Fuji Electric

Innovating Energy Technology

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

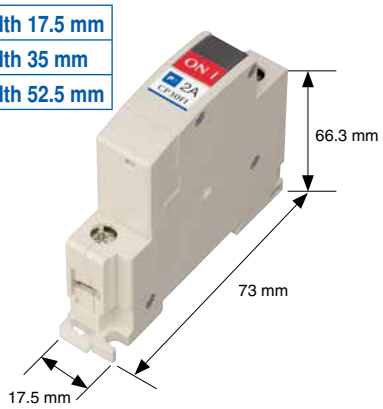
Specifications

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				

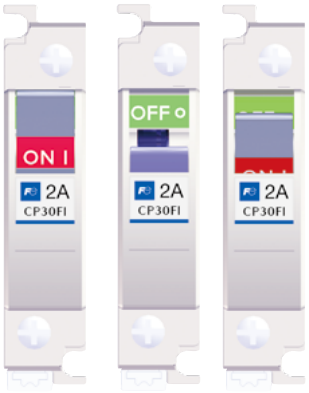
Downloaded from Arrow.com.

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



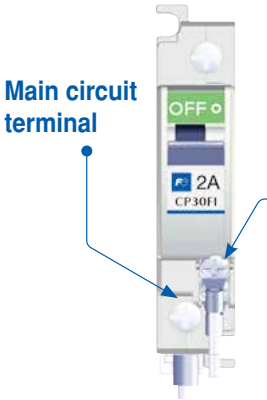
Finger protection structure



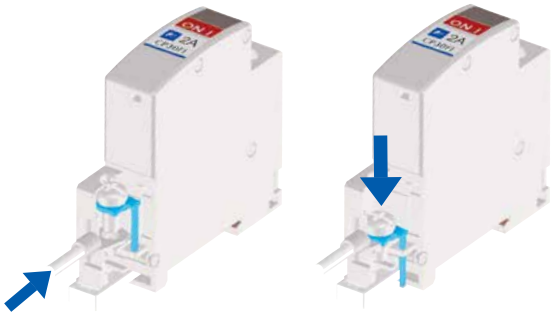
Conformity with major multi-standards

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

Easy wiring



- Wirable from either main or auxiliary circuit
  (Note) 1NO or 1NC contact
- Additional tightening possible while auxiliary circuit is connected



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

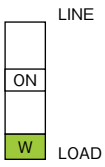
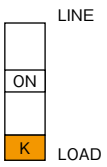
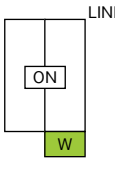
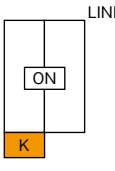
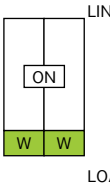
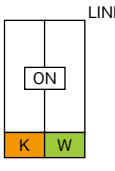
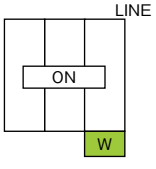
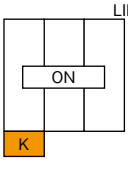
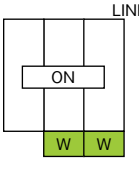
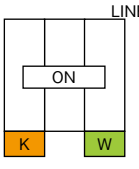
Code	Description
Blank	Without delay device
D	With delay device

Accessories

Description		Code	Code (Combination)	
Without auxiliary or alarm switch		-	-	-
Standard load	With auxiliary switch (NO contact)	WA	WAWA	WAWB
	With auxiliary switch (NC contact)	WB	-	WBWB
	With alarm switch (NO contact)	KA	WAKA	WBKA
	With alarm switch (NC contact)	KB	WAKB	WBKB
Low level circuit	With auxiliary switch (NO contact)	W1A	W1AW1A	W1AW1B
	With auxiliary switch (NC contact)	W1B	-	W1BW1B
	With alarm switch (NO contact)	K1A	W1AK1A	W1BK1A
	With alarm switch (NC contact)	K1B	W1AK1B	W1BK1B

Downloaded from Arrow.com.

