

**Magnetic contactors FC series**

■ **Description**

FUJI FC series contactors are designed for use in consumer products and light industrial machinery and equipment. They are recommended for applications which call for economy, easy handling and reliability. Typical applications include air conditioners, show cases, industrial washing machines, heaters, pumps, fans, compressors, dryers and vending machines. They are available in sizes ranging from FC-0UL to 4UL and up to 30kW at 440 Volts AC.

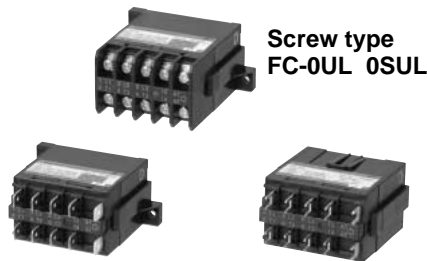
■ **Features**

- Small size, light weight
- Budget priced
- Long service life  
Electrical life expectancy: 250,000 operations. Good for 7 years service if they are operated 100 times a day.
- Scrubbing action  
The contacts are self-cleaning by a scrubbing action during operation and are made of a silver alloy.
- Highly reliable operating coil  
Pick-up voltage  
75% of rated voltage
- Self-lifting terminals  
Easy to wire

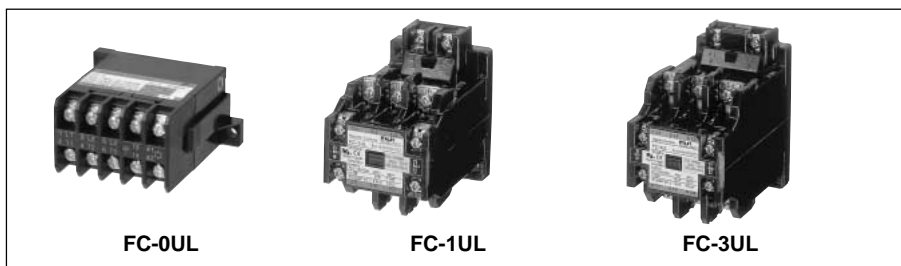
■ **Construction**

**FC-0UL, 0SUL**

- Their small size permits them to be mounted in positions where space is limited and they can be mounted in a variety of directions.
- The standard terminals are screw-type. Printed board type and tab terminals are also available.



Tab terminal type **FC-0TUL**      Printed board type **FC-0A**



- The contact section is housed inside the molded frame and is totally enclosed. The dust-tight construction keeps contact performance at a high level and results in a long trouble-free service life.

**FC-1UL to 4UL**

- FUJI self-lifting terminals make connection work simple.
- Their free floating design results in quiet operation and eliminates chattering and bouncing.
- The magnetic yokes have been given a rust preventing treatment.
- Coil power consumption is low.

■ **Ordering information**

Specify the following:

1. Ordering code
2. Operating coil voltage code
3. Auxiliary contact arrangement:  
In the case of type FC-0UL, 0A and 0TUL, specify the contact arrangement.

■ **Types and ratings (IEC60947-4-1)**

Motor capacity (kW) AC-3 3-phase	Operational current (A) AC-3 3-phase		Operational current (A) AC-1 *2	Auxiliary contact		Non-reversing Open	
	200V	380V		NO	NC	Type	Ordering code
240V	440V	200V	380V				
		240V	440V				
3	2.5	12	6	20	1	—	<b>FC-0UL</b> SF12B1A-■10
3	2.5	12	6	20	—	1	<b>FC-0UL</b> SF12B1A-■01
3.5	4.5	15	10	20	1	—	<b>FC-0SUL</b> SF15B1A-■10
3.5	4.5	15	10	20	—	1	<b>FC-0SUL</b> SF15B1A-■01
5.5	5.5	20	13	30	1	1*1	<b>FC-1UL</b> SF20B1A-■11
7.5	7.5	27	18	30	1	1*1	<b>FC-1SUL</b> SF26B1A-■11
11	11	40	26	45	1	1*1	<b>FC-2SUL</b> SF38B1A-■11
15	18.5	52	40	60	1	1*1	<b>FC-3UL</b> SF50B1A-■11
18.5	30	65	65	80	1	1*1	<b>FC-4UL</b> SF65B1A-■11
1.5	—	8	—	8	1	—	<b>FC-0A</b> SF08BBA-■10
1.5	—	8	—	8	—	1	<b>FC-0A</b> SF08BBA-■01
3	2.5	12	6	20	1	—	<b>FC-0TUL</b> SF12B3A-■10
3	2.5	12	6	20	—	1	<b>FC-0TUL</b> SF12B3A-■01
3.5	4.5	15	10	20	1	—	<b>FC-0STUL</b> SF15B3A-■10
3.5	4.5	15	10	20	—	1	<b>FC-0STUL</b> SF15B3A-■01
3	2.5	12	6	20	1	—	<b>FC-0/GUL</b> SF12B1G-■10
3	2.5	12	6	20	—	1	<b>FC-0/GUL</b> SF12B1G-■01
3.5	4.5	15	10	20	1	—	<b>FC-0S/GUL</b> SF15B1G-■10
3.5	4.5	15	10	20	—	1	<b>FC-0S/GUL</b> SF15B1G-■01
3	2.5	12	6	20	1	—	<b>FC-0T/GUL</b> SF12B3G-■10
3	2.5	12	6	20	—	1	<b>FC-0T/GUL</b> SF12B3G-■01
3.5	4.5	15	10	20	1	—	<b>FC-0ST/GUL</b> SF15B3G-■10
3.5	4.5	15	10	20	—	1	<b>FC-0ST/GUL</b> SF15B3G-■01
1.5	—	8	—	8	1	—	<b>FC-0A/G</b> SF08BBG-■10
1.5	—	8	—	8	—	1	<b>FC-0A/G</b> SF08BBG-■01

