contact reliability can be produced. (W1, K1)

Auxiliary and alarm switch ratings [W, K]

	125 V AC	250 V AC	30 V DC	60 V DC
Resistive load	3 A	1 A	2 A	1 A
Inductive load	1 A	0.5 A	1 A	0.5 A
Minimum load	5 V, 100mA (approx. 0.5 W)			

(Note1) Inductive load: power factor 0.7 or higher, time constant 7 ms or smaller

Auxiliary and alarm switch ratings [W1, K1]

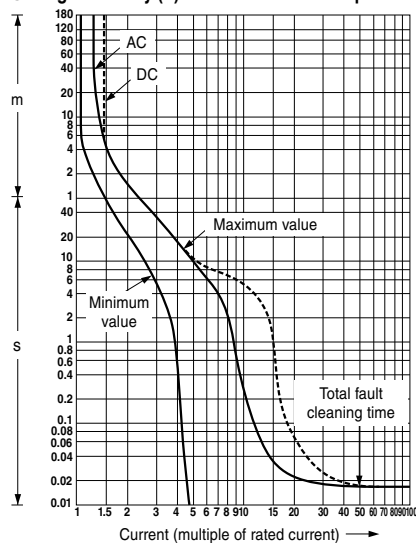
	30 V DC
Resistive load	0.1 A
Minimum load	6 V, 5 mA (approx. 0.03 W)

(Note3) The auxiliary and alarm switches operate in conjunction with the main contact of the circuit protector as shown in the table below.

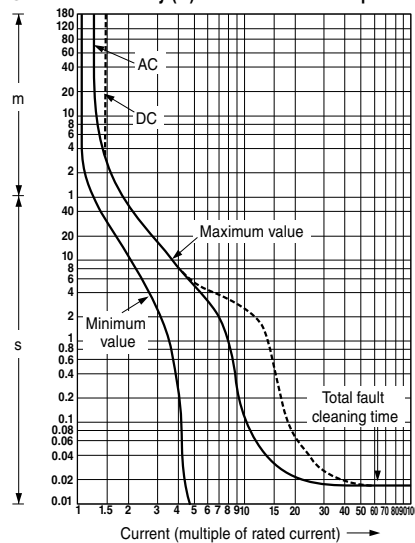
Main contact operation	ON	OFF	Trip (automatic interruption)
Auxiliary switch	NO contact 	13 — 14	13 — 14
	NC contact 	11 — 12	11 — 12
Alarm switch	NO contact 	93 — 94	93 — 94
	NC contact 	91 — 92	91 — 92

Operating characteristic curves

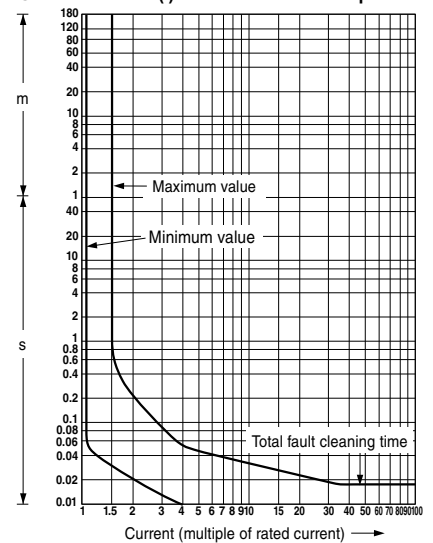
Long time delay (S) AC 50/60 Hz / DC compatible



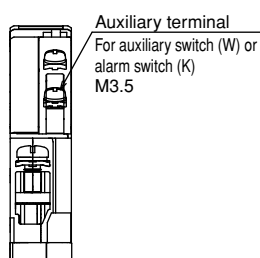
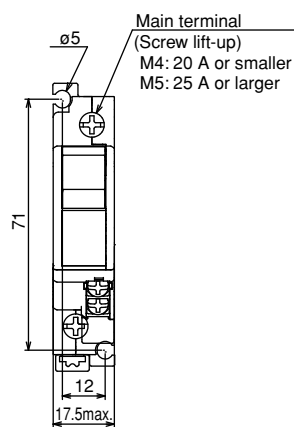
Medium time delay (M) AC 50/60 Hz / DC compatible



