



CONTACTORS MOTOR **STARTERS** INDUSTRIAL **RELAYS**



FUJI ELECTRIC

Fuji Electric Co., Ltd. has met the changing needs of society since being founded in 1923. The Company's technological strengths allow it to fulfill its responsibilities as a corporate and social leader ahead of its time. Over the years, Fuji Electric has entered many business fields, from the production of electronic devices and various components to large-scale systems such as electric power plants. Fuji Electric has 50+ years of experience in developing total systems and solutions for our customers.

With businesses ranging across many fields and as its mission expands, Fuji Electric is becoming increasingly aware of its role in the global society. The Company is redoubling its efforts to develop new technologies that will make an ever larger social contribution.

Fuji Electric is a global company with sales, service and manufacturing facilities located worldwide. Fuji Electric Corp. of America, incorporated in New York, has conducted business in the United States for over 25 years, with offices and operations in New Jersey, California and Texas. Fuji Electric has also established manufacturing and assembly facilities in the States of New Jersey and California. Our customer base and partnerships span across a number of Fortune 500 companies, states and city transit authorities and municipalities.

Fuji Electric Corp. of America currently supports products in the Ring Compressor Division, Distribution and Controls Division, Instrumentation and Controls Division and the Water Treatment Division.

DISTRIBUTION AND CONTROLS DIVISION

Fuji Electric's Distribution and Controls (D&C) Division offers products in the electric distribution and control system fields. Major products include control equipment, such as magnetic motor contactors, push-button switches and programmable logic controllers (PLCs) as well as electrical distribution equipment, such as molded-case circuit breakers and earth-leakage circuit breakers.

Fuji Electric's D&C Division's UL Listed and CSA Certified products provide control design / application engineers and users with an economically sound alternative choice without compromising quality, reliability or durability for years of service. This Division's products are used in machine tools, motor control centers, distribution boards, industrial machines, control panels, and instrumentation panels, as well as a host of other applications.

The Distribution and Controls Division has a network of distributors and representatives throughout the United States that provide first-rate service and response.

HIGH PERFORMANCE CONTACTORS AND STARTERS

Engineered for cost and application advantages

Contactors and Starters provide the best of both worlds..... Quality and Economy

Designed to globally accepted approvals and ratings

- Engineered for quality performance, day after day
- Wide variety of frame sizes - up to 350HP
- Overload relays feature open phase protection
- Contactors through 10HP at 480V offer industry's longest life expectancy - 2 million electrical operations

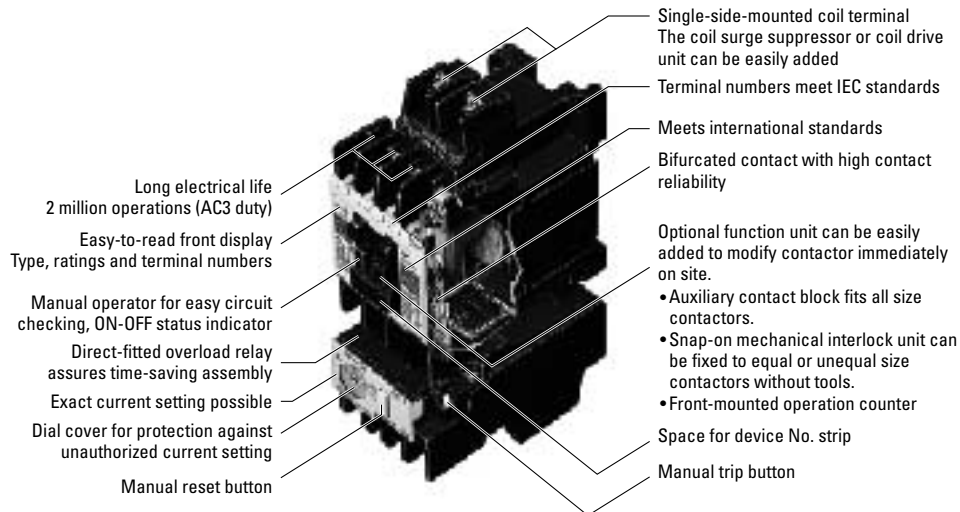
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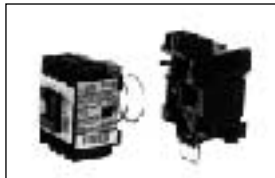
"ORANGE" LINE

UP TO 10HP@ 480VAC

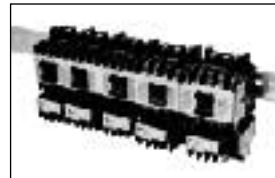
- 2 million electrical operations. The longest in the industry.
- "Logic level" aux contacts allow consistent operation down to 5VDC 3mA.
- Overloads offer "Open phase protection" as a standard feature.



Easy coil replacement without screws



Snap-on 35mm IEC and DIN rail mounting
Flat side construction allows side-by-side mounting



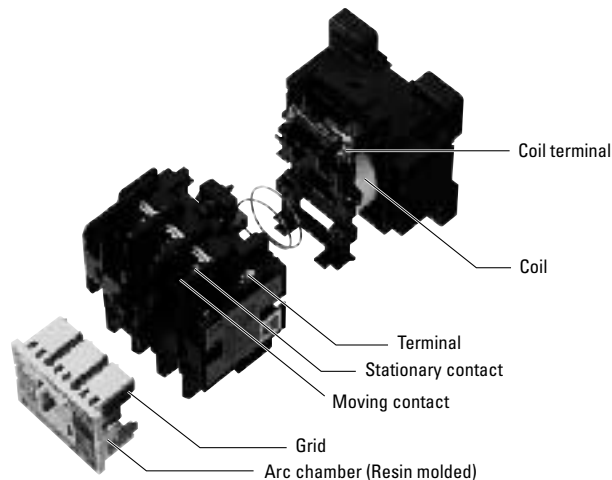
See pages 5 through 16 for details

ODYSSEY SERIES

(Conventional Coils)

UP TO 50HP@ 480VAC

- Redesigned coil offers lower power consumption characteristics.
- Compact size allows for efficient panel layout.
- 2NO+2NC aux contacts are included.



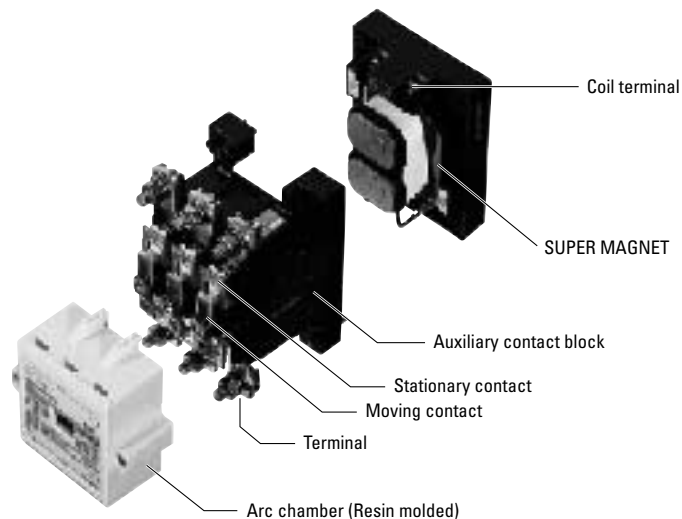
See pages 21 through 24 for details

ODYSSEY SERIES

(Featuring Super Magnet Technology)

UP TO 300HP@ 480VAC

- Coil operates on either AC or DC voltage.
- Chatter-free operation, eliminates contact welding & coil burning.
- "Super magnet" design offers advanced electronics for maximum dependability.



See pages 25 through 28 for details

SUPER MAGNET THEORY & EXPLANATION

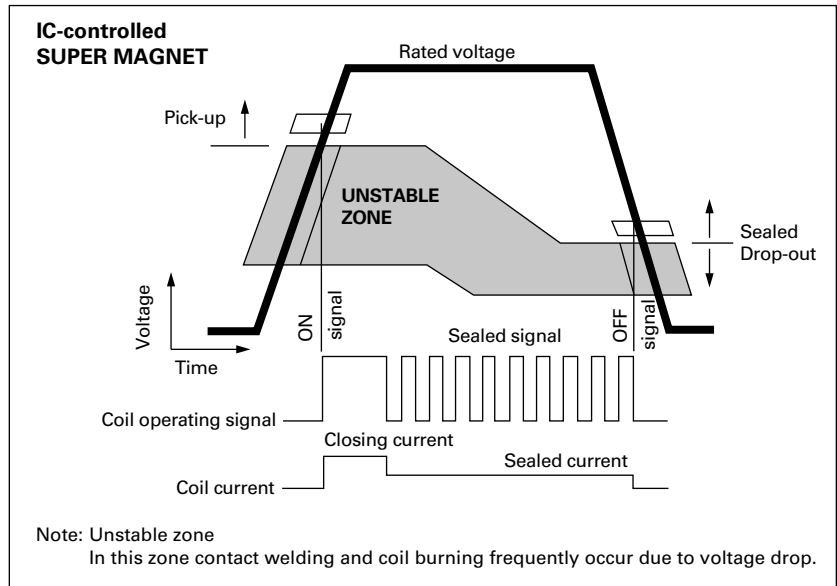
ADVANTAGES OF SUPER MAGNET

■ POSITIVE PICK-UP AND DROP-OUT

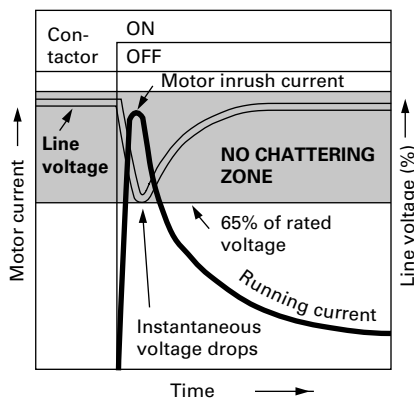
The SUPER MAGNET operation is electronically controlled. There is no unstable zone as will be seen in the diagram, an outstanding feature that other contactors can not provide.

Chattering is a phenomenon which occurs when the gravitational force of the starter magnet, decreases through the line voltage drop at the time of motor starting. This may cause damage such as contact welding or coil burning.

The SUPER MAGNET holds without chattering even if the line voltage drops to 65% of its rated value, thereby preventing this type of trouble.

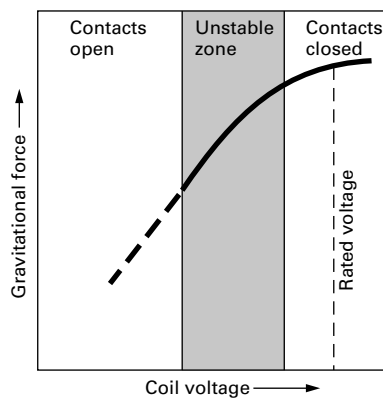


Motor starting

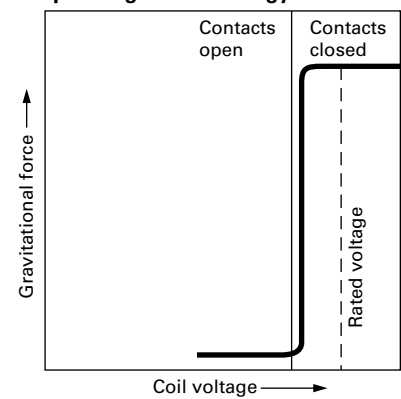


Note: No chattering occurs even if instantaneous voltage drops to 65% of rated voltage.