Notes: \*1 Auxiliary contact arrangement 2NO or 2NC is available.

Cable connection: FC-0A: P. C. board  
FC-0TUL, 0STUL: With flat connection tabs  
Other types: With screw-type terminals

\*2 Thermal current (A)

■: Coil voltage code, see page 01/82.

# Magnetic Contactors and Starters

## FC and FW series

### ■ Ordering code system

#### ● Contactor

S F 3 5 B 1 A — E 2 2  
 ① ② ③ ④ ⑤ ⑥ ⑧ ⑨ ⑩

#### ① Product category

Description	Code
Contactors and starters	S

#### ② Series category

Description	Code
F series	F

#### ③④ Frame size

Frame size	Code	
	③	④
0, 0T	1	2
0A	0	8
0S, 0ST	1	5
1	2	0
1S	2	6
2S	3	5
3	5	0
4	6	5

#### ⑤ Version

Description	Code
<u>Non-reversing, open</u>	
Contactor	
Standard	1
With tab terminal	T
Starter	
Standard	A
<u>Non-reversing, enclosed</u>	
Standard	C
With ON-OFF pushbutton (plastic enclosure)	P
With ON-OFF pushbutton (steel enclosure)	S
With ON-OFF pushbutton and lamp (plastic enclosure)	K

#### ⑥ Coil specification

Description	Code
AC operating coil	A
DC operating coil	G

#### ⑦ Type of thermal overload relay

Description	No. of element	Code
Standard	2, 3	N
Quick operating	3	S
Open-phase protection	3	E

#### ● Starter

S F 3 5 B A A N — E 2 2 T B D  
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫

#### ⑧ Coil voltage

Operating coil voltage		Code
50Hz	60Hz	
24V	24 — 26V	E
48V	48 — 52V	F
100V	100 — 110V	1
100 — 110V	110 — 120V	H
110 — 120V	120 — 130V	K
200V	200 — 220V	2
200 — 220V	220 — 240V	M
220 — 240V	240 — 260V	P
346 — 380V	380 — 420V	S
380 — 400V	400 — 440V	4
415 — 440V	440 — 480V	T

#### ● DC coil

Operating coil voltage	Code
24V DC	E
48V DC	F
60V DC	G
100V DC	1
110V DC	H
200V DC	2
220V DC	M

#### ⑩ Thermal overload relay ampere setting range

Ampere setting range (A)	Code	Ampere setting range (A)	Code	Ampere setting range (A)	Code
0.1 — 0.15	TA	1.4 — 2.2	TM	7 — 11	TV
0.15 — 0.24	TC	1.7 — 2.6	TN	8 — 16	TV
0.24 — 0.36	TE	2.2 — 3.4	TP	9 — 13	TW
0.36 — 0.54	TG			12 — 18	TX
				13 — 20	TA* <sup>1</sup>
				18 — 26	TB
				20 — 26	TC* <sup>2</sup>
0.48 — 0.72	TH	2.8 — 4.2	TR	24 — 36	TE
0.64 — 0.96	TJ	4 — 6	TS	28 — 40	TF
0.8 — 1.2	TK	5 — 8	TT	34 — 50	TG
0.95 — 1.45	TL	6 — 9	TU	45 — 67	TJ

Note: \*<sup>1</sup> For FW-1S: X

\*<sup>2</sup> For FW-1S: Y

#### ⑫ No. of heater element

Description	Code
2-element	Blank
3-element	D

#### ⑨⑩ Auxiliary contact

##### Frame size 0 to 4

Contact arrangement	Code	
	⑨	⑩
1NO	1	0
1NC	0	1
2NO	2	0
1NO + 1NC	1	1
2NC	0	2

■ Auxiliary contact ratings (IEC 60947-4-1)

Frame size	Rated thermal current (A)	Voltage (V AC)	Making & breaking capacity (A)	Rated operational current (A)	
				Inductive	Resistive
0, 0A, 0T 0S	8	110	40	4	8
		220	40	4	8
		440	20	2	8
1, 1S, 2S 3, 4	10	110	100	10	10
		220	60	6	10
		440	60	6	10

■ Performance data

Frame size	Making capacity (A)	Breaking capacity (A)	Operating cycles per hour	Life expectancy (operations)	
				Electrical	Mechanical
0 to 1S	10 × Ie	10 × Ie	600	250,000	1 million
2S to 4	10 × Ie	10 × Ie	600	250,000	1 million