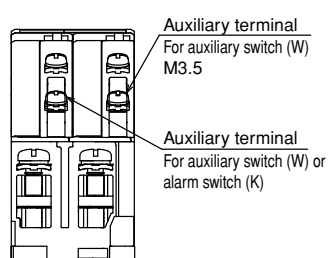
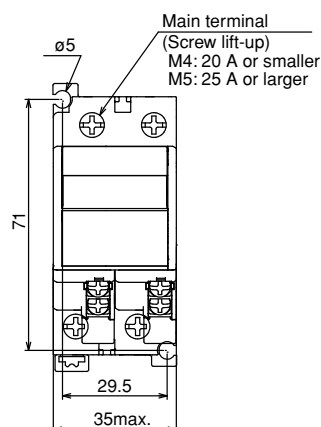
Instantaneous (I) AC 50/60 Hz / DC compatible



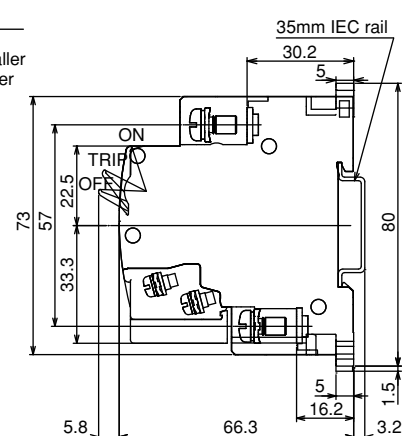
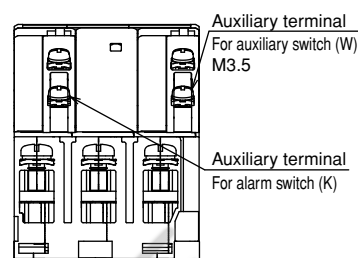
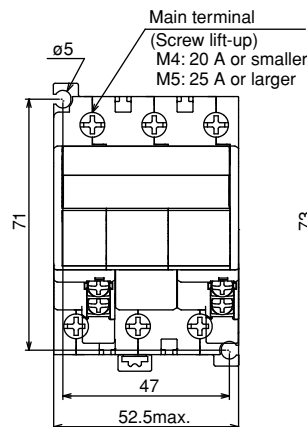
[1-pole]



[2-pole]

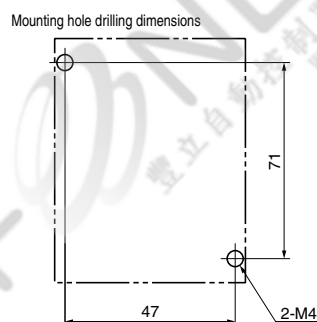
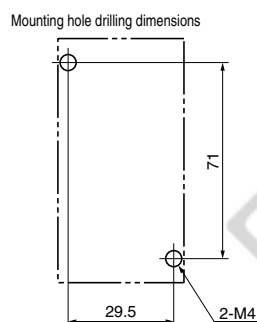
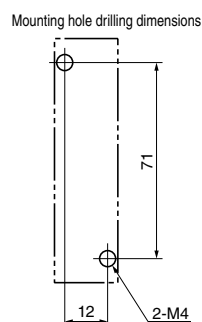


[3-pole]

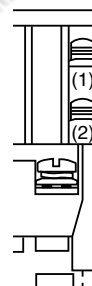


Terminal position when using two auxiliary switches.

Hole drilling dimensions



Auxiliary terminal position and contact no.



Terminal position	Contact no.			
	Auxiliary switch		Alarm switch	
	NO	NC	NO	NC
(1)	13	11	93	91
(2)	14	12	94	92