Conventional contactors



Contactors featuring Super Magnet technology

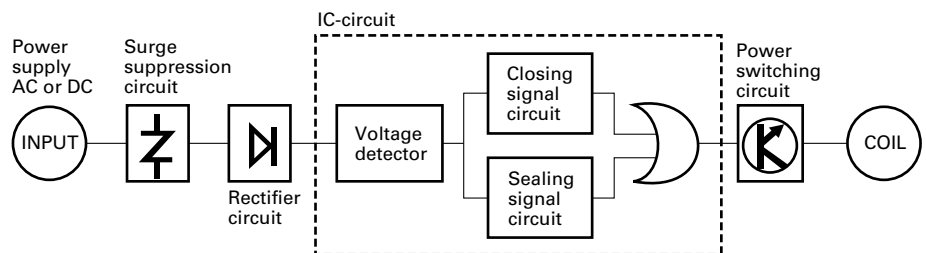


Note: Since SC series contactors are electronically controlled there is no unstable zone.

■ OPERATION ON BOTH AC AND DC INPUTS

The rated operational voltage range of the Super Magnet series contactors has been greatly expanded.

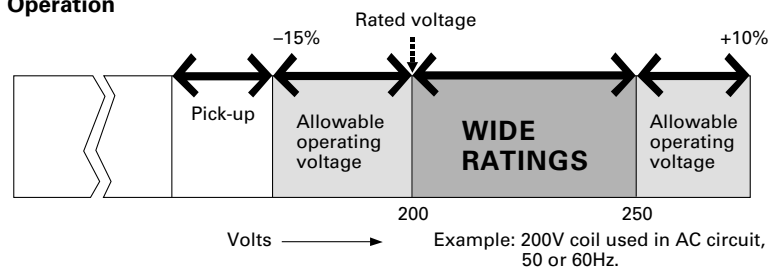
They operate on both AC (50/60Hz) and DC inputs.



Coils (3F to 5H)

Rated voltage	Rated coil voltage, frequency			
	AC		DC	
24V	24-25V	50/60Hz	24V	
48V	48-50V	50/60Hz	48V	
100V	100-127V	50/60Hz	100-110V	
200V	200-250V	50/60Hz	200-240V	
300V	265-347V	50/60Hz	-	
400V	380-450V	50/60Hz	-	
500V	460-575V	50/60Hz	-	

Operation



"ORANGE LINE" AC Contactors, AC Operated



■ NON-REVERSING CONTACTORS UL File No. E42419, E44592 cUL listed

1 Phase HP Rating (Full load ampere)		3 Phase HP Ratings (Full load ampere)				Rated thermal current for non inductive / resistive load	Qty. of Auxiliary Contacts	Part Number	Fuji Type	Frame Size
100-120V	220-240V	200-208V	220-240V	440-480V	550-600V					
1/3 (7.2)	1 (8)	2 (7.8)	2 (6.8)	5 (7.6)	5 (6.1)	11	1	4NC0A0#@@%	SC-03	0A
1/3 (7.2)	1 (8)	3 (11)	3 (9.6)	5 (7.6)	5 (6.1)	13	1	4NC0F0#@@%	SC-0	0F
1/3 (7.2)	1 (8)	3 (11)	3 (9.6)	5 (7.6)	5 (6.1)	13	2	4NC0G0#@@%	SC-05	0G
1 (16)	2 (12)	5 (17.5)	5 (15.2)	7 1/2 (11)	7 1/2 (9)	20	1	4NC0Q0#@@%	SC-4-0	0Q
1 (16)	2 (12)	5 (17.5)	5 (15.2)	10 (14)	10 (11)	20	1	4NC0R0#@@%	SC-4-1	0R
1 (16)	2 (12)	5 (17.5)	5 (15.2)	10 (14)	10 (11)	20	2	4NC0H0#@@%	SC-5-1	0H

■ REVERSING CONTACTORS UL File No. E42419, E44592 cUL listed

1 Phase HP Rating (Full load ampere)		3 Phase HP Ratings (Full load ampere)				Rated thermal current for non inductive / resistive load	Qty. of Auxiliary Contacts	Part Number	Fuji Type	Frame Size
100-120V	220-240V	200-208V	220-240V	440-480V	550-600V					
1/3 (7.2)	1 (8)	2 (7.8)	2 (6.8)	5 (7.6)	5 (6.1)	11	1	4ND0A0#@@%	SC-03RM	0A
1/3 (7.2)	1 (8)	3 (11)	3 (9.6)	5 (7.6)	5 (6.1)	13	1	4ND0F0#@@%	SC-0RM	0F
1/3 (7.2)	1 (8)	3 (11)	3 (9.6)	5 (7.6)	5 (6.1)	13	2	4ND0G0#@@%	SC-05RM	0G
1 (16)	2 (12)	5 (17.5)	5 (15.2)	7 1/2 (11)	7 1/2 (9)	20	1	4ND0Q0#@@%	SC-4-0RM	0Q
1 (16)	2 (12)	5 (17.5)	5 (15.2)	10 (14)	10 (11)	20	1	4ND0R0#@@%	SC-4-1RM	0R
1 (16)	2 (12)	5 (17.5)	5 (15.2)	10 (14)	10 (11)	20	2	4ND0H0#@@%	SC-5-1RM	0H

Note: The list above indicates the No. of auxiliary contacts provided per contactor.

If larger contactors are required, please turn to page 21.

EXPLANATION OF PART NUMBER SYSTEM

4 N C 0 A 0 # @ @ %

• **PRODUCT LINE**
4=Orange Line

• **OPERATION**
N=AC Coil
G=DC Coil

• **DESCRIPTION**
C=Non-Reversing Contactor
D=Reversing Contactor

• **FRAME SIZE**

• **TERMINAL OPTION**

Blank: Standard
Y: Optional, non removable terminal
cover accessory.
(Note: Y type not available for 0Q or
0R frame sizes)

• **QUANTITY OF AUX. CONTACTS**

10 : 1NO 20 : 2NO
01 : 1NC 02 : 2NC
11 : 1NO+1NC

See above under the "Qty. of Aux Contacts"
column or next page.

• **COIL VOLTAGE**

Select code from chart on next page

• **FRAME ENCLOSURE**

0=Open Frame, No Enclosure

"ORANGE LINE" AC Contactors, AC Operated

AVAILABLE COILS

Code Letter	AC Coil 60Hz	AC Coil 50Hz
E	24-26V	24V
F	48-52V	48V
A	100-110V	100V
1	110-120V	100-110V
G	120-130V	110-120V
B	200-220V	200V
2	220-240V	200-220V
C	400-440V	380-400V
4	440-480V	415-440V
5	550-600V	500-550V

If DC operation is required,
please turn to page 7-8.

COIL CHARACTERISTICS

Frame Size	Power Consumption (VA)		Pick-up Voltage (V)	Drop-out Voltage (V)	OperatingTime (ms)	
					Coil ON	Coil OFF
	Inrush Sealed				↓	↓
					Contact ON	Contact OFF
0A	95	9	58-68	40-55	9-20	5-16
0F	95	9	58-68	40-55	9-20	5-16
0G	95	9	58-68	40-55	9-20	5-16
0Q	95	9	65-73	44-60	9-20	5-16
0R	95	9	65-73	44-60	9-20	5-16
0H	95	9	65-73	44-60	9-20	5-16

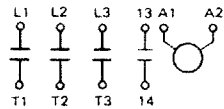
This data is based on 110-120VAC, 50/60Hz coil, tested at 120VAC, 60Hz.
For additional coil data, please see page 49.

WIRING DIAGRAMS / AUXILIARY CONTACT INFORMATION

NON-REVERSING CONTACTORS

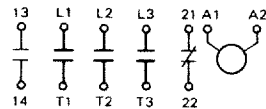
(4NC0A0, 0F0, 0Q0 and 0R0)

1NO* (Standard)*

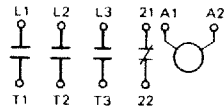


(4NC0G0 and 4NC0H0)

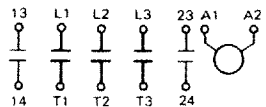
1NO+1NC (Standard)**



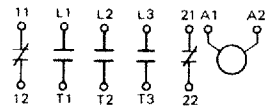
1NC* (Option)



2NO** (Option)

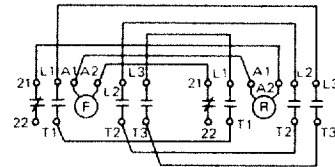


2NC** (Option)

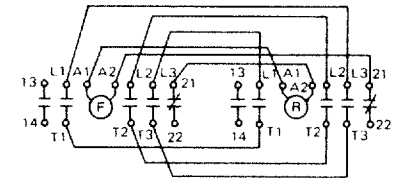


REVERSING CONTACTORS

(4ND0A0, 0F0, 0Q0, 0R0) ***



(4ND0G0 and 4ND0H0) ***



AUXILIARY CONTACT RATINGS

Operating	Contact rating Code Designation	Continuous Ampere Rating	Current-Make/Break (A)			
			110 to 120V	220 to 240V	440 to 480V	550 to 600V
AC	A600	10	60/6	30/3	15/1.5	12/1.2
DC	Q300	10	120V	240V		
			0.55/0.55	0.27/0.27		

* The 0A, 0F, 0Q & 0R frames offer 1 Aux. contact, NO standard. However, NC is available as an option.

** The 0G & 0H frames offer 2 Aux. contacts, 1NO + 1NC standard. However, 2NO or 2NC is available as an option.

*** Reversing contactors are NOT pre-wired with an electrical interlock unless requested when ordered.
Reversing contactors without at least 1NC Aux. contact can not be electrically interlocked.