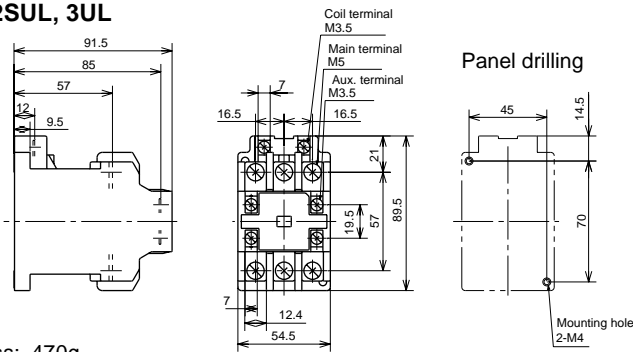
Ie: Rated operational current

■ Coil ratings

Frame size	Power consumption		Voltage and frequency *	Wiring	Operating voltage range
	Inrush (VA)	Sealed (VA)			
0, 0A, 0T, 0S	23	6	200V		0.75 to 1.1 times rated coil voltage
1, 1S	75	11	50Hz		
2S	125	14			
3	125	14			
4	200	14.3			

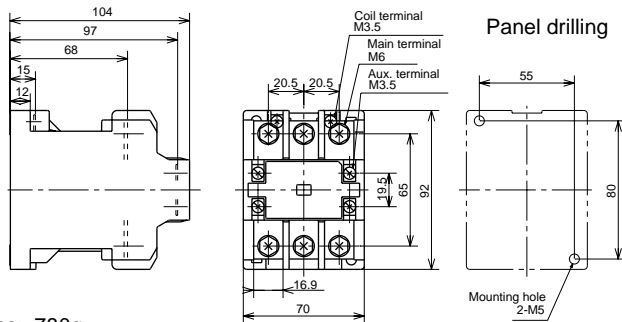
Notes: \* Other voltages between 24V and 440V AC are available.  
DC operated type FC-0/G and FC-0T/G are also available.  
Coil voltage: 24, 48, 60, 100, 120, 200, 210 and 220V DC

FC-2SUL, 3UL



Mass: 470g

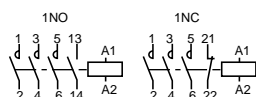
FC-4UL



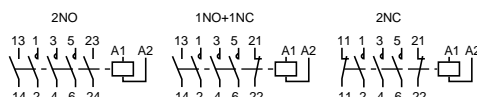
Mass: 780g

■ Wiring diagrams

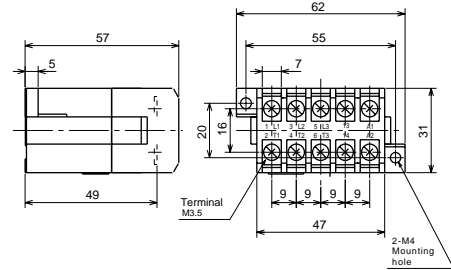
FC-0UL, 0A, 0TUL, 0SUL, 0STUL



FC-1UL, 1SUL, 2SUL, 3UL, 4UL

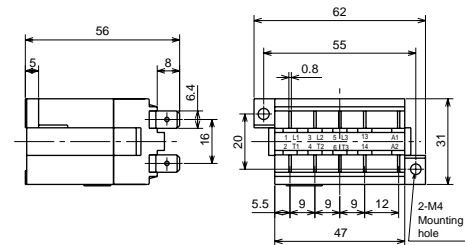


■ Dimensions, mm  
FC-0UL, 0SUL



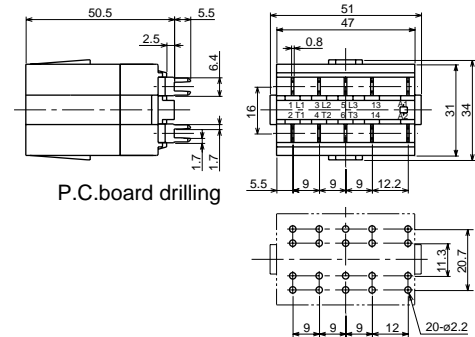
Mass: 160g

FC-0TUL, 0ST/UL



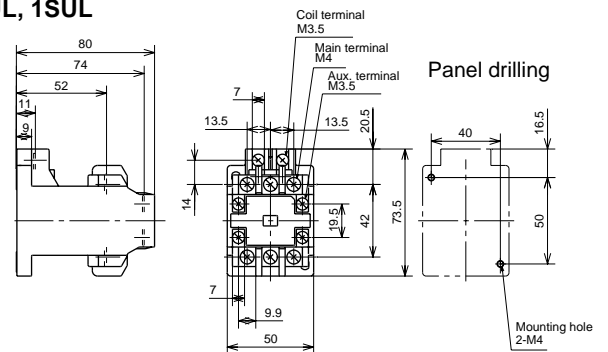
Mass: 160g

FC-0A



Mass: 140g

FC-1UL, 1SUL



Mass: 320g