Auxiliary and alarm switch mounting specification

	Standard		Nonstandard		Remarks
	W (W1)	K (K1)	WW (W1W1)	WK (W1K1)	Symbols in parentheses are for low level circuits.
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]

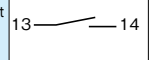
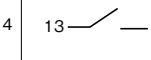
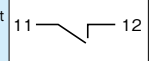
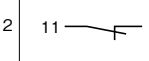
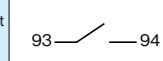
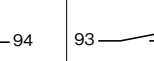
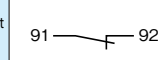
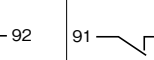
	125 V AC	250 V AC	30 V DC	60 V DC
Resistive load	3 A	1 A	2 A	1A
Inductive load	1 A	0.5 A	1 A	0.5 A
Minimum load	5 V, 100mA (approx. 0.5 W)			

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

Auxiliary and alarm switch ratings [W1, K1]

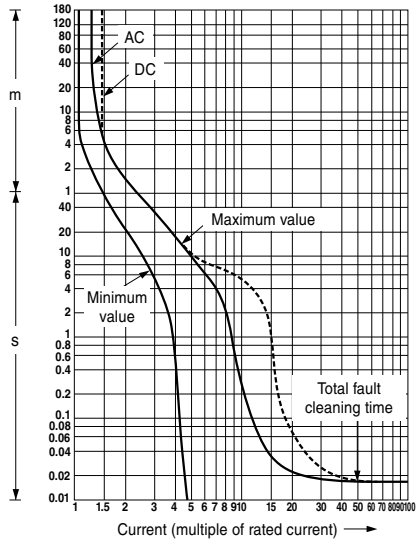
	30 V DC
Resistive load	0.1 A
Minimum load	6 V, 5 mA (approx. 0.03 W)

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

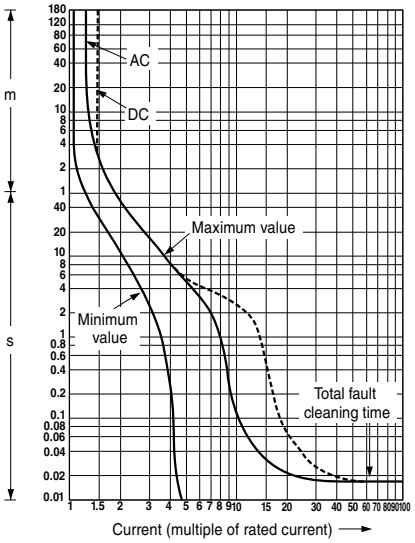
Main contact operation		ON	OFF	Trip (automatic interruption)
Auxiliary switch	NO contact			
	NC contact			
Alarm switch	NO contact			
	NC contact			

Operating characteristic curves

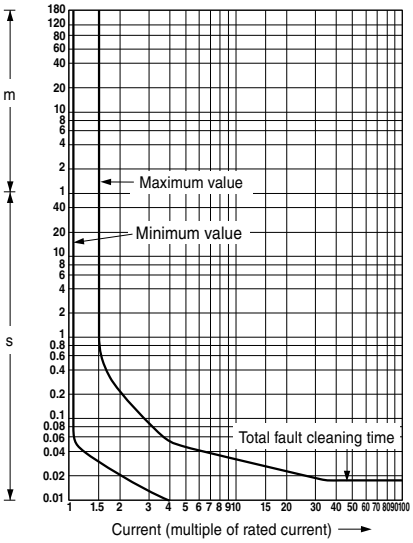
Long time delay (S) AC 50/60 Hz / DC compatible