"ORANGE LINE" AC Contactors, DC Operated



■ NON-REVERSING CONTACTORS UL File No. E42419, E44592 cUL listed

1 Phase HP Rating (Full load ampere)		3 Phase HP Ratings (Full load ampere)				Rated thermal current for non inductive / resistive load	Qty. of Auxiliary Contacts	Part Number	Fuji Type	Frame Size
100-120V	220-240V	200-208V	220-240V	440-480V	550-600V					
1/3 (7.2)	1 (8)	2 (7.8)	2 (6.8)	5 (7.6)	5 (6.1)	11	1	4GC0A0#@@%	SC-03/G	0A
1/3 (7.2)	1 (8)	3 (11)	3 (9.6)	5 (7.6)	5 (6.1)	13	1	4GC0F0#@@%	SC-0/G	0F
1/3 (7.2)	1 (8)	3 (11)	3 (9.6)	5 (7.6)	5 (6.1)	13	2	4GC0G0#@@%	SC-05/G	0G
1 (16)	2 (12)	5 (17.5)	5 (15.2)	7 1/2 (11)	7 1/2 (9)	20	1	4GC0Q0#@@%	SC-4-0/G	0Q
1 (16)	2 (12)	5 (17.5)	5 (15.2)	10 (14)	10 (11)	20	1	4GC0R0#@@%	SC-4-1/G	0R
1 (16)	2 (12)	5 (17.5)	5 (15.2)	10 (14)	10 (11)	20	2	4GC0H0#@@%	SC-5-1/G	0H

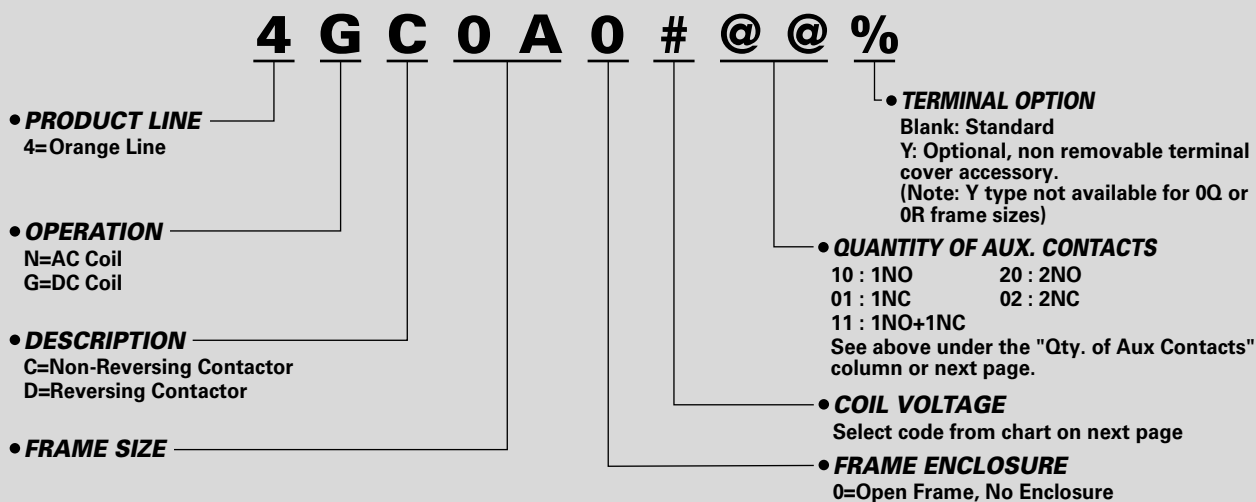
■ REVERSING CONTACTORS UL File No. E42419, E44592 cUL listed

1 Phase HP Rating (Full load ampere)		3 Phase HP Ratings (Full load ampere)				Rated thermal current for non inductive / resistive load	Qty. of Auxiliary Contacts	Part Number	Fuji Type	Frame Size
100-120V	220-240V	200-208V	220-240V	440-480V	550-600V					
1/3 (7.2)	1 (8)	2 (7.8)	2 (6.8)	5 (7.6)	5 (6.1)	11	1	4GD0A0#@@%	SC-03RM/G	0A
1/3 (7.2)	1 (8)	3 (11)	3 (9.6)	5 (7.6)	5 (6.1)	13	1	4GD0F0#@@%	SC-0RM/G	0F
1/3 (7.2)	1 (8)	3 (11)	3 (9.6)	5 (7.6)	5 (6.1)	13	2	4GD0G0#@@%	SC-05RM/G	0G
1 (16)	2 (12)	5 (17.5)	5 (15.2)	7 1/2 (11)	7 1/2 (9)	20	1	4GD0Q0#@@%	SC-4-0RM/G	0Q
1 (16)	2 (12)	5 (17.5)	5 (15.2)	10 (14)	10 (11)	20	1	4GD0R0#@@%	SC-4-1RM/G	0R
1 (16)	2 (12)	5 (17.5)	5 (15.2)	10 (14)	10 (11)	20	2	4GD0H0#@@%	SC-5-1RM/G	0H

Note: The list above indicates the No. of auxiliary contacts provided per contactor.

If larger contactors are required, please turn to page 23.

EXPLANATION OF PART NUMBER SYSTEM



"ORANGE LINE" AC Contactors, DC Operated

AVAILABLE COILS

Code Letter	DC Coil
T	12V
M	24V
N	48V
1	100V
R	110V
2	200V
S	220V

If AC operation is required, please turn to page 5-6.

COIL CHARACTERISTICS

Frame Size	Power Consumption (VA)		Pick-up Voltage (V)	Drop-out Voltage (V)	Operating Time (ms)	
					Coil ON ↓ Contact ON	Coil OFF ↓ Contact OFF
0A	7	7	11-15	3-6	43-47	22-24
0F	7	7	11-15	3-6	43-47	22-24
0G	7	7	10-15	3-7	43-47	22-24
0Q	7	7	11-15	3-7	44-48	22-25
0R	7	7	11-15	3-7	44-48	22-25
0H	7	7	11-16	4-7	45-49	22-26

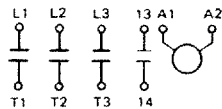
This data is based on 24-26VDC coil, tested at 24VDC.
For additional coil data, please see page 50.

WIRING DIAGRAMS / AUXILIARY CONTACT INFORMATION

NON-REVERSING CONTACTORS

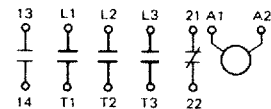
(4GC0A0, 0F0, 0Q0 and 0R0)

1NO* (Standard)*

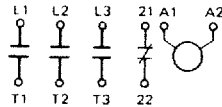


(4GC0G0 and 4GC0H0)

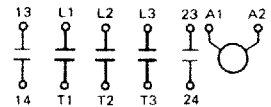
1NO+1NC (Standard)**



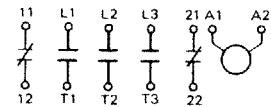
1NC* (Option)



2NO** (Option)

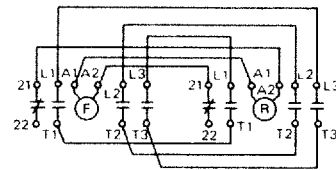


2NC** (Option)

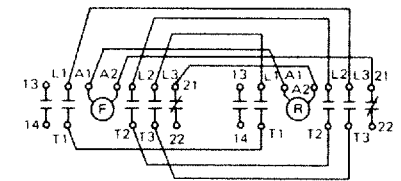


REVERSING CONTACTORS

(4GD0A0, 0F0, 0Q0, 0R0) ***



(4GD0G0 and 4GD0H0) ***



AUXILIARY CONTACT RATINGS

Operating	Contact Rating Code Designation	Continuous Ampere Rating	Current-Make/Break (A)			
			110 to 120V	220 to 240V	440 to 480V	550 to 600V
AC	A600	10	60/6	30/3	15/1.5	12/1.2
DC	Q300	10	120V	240V		
			0.55/0.55	0.27/0.27		

* The 0A, 0F, 0Q & 0R frames offer 1 Aux. contact, NO standard. However, NC is available as an option.

** The 0G & 0H frames offer 2 Aux. contacts, 1NO + 1NC standard. However, 2NO or 2NC is available as an option.

*** Reversing contactors are NOT pre-wired with an electrical interlock unless requested when ordered.

Reversing contactors without at least 1NC Aux. contact can not be electrically interlocked.

"ORANGE LINE" AC Motor Starters, AC Operated



■ NON-REVERSING MOTOR STARTERS UL File No. E42419, E44592 cUL listed

1 Phase HP Rating (Full load ampere)		3 Phase HP Ratings (Full load ampere)				Rated thermal current for non inductive / resistive load	Qty. of Auxiliary Contacts	Part Number	Fuji Type	Frame Size
100-120V	220-240V	200-208V	220-240V	440-480V	550-600V					
1/3 (7.2)	1 (8)	2 (7.8)	2 (6.8)	5 (7.6)	5 (6.1)	11	1	4NW0A0#* @ @K%	SW-03/2E	0A
1/3 (7.2)	1 (8)	3 (11)	3 (9.6)	5 (7.6)	5 (6.1)	13	1	4NW0F0#* @ @K%	SW-0/2E	0F
1/3 (7.2)	1 (8)	3 (11)	3 (9.6)	5 (7.6)	5 (6.1)	13	2	4NW0G0#* @ @K%	SW-05/2E	0G
1 (16)	2 (12)	5 (17.5)	5 (15.2)	7 1/2 (11)	7 1/2 (9)	20	1	4NW0Q0#* @ @K%	SW-4-0/2E	0Q
1 (16)	2 (12)	5 (17.5)	5 (15.2)	10 (14)	10 (11)	20	1	4NW0R0#* @ @K%	SW-4-1/2E	0R
1 (16)	2 (12)	5 (17.5)	5 (15.2)	10 (14)	10 (11)	20	2	4NW0H0#* @ @K%	SW-5-1/2E	0H

■ REVERSING MOTOR STARTERS UL File No. E42419, E44592 cUL listed

1 Phase HP Rating (Full load ampere)		3 Phase HP Ratings (Full load ampere)				Rated thermal current for non inductive / resistive load	Qty. of Auxiliary Contacts	Part Number	Fuji Type	Frame Size
100-120V	220-240V	200-208V	220-240V	440-480V	550-600V					
1/3 (7.2)	1 (8)	2 (7.8)	2 (6.8)	5 (7.6)	5 (6.1)	11	1	4NX0A0#* @ @K%	SW-03RM/2E	0A
1/3 (7.2)	1 (8)	3 (11)	3 (9.6)	5 (7.6)	5 (6.1)	13	1	4NX0F0#* @ @K%	SW-0RM/2E	0F
1/3 (7.2)	1 (8)	3 (11)	3 (9.6)	5 (7.6)	5 (6.1)	13	2	4NX0G0#* @ @K%	SW-05RM/2E	0G
1 (16)	2 (12)	5 (17.5)	5 (15.2)	7 1/2 (11)	7 1/2 (9)	20	1	4NX0Q0#* @ @K%	SW-4-0RM/2E	0Q
1 (16)	2 (12)	5 (17.5)	5 (15.2)	10 (14)	10 (11)	20	1	4NX0R0#* @ @K%	SW-4-1RM/2E	0R
1 (16)	2 (12)	5 (17.5)	5 (15.2)	10 (14)	10 (11)	20	2	4NX0H0#* @ @K%	SW-5-1RM/2E	0H

Note: The list above indicates the No. of auxiliary contacts provided per contactor.

If larger motor starters are required, please turn to page 21.

EXPLANATION OF PART NUMBER SYSTEM

4 N W 0 A 0 # * @ @ K %

• **PRODUCT LINE**

4=Orange Line

• **OPERATION**

N=AC Coil
G=DC Coil

• **DESCRIPTION**

W=Non-Reversing Motor Starter
X=Reversing Motor Starter

• **FRAME SIZE**

• **FRAME ENCLOSURE**

0=Open Frame, No Enclosure

• **COIL VOLTAGE**

Select code from chart on next page

• **TERMINAL OPTION**

Blank: Standard
Y: Optional, non removable
terminal cover accessory.
(Note: Y type not available for
0Q or 0R frame sizes)

• **OVERLOAD TYPE**

K=Open Phase Protection
offered as a standard

• **QUANTITY OF AUX. CONTACTS**

10 : 1NO 20 : 2NO
01 : 1NC 02 : 2NC
11 : 1NO+1NC

See above under the "Qty. of Aux Contacts"
column or next page.

• **OVERLOAD RANGE**

Select appropriate letter from chart
on next page

"ORANGE LINE" AC Motor Starters, AC Operated

AVAILABLE COILS

Code Letter	AC Coil 60Hz	AC Coil 50Hz
E	24–26V	24V
F	48–52V	48V
A	100–110V	100V
1	110–120V	100–110V
G	120–130V	110–120V
B	200–220V	200V
2	220–240V	200–220V
C	400–440V	380–400V
4	440–480V	415–440V
5	550–600V	500–550V

If DC operation is required,
please turn to page 11-12.

COIL CHARACTERISTICS

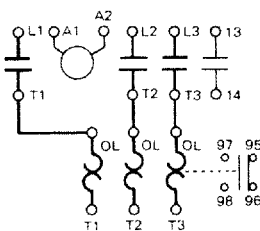
Frame Size	Power Consumption (VA)		Pick-up Voltage (V)	Drop-out Voltage (V)	OperatingTime (ms)	
					Coil ON	Coil OFF
	Inrush Sealed				↓	↓
					Contact ON	Contact OFF
0A	95	9	58-68	40-55	9-20	5-16
0F	95	9	58-68	40-55	9-20	5-16
0G	95	9	58-68	40-55	9-20	5-16
0Q	95	9	65-73	44-60	9-20	5-16
0R	95	9	65-73	44-60	9-20	5-16
0H	95	9	65-73	44-60	9-20	5-16

This data is based on 110-120VAC, 50/60Hz coil, tested at 120VAC, 60Hz.
For additional coil data, please see page 49.

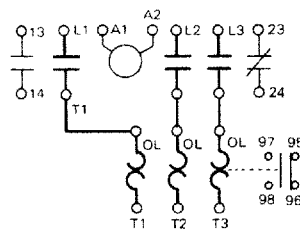
WIRING DIAGRAMS / AUXILIARY CONTACT INFORMATION

NON-REVERSING MOTOR STARTERS

(4NW0A0, 0F0, 0Q0
and 0R0)*

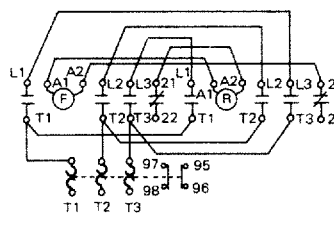


(4NW0G0 and 0H0)**

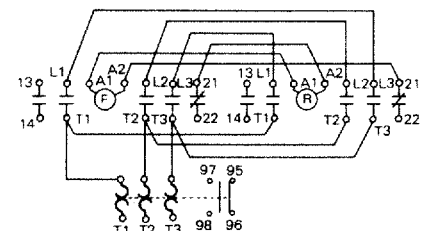


REVERSING MOTOR STARTERS

(4NX0A0, 0F0, 0Q0, 0R0) ***



(4NX0G0, 0H0) ***



- * The 0A, 0F, 0Q & 0R frames offer 1 Aux. contact, NO standard. However, NC is available as an option.
 ** The 0G & 0H frames offer 2 Aux. contacts, 1NO + 1NC standard. However, 2NO or 2NC is available as an option.
 *** Reversing starters are NOT pre-wired with an electrical interlock unless requested when ordered. Reversing starters without at least 1NC Aux. contact can not be electrically interlocked.

AUXILIARY CONTACT RATINGS

Operating	Contact rating Code Designation	Continuous Ampere Rating	Current-Make/Break (A)			
			110 to 120V	220 to 240V	440 to 480V	550 to 600V
AC	A600	10	60/6	30/3	15/1.5	12/1.2
DC	Q300	10	120V	240V	0.55/0.55	0.27/0.27

OVERLOAD RANGES

Overload relays can be purchased separately.
See page 13 for details and part numbers.

Code	Range	Code	Range	Code	Range	Code	Range	Code	Range
A	0.1–0.15	E	0.48–0.72	J	1.4–2.2	N	4–6	T†	9–13
B	0.15–0.24	F	0.64–0.96	K	1.7–2.6	P	5–8	V†	12–18
C	0.24–0.36	G	0.8–1.2	L	2.2–3.4	Q	6–9		
D	0.36–0.54	H	0.95–1.45	M	2.8–4.2	S	7–11		

† These codes (T & V) are not available on frame sizes 0A, 0F, or 0G. They can be specified for use on frame sizes 0Q, 0R, & 0H only.

"ORANGE LINE" AC Motor Starters, DC Operated



■ NON-REVERSING MOTOR STARTERS UL File No. E42419, E44592 cUL listed

1 Phase HP Rating (Full load ampere)		3 Phase HP Ratings (Full load ampere)				Rated thermal current for non inductive / resistive load	Qty. of Auxiliary Contacts	Part Number	Fuji Type	Frame Size
100-120V	220-240V	200-208V	220-240V	440-480V	550-600V					
1/3 (7.2)	1 (8)	2 (7.8)	2 (6.8)	5 (7.6)	5 (6.1)	11	1	4GW0A0#*@@K%	SW-03/G2E	0A
1/3 (7.2)	1 (8)	3 (11)	3 (9.6)	5 (7.6)	5 (6.1)	13	1	4GW0F0#*@@K%	SW-0/G2E	0F
1/3 (7.2)	1 (8)	3 (11)	3 (9.6)	5 (7.6)	5 (6.1)	13	2	4GW0G0#*@@K%	SW-05/G2E	0G
1 (16)	2 (12)	5 (17.5)	5 (15.2)	7 1/2 (11)	7 1/2 (9)	20	1	4GW0Q0#*@@K%	SW-4-0/G2E	0Q
1 (16)	2 (12)	5 (17.5)	5 (15.2)	10 (14)	10 (11)	20	1	4GW0R0#*@@K%	SW-4-1/G2E	0R
1 (16)	2 (12)	5 (17.5)	5 (15.2)	10 (14)	10 (11)	20	2	4GW0H0#*@@K%	SW-5-1/G2E	0H

■ REVERSING MOTOR STARTERS UL File No. E42419, E44592 cUL listed

1 Phase HP Rating (Full load ampere)		3 Phase HP Ratings (Full load ampere)				Rated thermal current for non inductive / resistive load	Qty. of Auxiliary Contacts	Part Number	Fuji Type	Frame Size
100-120V	220-240V	200-208V	220-240V	440-480V	550-600V					
1/3 (7.2)	1 (8)	2 (7.8)	2 (6.8)	5 (7.6)	5 (6.1)	11	1	4GX0A0#*@@K%	SW-03RM/G2E	0A
1/3 (7.2)	1 (8)	3 (11)	3 (9.6)	5 (7.6)	5 (6.1)	13	1	4GX0F0#*@@K%	SW-0RM/G2E	0F
1/3 (7.2)	1 (8)	3 (11)	3 (9.6)	5 (7.6)	5 (6.1)	13	2	4GX0G0#*@@K%	SW-05RM/G2E	0G
1 (16)	2 (12)	5 (17.5)	5 (15.2)	7 1/2 (11)	7 1/2 (9)	20	1	4GX0Q0#*@@K%	SW-4-0RM/G2E	0Q
1 (16)	2 (12)	5 (17.5)	5 (15.2)	10 (14)	10 (11)	20	1	4GX0R0#*@@K%	SW-4-1RM/G2E	0R
1 (16)	2 (12)	5 (17.5)	5 (15.2)	10 (14)	10 (11)	20	2	4GX0H0#*@@K%	SW-5-1RM/G2E	0H

Note: The list above indicates the No. of auxiliary contacts provided per contactor.

If larger motor starters are required, please turn to page 23.

EXPLANATION OF PART NUMBER SYSTEM

4 G W 0 A 0 # * @ @ K %

• PRODUCT LINE

4=Orange Line

• OPERATION

N=AC Coil
G=DC Coil

• DESCRIPTION

W=Non-Reversing Motor Starter
X=Reversing Motor Starter

• FRAME SIZE

• FRAME ENCLOSURE

0=Open Frame, No Enclosure

• COIL VOLTAGE

Select code from chart on next page

• TERMINAL OPTION

Blank: Standard
Y: Optional, non removable
terminal cover accessory.
(Note: Y type not available for 0Q
or 0R frame sizes)

• OVERLOAD TYPE

K=Open Phase Protection
offered as a standard

• QUANTITY OF AUX. CONTACTS

10 : 1NO 20 : 2NO
01 : 1NC 02 : 2NC
11 : 1NO+1NC

See above under the "Qty. of Aux Contacts"
column or next page.

• OVERLOAD RANGE

Select appropriate letter from chart
on next page

"ORANGE LINE" AC Motor Starters, DC Operated

AVAILABLE COILS

Code Letter	DC Coil
T	12V
M	24V
N	48V
1	100V
R	110V
2	200V
S	220V

If AC operation is required, please turn to page 9-10.

COIL CHARACTERISTICS

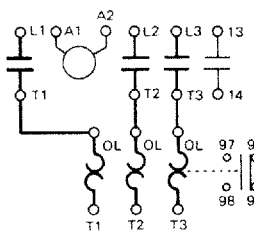
Frame Size	Power Consumption (VA)		Pick-up Voltage (V)	Drop-out Voltage (V)	Operating Time (ms)	
	Inrush	Sealed			Coil ON ↓ Contact ON	Coil OFF ↓ Contact OFF
0A	7	7	11-15	3-6	43-47	22-24
0F	7	7	11-15	3-6	43-47	22-24
0G	7	7	10-15	3-7	43-47	22-24
0Q	7	7	11-15	3-7	44-48	22-25
0R	7	7	11-15	3-7	44-48	22-25
0H	7	7	11-16	4-7	45-49	22-26

This data is based on 24-26VDC coil, tested at 24VDC.
For additional coil data, please see page 50.