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



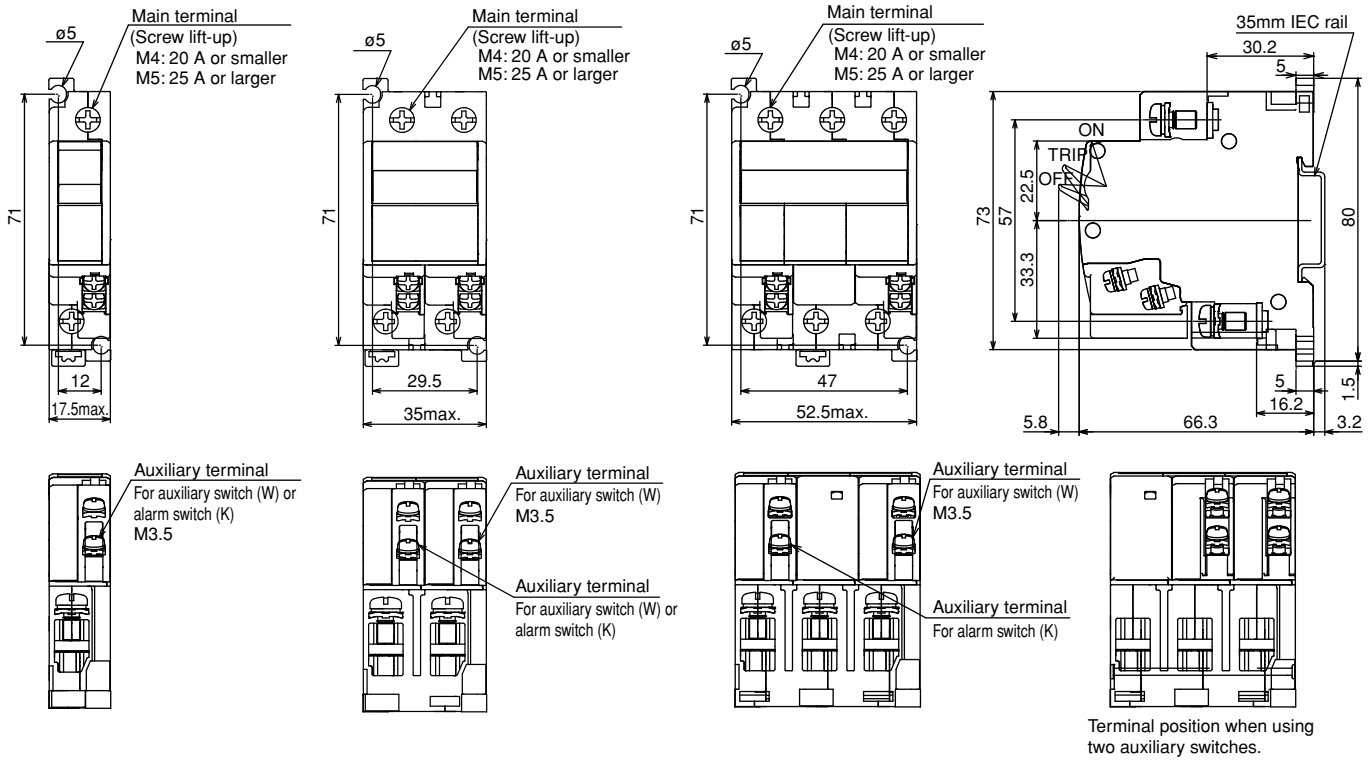
Instantaneous (I) AC 50/60 Hz / DC compatible



Downloaded from Arrow.com.

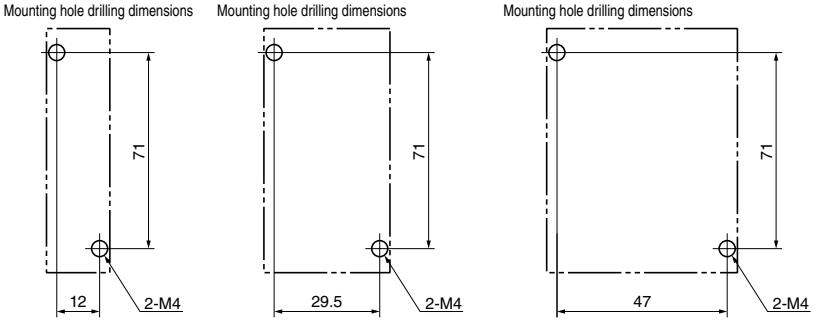
Dimensions, mm

[1-pole] **[2-pole]** **[3-pole]**

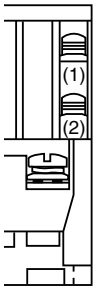


Terminal position when using two auxiliary switches.

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

Fuji Electric FA Components & Systems Co., Ltd.

5-7, Nihonbashi Odemma-cho, Chuo-ku, Tokyo, 103-0011, Japan

URL http://www.fujielectric.co.jp/fcs/eng

Downloaded from Arrow.com.