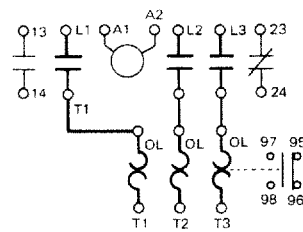
WIRING DIAGRAMS / AUXILIARY CONTACT INFORMATION

NON-REVERSING MOTOR STARTERS

(4NW0A0, 0F0, 0Q0 and 0R0)*

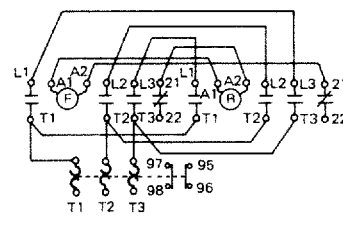


(4GW0G0 and 0H0)**

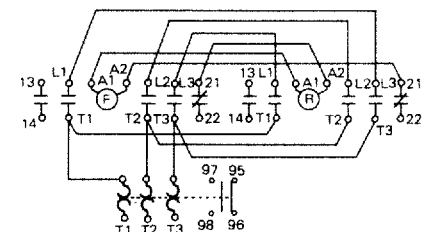


REVERSING MOTOR STARTERS

(4GX0A0, 0F0, 0Q0, 0R0) ***



(4GX0G0, 0H0) ***



- * The 0A, 0F, 0Q & 0R frames offer 1 Aux. contact, NO standard. However, NC is available as an option.
 ** The 0G & 0H frames offer 2 Aux. contacts, 1NO + 1NC standard. However, 2NO or 2NC is available as an option.
 *** Reversing contactors are NOT pre-wired with an electrical interlock unless requested when ordered. Reversing contactors without at least 1NC Aux. contact can not be electrically interlocked.

AUXILIARY CONTACT RATINGS

Operating	Contact rating code designation	Continuous ampere rating	Current-Make/Break (A)			
			110 to 120V	220 to 240V	440 to 480V	550 to 600V
AC	A600	10	60/6	30/3	15/1.5	12/1.2
DC	Q300	10	120V		240V	
			0.55/0.55		0.27/0.27	

OVERLOAD RANGES

Overload relays can be purchased separately. See page 13 for details and part numbers.

Code	Range	Code	Range	Code	Range	Code	Range	Code	Range
A	0.1-0.15	E	0.48-0.72	J	1.4-2.2	N	4-6	T†	9-13
B	0.15-0.24	F	0.64-0.96	K	1.7-2.6	P	5-8	V†	12-18
C	0.24-0.36	G	0.8-1.2	L	2.2-3.4	Q	6-9		
D	0.36-0.54	H	0.95-1.45	M	2.8-4.2	S	7-11		

† These codes (T & V) are not available on frame sizes 0A, 0F, or 0G. They can be specified for use on frame sizes 0Q, 0R, & 0H only.

"ORANGE LINE" THERMAL OVERLOAD RELAYS

Selection Guide

■ FEATURES

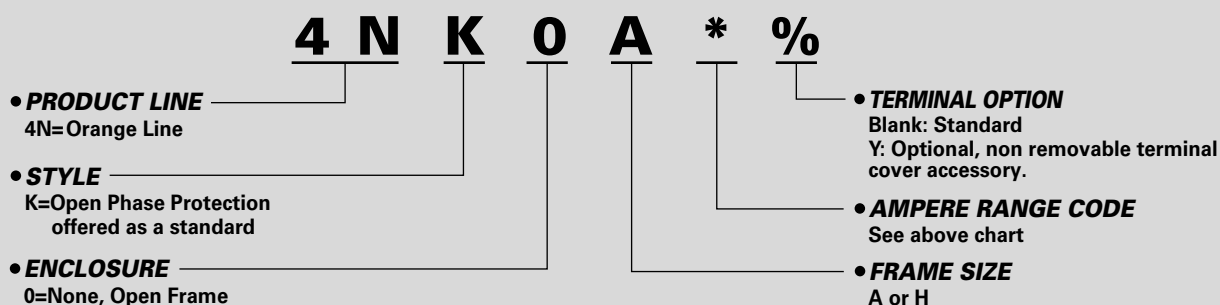
- 1NO+1NC alarm contact (Automatic reset available.)
- Provided with a built-in heater, thus ensuring accurate operations.
- Calibrated Rated Current Dial.
- With manual trip device.
- With open-phase protection device.



■ THERMAL OVERLOAD RELAYS UL File No.E44592 CSA File No.LR20479

Overload Part#	Ampere Range Code Letter	Adjustable Ampere Range	Used on Contactor Frames	Japanese Part Number for Overload
4NK0A*%	A	0.1 – 0.15	0A, 0F, 0G	TK-0N
	B	0.15 – 0.24		
	C	0.24 – 0.36		
	D	0.36 – 0.54		
	E	0.48 – 0.72		
	F	0.64 – 0.96		
	G	0.8 – 1.2		
	H	0.95 – 1.45		
	J	1.4 – 2.2		
	K	1.7 – 2.6		
	L	2.2 – 3.4		
	M	2.8 – 4.2		
	N	4 – 6		
	P	5 – 8		
	Q	6 – 9		
	S	7 – 11		
4NK0H*%	A	0.1 – 0.15	0Q, 0R, 0H	TK-5-1N
	B	0.15 – 0.24		
	C	0.24 – 0.36		
	D	0.36 – 0.54		
	E	0.48 – 0.72		
	F	0.64 – 0.96		
	G	0.8 – 1.2		
	H	0.95 – 1.45		
	J	1.4 – 2.2		
	K	1.7 – 2.6		
	L	2.2 – 3.4		
	M	2.8 – 4.2		
	N	4 – 6		
	P	5 – 8		
	Q	6 – 9		
	S	7 – 11		
	T	9 – 13		
	V	12 – 18		

EXPLANATION OF PART NUMBER SYSTEM

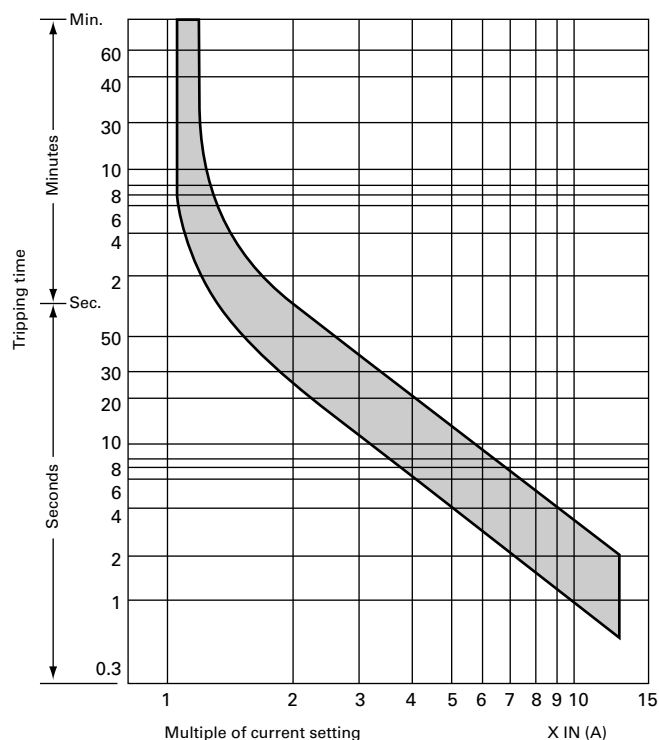


"ORANGE LINE" THERMAL OVERLOAD RELAYS

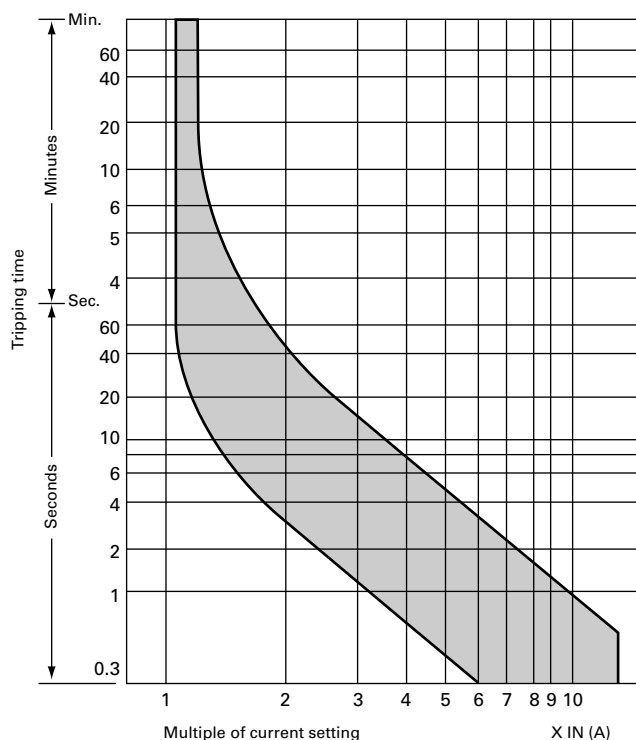
Overload Trip Curves

■ THERMAL OVERLOAD RELAYS/OPEN-PHASE PROTECTION TYPE K

Cold Start



Hot Start

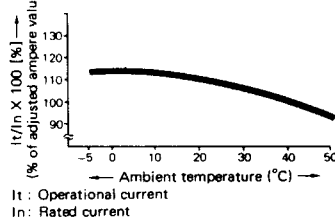


Cat. No.: 4NK0A*, 4NK0H*
FUJI type: TK-0N, TK-5-1N

■ AMBIENT TEMPERATURE COMPENSATOR

FUJI overload relays are provided with an ambient temperature compensator. Their characteristics limit ampere value changes to approx. 10% as the ambient temperature changes between -5°C and 40°C .

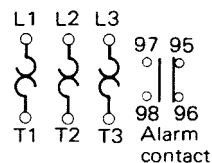
**Compensation characteristics
(Average value)**



I_t : Operational current
 I_n : Rated current

■ WIRING DIAGRAMS

(4NK0A* through 4NK4Q*)



Independent mounting of Orange Line thermal overload relays is possible through the use of an additional mounting bracket.

For 4NK0A* overloads, use mounting bracket part # SZ-HB
For 4NK0H* overloads, use mounting bracket part # SZ-HC

■ ALARM CONTACT RATINGS

Contact rating Code Designation	Continuous Ampere Rating	Current-Make/Break (A)			
		110 to 120V	220 to 240V	440 to 480V	550 to 600V
C600	2.5	15/1.5	7.5/0.75	3.75/0.375	3.0/0.3



Base unit for separate mounting

"ORANGE LINE" ACCESSORIES

SIDE MOUNTING

■ AUXILIARY CONTACT BLOCK

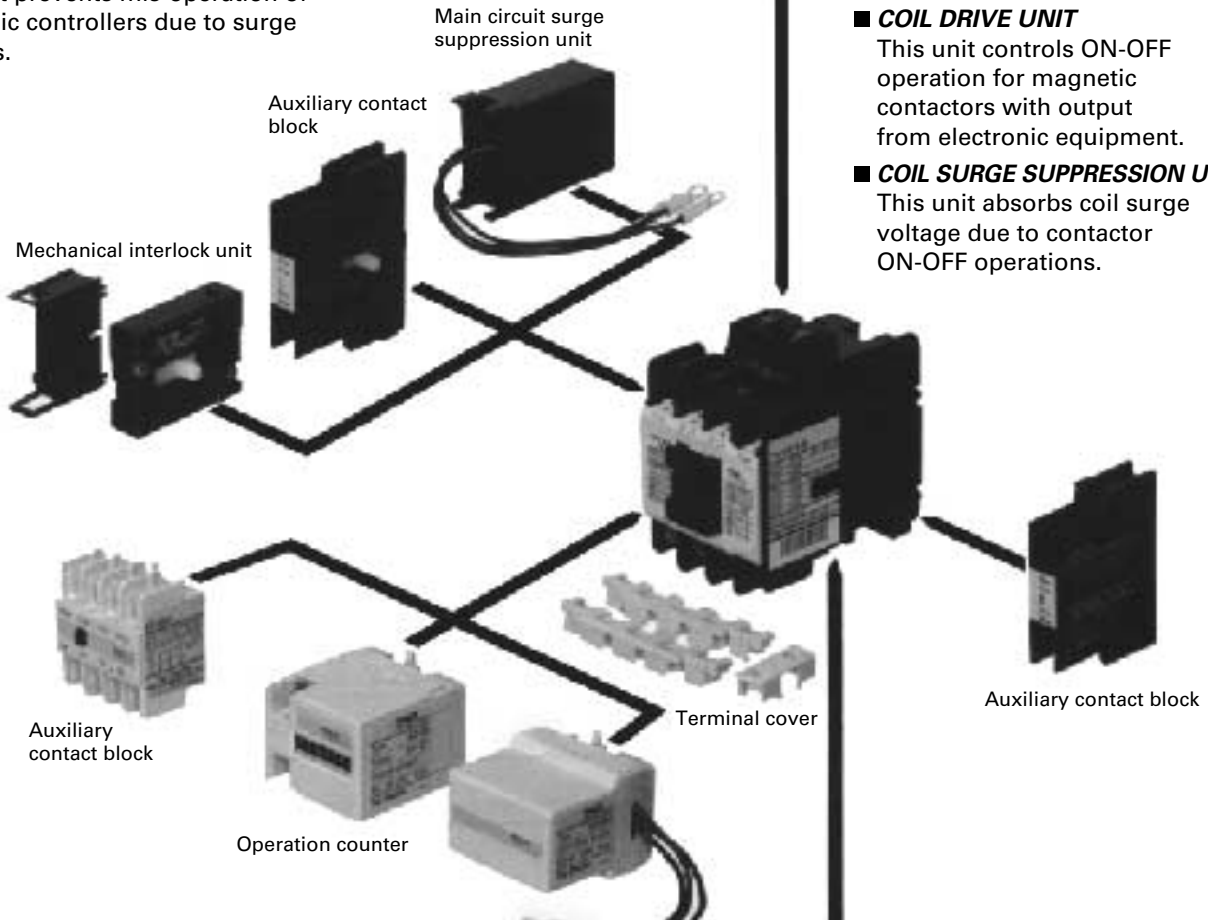
Single pole (1NO + 1NC)

■ MECHANICAL INTERLOCK UNIT

The mechanical interlock unit is used to interlock two contactors for reversing. One size fits all contactors.

■ MAIN CIRCUIT SURGE SUPPRESSION UNIT

This unit prevents mis-operation of electronic controllers due to surge voltages.



TOP MOUNTING

■ COIL DRIVE UNIT

This unit controls ON-OFF operation for magnetic contactors with output from electronic equipment.

■ COIL SURGE SUPPRESSION UNIT

This unit absorbs coil surge voltage due to contactor ON-OFF operations.

FRONT MOUNTING

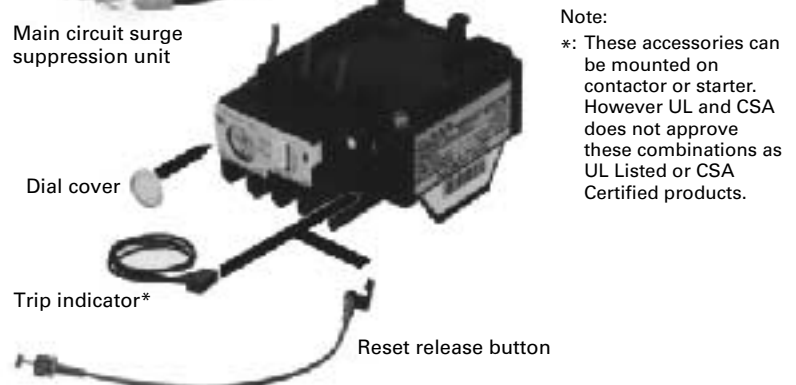
■ AUXILIARY CONTACT BLOCK

2-pole or 4-pole

■ OPERATION COUNTER

This counter indicates the number of contactor ON-OFF operations to ensure easy maintenance and inspection.

■ MAIN CIRCUIT SURGE SUPPRESSION UNIT



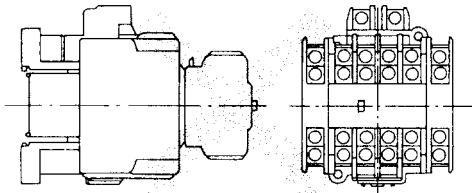
Note:

*: These accessories can be mounted on contactor or starter. However UL and CSA does not approve these combinations as UL Listed or CSA Certified products.

"ORANGE LINE" ACCESSORIES

Description	Type
Auxiliary Contact Block	
●Front mounting 4NO 3NO+1NC 2NO+2NC 2NO 1NO+1NC 2NC 1NO+1NC (Over lapping) 2NO+2NC (Over lapping)	SZ-A40 SZ-A31 SZ-A22 SZ-A20 SZ-A11 SZ-A02 SZ-A111 SZ-A222
●Front mounting, single contact type 4NO 3NO+1NC 2NO+2NC	SZ-A40H SZ-A31H SZ-A22H
●Side mounting 1NO+1NC	SZ-AS1
●Side mounting, single contact type	SZ-AS1H

Front mounting type and side mounting type auxiliary contact blocks can not be used simultaneously.



Operating Counter	●Without alarm contact ●With alarm contact	SZ-J
	at 1-million operations	SZ-J1
	at 2-million operations	SZ-J2
	at 3-million operations	SZ-J3
	at 4-million operations	SZ-J4
	at 5-million operations	SZ-J5
	at 6-million operations	SZ-J6
	at 7-million operations	SZ-J7
	at 8-million operations	SZ-J8
3-pole Parallel Connection Link	For 0A0, 0F0, 0G0 (2 pcs.)	SZ-SP1
	For 0Q0, 0R0, 0H0 (2 pcs.)	SZ-SP2
Coil Drive Unit	24V DC (Relay)	SZ-CD1
	24V DC (Solid State)	SZ-03/ CD2-24
Off-delay Release Unit	100V AC 110V AC 200V AC 220V AC	SZ-DE100 SZ-DE110 SZ-DE200 SZ-DE220

Description		Type
Terminal Cover	●Contactor For 4NC0A0, 4NC0F0 For 4NC0G0 For 4NC0Q0, 4NC0R0 For 4NC0H0	SZ-T1 SZ-T2 SZ-T3 SZ-T4
	●Auxiliary contact block For 4-pole, front mounting For 2-pole, front mounting For 2-pole, side mounting	SZ-T5 SZ-T6 SZ-T7
	●Thermal overload relay For 4NK0A For 4NK0H Base unit for separate mounting: For SZ-HB For SZ-HC	SZ-T12 SZ-T13 SZ-T10 SZ-T11
Coil Surge Suppression Unit	Varistor: 24 to 48V AC 100 to 240V AC 380 to 440V AC 24 to 48V AC with LED 100 to 240V AC with LED RC: 24 to 48V AC 100 to 240V AC 24 to 48V AC with LED 100 to 240V AC with LED	SZ-Z1 SZ-Z2 SZ-Z3 SZ-Z6 SZ-Z7 SZ-Z4 SZ-Z5 SZ-Z8 SZ-Z9
Main Circuit Surge Suppression Unit	With delta-connected CR, 100 to 240V AC ●Front mounting ●Side mounting	 SZ-ZM1 SZ-ZM2
Base Unit for Separate Mounting	For 4NK0A For 4NK0H	SZ-HB SZ-HC
Case Cover	Non-reversing (Plastic) Non-reversing, with pushbuttons (Plastic) Reversing (Steel)	SZ-JC1 SZ-JC2 SZ-JC3
Dial Cover		SZ-DA
Trip Indicator	100 to 110V AC 200 to 220V AC	SZ-L100 SZ-L200
Reset Release Button	Lead length: 300mm 500mm 700mm	SZ-R1 SZ-R2 SZ-R3
Mechanical Interlock Unit		SZ-RM
Power Connection Kit for Reversing	For 4NC0A0, 4NC0F0 For 4NC0G0 For 4NC0Q0, 4NC0R0 For 4NC0H0	SZ-RW1 SZ-RW2 SZ-RW3 SZ-RW4

ORANGE LINE REPLACEMENT PARTS

■ MAIN CONTACTS

Size	Contacts	Kit Each	U.S. Catalog No.
0A	Movable Stationary	3 6	4NC0A-CK
0F, 0G	Movable Stationary	3 6	4NC0G-CK
0Q	Movable Stationary	3 6	4NC0Q-CK
0R, 0H	Movable Stationary	3 6	4NC0H-CK

■ COIL

ALL ORANGE LINE devices use the same coils.

–AC coils: 4NC0H-#MC, Replace the # with the correct coil code found on page 6

–DC coils: 4GC0H-#MC, Replace the # with the correct coil code found on page 8

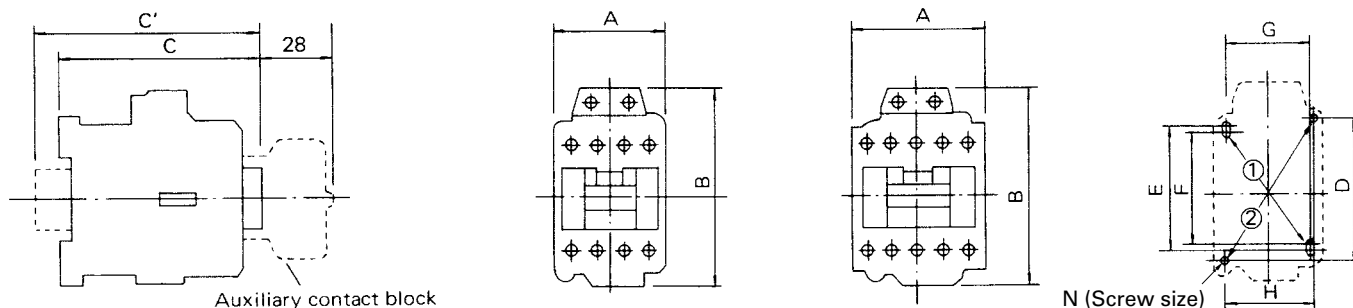
"ORANGE LINE" Dimensions

■ NON-REVERSING CONTACTORS/OPEN TYPE Approximate Dimensions, mm

FIG.1 (4NC0A0 through 4NC0H0)

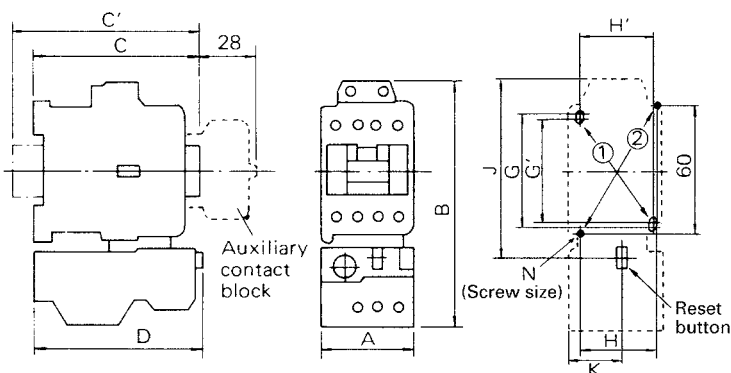
4NC0A0, 0F0, 0Q0, 0R0

4NC0G0, 0H0



U.S. CAT. No.	Fuji Type	Fig. No.	Dimensions, mm										Net Weight (kg)
			A	B	C	C'	D	E	F	G	H	N	
4NC0A0	SC-03	1	43	80	80	90	60	52	48	34	35	2-M4	0.32
4NC0F0	SC-0	1	43	80	80	90	60	52	48	34	35	2-M4	0.32
4NC0G0	SC-05	1	53	80	80	90	60	52	48	34	35	2-M4	0.34
4NC0Q0	SC-4-0	1	53	80	81	91	60	52	48	34	35	2-M4	0.36
4NC0R0	SC-4-1	1	53	80	81	91	60	52	48	34	35	2-M4	0.36
4NC0H0	SC-5-1	1	64	80	81	91	60	60	56	54	50	2-M4	0.38
4GC0A0	SC-03/G	1	43	80	110	120	60	52	48	34	35	2-M4	0.55
4GC0F0	SC-0/G	1	43	80	110	120	60	52	48	34	35	2-M4	0.55
4GC0G0	SC-05/G	1	53	80	110	120	60	52	48	34	35	2-M4	0.58
4GC0Q0	SC-4-0/G	1	53	80	111	121	60	52	48	34	35	2-M4	0.6
4GC0R0	SC-4-1/G	1	53	80	111	121	60	52	48	34	35	2-M4	0.6
4GC0H0	SC-5-1/G	1	64	80	111	121	60	60	56	54	50	2-M4	0.62

FIG.2 (4NW0A0 through 4NW0H0)

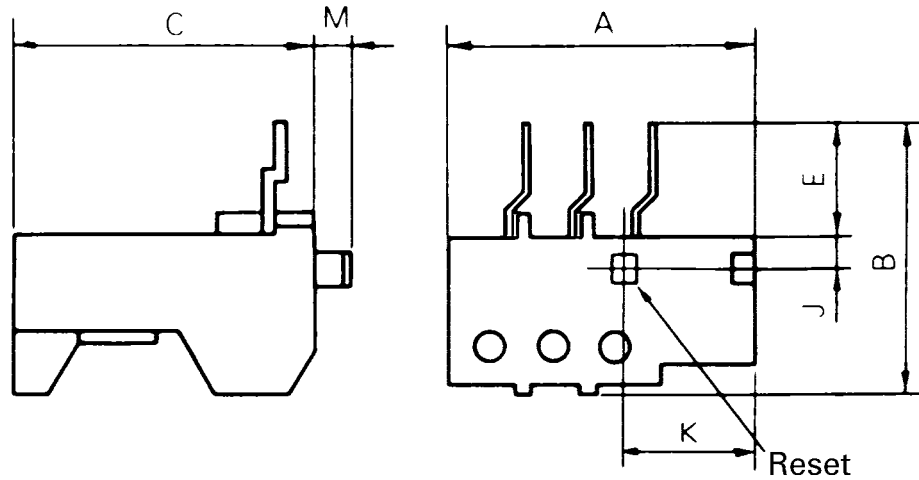


U.S. CAT. No.	Fuji Type	Fig. No.	Dimensions, mm													Net Weight (kg)
			A	B	C	C'	D	F	G	G'	H	H'	J	K	N	
4NW0A0	SW-03/2E	2	44	120	80	90	81	60	52	48	35	34	90	26.5	2-M4	0.43
4NW0F0	SW-0/2E	2	44	120	80	90	81	60	52	48	35	34	90	26.5	2-M4	0.43
4NW0G0	SW-05/2E	2	53	120	80	90	81	60	52	48	35	34	90	35.5	2-M4	0.45
4NW0Q0	SW-4-0/2E	2	53	126	81	91	81	60	52	48	35	34	93	26.5	2-M4	0.47
4NW0R0	SW-4-1/2E	2	53	126	81	91	81	60	52	48	35	34	93	26.5	2-M4	0.47
4NW0H0	SW-5-1/2E	2	64	126	81	91	81	60	60	56	50	54	93	37.5	2-M4	0.5
4GW0A0	SW-03/G 2E	2	44	120	110	120	81	60	52	48	35	34	90	26.5	2-M4	0.66
4GW0F0	SW-0/G 2E	2	44	120	110	120	81	60	52	48	35	34	90	26.5	2-M4	0.66
4GW0G0	SW-05/G 2E	2	53	120	110	120	81	60	52	48	35	34	90	35.5	2-M4	0.69
4GW0Q0	SW-4-0/G 2E	2	53	126	111	121	81	60	52	48	35	34	93	26.5	2-M4	0.72
4GW0R0	SW-4-1/G 2E	2	53	126	111	121	81	60	52	48	35	34	93	26.5	2-M4	0.72
4GW0H0	SW-5-1/G 2E	2	64	126	111	121	81	60	60	56	50	54	93	37.5	2-M4	0.74

"ORANGE LINE" Dimensions

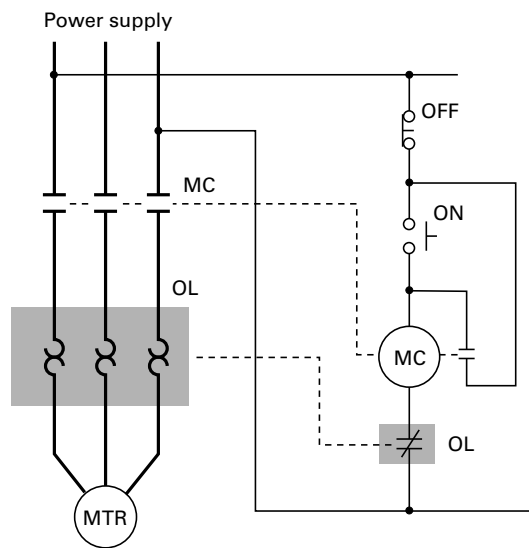
■ THERMAL OVERLOAD RELAYS Approximate Dimensions, mm

FIG. 5



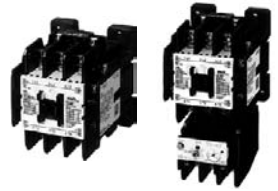
U.S. CAT. No.	Fuji Type	Fig. No.	Dimensions, mm							Net Weight (kg)
			A	B	C	E	J	K	M	
4NK0A	TK-0N	5	44	58.5	77	17	10.5	17.5	3	0.11
4NK0H*	TK-5-1N	5	53	60.5	77	14	14	26.5	3	0.12

Schematic Diagram



"ORANGE LINE" NOTES

"ODYSSEY SERIES" AC Contactors & Starters, AC Operated (Conventional AC Coils)



■ NON-REVERSING CONTACTORS UL File No. E42419

1 Phase HP Rating (Full load ampere)		3 Phase HP Ratings (Full load ampere)				Rated thermal current for non inductive / resistive load	Qty. of Aux. Contacts		Part Number	Fuji Type	Frame Size
100-120V	220-240V	200-208V	220-240V	440-480V	550-600V		NO	NC			
2 (24)	5 (28)	71/2 (25.3)	10 (28)	25 (34)	25 (27)	50	2	2	3NC0T0#22	SC-N1	0T
3 (34)	71/2 (40)	10 (32.2)	15 (42)	30 (40)	30 (32)	60	2	2	3NC1Q0#22	SC-N2	1Q
3 (34)	10 (50)	15 (48.3)	20 (54)	40 (52)	40 (41)	80	2	2	3NC2F0#22	SC-N2S	2F
5 (34)	15 (68)	20 (62.1)	25 (68)	50 (65)	50 (52)	100	2	2	3NC2H0#22	SC-N3	2H
71/2 (56)	15 (68)	25 (78.2)	30 (80)	60 (77)	60 (62)	135	2	2	3NC2T0#22	SC-N4	2T

■ REVERSING CONTACTORS UL File No. E42419, cUL listed

1 Phase HP Rating (Full load ampere)		3 Phase HP Ratings (Full load ampere)				Rated thermal current for non inductive / resistive load	Qty. of Aux. Contacts		Part Number	Fuji Type	Frame Size
100-120V	220-240V	200-208V	220-240V	440-480V	550-600V		NO	NC			
2 (24)	5 (28)	71/2 (25.3)	10 (28)	25 (34)	25 (27)	50	2	2	3ND0T0#22	SC-N1RM	0T
3 (34)	71/2 (40)	10 (32.2)	15 (42)	30 (40)	30 (32)	60	2	2	3ND1Q0#22	SC-N2RM	1Q
3 (34)	10 (50)	15 (48.3)	20 (54)	40 (52)	40 (41)	80	2	2	3ND2F0#22	SC-N2SRM	2F
5 (34)	15 (68)	20 (62.1)	25 (68)	50 (65)	50 (52)	100	2	2	3ND2H0#22	SC-N3RM	2H
71/2 (56)	15 (68)	25 (78.2)	30 (80)	60 (77)	60 (62)	135	2	2	3ND2T0#22	SC-N4RM	2T

■ NON-REVERSING MOTOR STARTERS UL File No. E42419, cUL listed

1 Phase HP Rating (Full load ampere)		3 Phase HP Ratings (Full load ampere)				Rated thermal current for non inductive / resistive load	Qty. of Aux. Contacts		Part Number	Fuji Type	Frame Size
100-120V	220-240V	200-208V	220-240V	440-480V	550-600V		NO	NC			
2 (24)	5 (28)	71/2 (25.3)	10 (28)	25 (34)	25 (27)	50	2	2	3NW0T0#*22K	SW-N1/2E	0T
3 (34)	71/2 (40)	10 (32.2)	15 (42)	30 (40)	30 (32)	60	2	2	3NW1Q0#*22K	SW-N2/2E	1Q
3 (34)	10 (50)	15 (48.3)	20 (54)	40 (52)	40 (41)	80	2	2	3NW2F0#*22K	SW-N2S/2E	2F
5 (34)	15 (68)	20 (62.1)	25 (68)	50 (65)	50 (52)	100	2	2	3NW2H0#*22K	SW-N3/2E	2H
71/2 (56)	15 (68)	25 (78.2)	30 (80)	60 (77)	60 (62)	135	2	2	3NW2T0#*22K	SW-N4/2E	2T

■ REVERSING MOTOR STARTERS UL File No. E42419, cUL listed

1 Phase HP Rating (Full load ampere)		3 Phase HP Ratings (Full load ampere)				Rated thermal current for non inductive / resistive load	Qty. of Aux. Contacts		Part Number	Fuji Type	Frame Size
100-120V	220-240V	200-208V	220-240V	440-480V	550-600V		NO	NC			
2 (24)	5 (28)	71/2 (25.3)	10 (28)	25 (34)	25 (27)	50	2	2	3NX0T0#*22K	SW-N1RM/2E	0T
3 (34)	71/2 (40)	10 (32.2)	15 (42)	30 (40)	30 (32)	60	2	2	3NX1Q0#*22K	SW-N2RM/2E	1Q
3 (34)	10 (50)	15 (48.3)	20 (54)	40 (52)	40 (41)	80	2	2	3NX2F0#*22K	SW-N2SRM/2E	2F
5 (34)	15 (68)	20 (62.1)	25 (68)	50 (65)	50 (52)	100	2	2	3NX2H0#*22K	SW-N3RM/2E	2H
71/2 (56)	15 (68)	25 (78.2)	30 (80)	60 (77)	60 (62)	135	2	2	3NX2T0#*22K	SW-N4RM/2E	2T

If larger contactors or motor starters are required, please turn to page 25-27.

EXPLANATION OF PART NUMBER SYSTEM

3 N W 0 T 0 # * 2 2 K

• **PRODUCT LINE**
3=Odyssey Series

• **OPERATION**
N=AC Coil

• **DESCRIPTION**
C=Non-Reversing Contactor
D=Reversing Contactor
W=Non-Reversing Motor Starter
X=Reversing Motor Starter

• **FRAME SIZE**

• **FRAME ENCLOSURE**
0=Open Frame, No Enclosure

• **OVERLOAD TYPE**
K=Open Phase Protection
offered as a standard
(motor starters only
omit for contactors)

• **QUANTITY OF N.C. AUX. CONTACTS**

• **QUANTITY OF N.O. AUX. CONTACTS**

• **OVERLOAD RANGE**
Select appropriate letter from chart
on page 29
(motor starters only
omit for contactors)

• **COIL VOLTAGE**
Select code from chart on next page

"ODYSSEY SERIES" AC Contactors & Starters, AC Operated (Conventional AC Coils)

AVAILABLE COILS

Code Letter	AC Coil 60Hz	AC Coil 50Hz
E	24–26V	24V
F	48–52V	48V
A	100–110V	100V
1	110–120V	100–110V
G	120–130V	110–120V
B	200–220V	200V
2	220–240V	200–220V
C	400–440V	380–400V
4	440–480V	415–440V
5	550–600V	500–550V

If DC operation is required,
please turn to page 23-24.

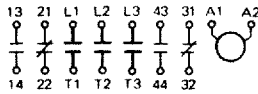
COIL CHARACTERISTICS

Frame Size	Power Consumption (VA)		Pick-up Voltage (V)	Drop-out Voltage (V)	Operating Time (ms)	
					Coil ON	Coil OFF
					↓	↓
	Inrush Sealed				Contact ON	Contact OFF
0T	135	12.4	60–70	43–58	10–17	6–13
1Q	135	12.4	60–70	43–58	10–17	6–13
2F	190	13.4	65–75	50–60	10–18	8–18
2H	190	13.4	65–75	50–60	10–18	8–18
2T	210	14.4	70–75	51–53	16–23	7–17

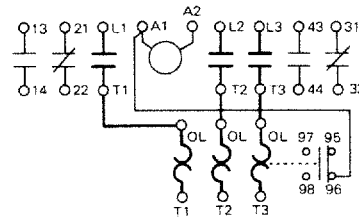
This data is based on 110-120VAC, 50/60Hz coil, tested at 120VAC, 60Hz.
For additional coil data, please see page 49.

WIRING DIAGRAMS / AUXILIARY CONTACT INFORMATION

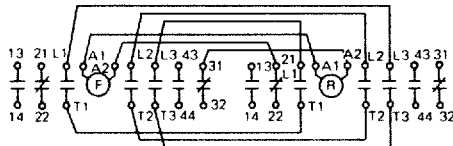
NON-REVERSING CONTACTORS



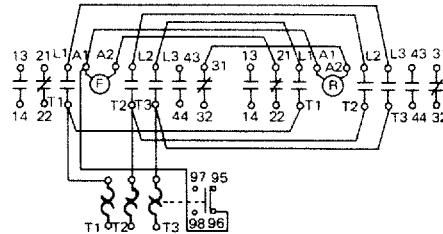
NON-REVERSING MOTOR STARTERS



REVERSING CONTACTORS



REVERSING MOTOR STARTERS



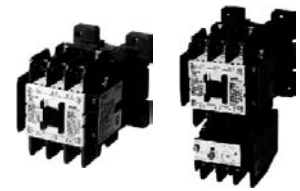
AUXILIARY CONTACT RATINGS

Operating	Contact rating Code Designation	Continuous Ampere Rating	Current-Make/Break (A)			
			110 to 120V	220 to 240V	440 to 480V	550 to 600V
AC	A600	10	60/6	30/3	15/1.5	12/1.2
DC	Q300	10	120V	240V		
			0.55/0.55	0.27/0.27		

Notes:

- 1) All Odyssey series contactors and starters come equipped with 2NO + 2NC auxiliary contacts standard.
- 2) Reversing contactors & starters from Frame size 0T through 2H can be constructed in the field. See accessories on pages 31-32 for details. Large frame size reversing units only factory assembled.

"ODYSSEY SERIES" AC Contactors & Starters, DC Operated (Conventional DC Coils)



■ NON-REVERSING CONTACTORS UL File No. E42419, cUL listed

1 Phase HP Rating (Full load ampere)		3 Phase HP Ratings (Full load ampere)				Rated thermal current for non inductive / resistive load	Qty. of Aux. Contacts		Part Number	Fuji Type	Frame Size
100-120V	220-240V	200-208V	220-240V	440-480V	550-600V		NO	NC			
2 (24)	5(28)	71/2 (25.3)	10 (28)	25 (34)	25 (27)	50	2	2	3GC0T0#22	SC-N1/G	0T
3 (34)	71/2(40)	10 (32.2)	15 (42)	30 (40)	30 (32)	60	2	2	3GC1Q0#22	SC-N2/G	1Q
3 (34)	10(50)	15 (48.3)	20 (54)	40 (52)	40 (41)	80	2	2	3GC2F0#22	SC-N2S/G	2F
5 (34)	15(68)	20 (62.1)	25 (68)	50 (65)	50 (52)	100	2	2	3GC2H0#22	SC-N3/G	2H

■ REVERSING CONTACTORS UL File No. E42419, cUL listed

1 Phase HP Rating (Full load ampere)		3 Phase HP Ratings (Full load ampere)				Rated thermal current for non inductive / resistive load	Qty. of Aux. Contacts		Part Number	Fuji Type	Frame Size
100-120V	220-240V	200-208V	220-240V	440-480V	550-600V		NO	NC			
2 (24)	5 (28)	71/2 (25.3)	10 (28)	25 (34)	25 (27)	50	2	2	3GD0T0#22	SC-N1RM/G	0T
3 (34)	71/2 (40)	10 (32.2)	15 (42)	30 (40)	30 (32)	60	2	2	3GD1Q0#22	SC-N2RM/G	1Q
3 (34)	10 (50)	15 (48.3)	20 (54)	40 (52)	40 (41)	80	2	2	3GD2F0#22	SC-N2SRM/G	2F
5 (34)	15 (68)	20 (62.1)	25 (68)	50 (65)	50 (52)	100	2	2	3GD2H0#22	SC-N3RM/G	2H

■ NON-REVERSING MOTOR STARTERS UL File No. E42419, cUL listed

1 Phase HP Rating (Full load ampere)		3 Phase HP Ratings (Full load ampere)				Rated thermal current for non inductive / resistive load	Qty. of Aux. Contacts		Part Number	Fuji Type	Frame Size
100-120V	220-240V	200-208V	220-240V	440-480V	550-600V		NO	NC			
2 (24)	5 (28)	71/2 (25.3)	10 (28)	25 (34)	25 (27)	50	2	2	3GW0T0#*22K	SW-N1/G2E	0T
3 (34)	71/2 (40)	10 (32.2)	15 (42)	30 (40)	30 (32)	60	2	2	3GW1Q0#*22K	SW-N2/G2E	1Q
3 (34)	10 (50)	15 (48.3)	20 (54)	40 (52)	40 (41)	80	2	2	3GW2F0#*22K	SW-N2S/G2E	2F
5 (34)	15 (68)	20 (62.1)	25 (68)	50 (65)	50 (52)	100	2	2	3GW2H0#*22K	SW-N3/G2E	2H

■ REVERSING MOTOR STARTERS UL File No. E42419, cUL listed

1 Phase HP Rating (Full load ampere)		3 Phase HP Ratings (Full load ampere)				Rated thermal current for non inductive / resistive load	Qty. of Aux. Contacts		Part Number	Fuji Type	Frame Size
100-120V	220-240V	200-208V	220-240V	440-480V	550-600V		NO	NC			
2 (24)	5 (28)	71/2 (25.3)	10 (28)	25 (34)	25 (27)	50	2	2	3GX0T0#*22K	SW-N1RM/G2E	0T
3 (34)	71/2 (40)	10 (32.2)	15 (42)	30 (40)	30 (32)	60	2	2	3GX1Q0#*22K	SW-N2RM/G2E	1Q
3 (34)	10 (50)	15 (48.3)	20 (54)	40 (52)	40 (41)	80	2	2	3GX2F0#*22K	SW-N2SRM/G2E	2F
5 (34)	15 (68)	20 (62.1)	25 (68)	50 (65)	50 (52)	100	2	2	3GX2H0#*22K	SW-N3RM/G2E	2H

If larger contactors or motor starters are required, please turn to page 25-27.

EXPLANATION OF PART NUMBER SYSTEM

3 G W 0 T 0 # * 2 2 K

• **PRODUCT LINE**
3=Odyssey Series

• **OPERATION**
G=DC Coil

• **DESCRIPTION**
C=Non-Reversing Contactor
D=Reversing Contactor
W=Non-Reversing Motor Starter
X=Reversing Motor Starter

• **FRAME SIZE**

• **FRAME ENCLOSURE**
0=Open Frame, No Enclosure

• **OVERLOAD TYPE**
K=Open Phase Protection
offered as a standard
(Motor Starters Only
Omit for Contactors)

• **QUANTITY OF N.C. AUX. CONTACTS**

• **QUANTITY OF N.O. AUX. CONTACTS**

• **OVERLOAD RANGE**
Select appropriate letter from chart
on page 29
(Motor Starters Only
Omit for Contactors)

• **COIL VOLTAGE**
Select code from chart on next page

"ODYSSEY SERIES" AC Contactors & Starters, DC Operated (Conventional DC Coils)

AVAILABLE COILS

Code Letter	DC Coil
T	12V
M	24V
N	48V
1	100V
R	110V
2	200V
S	220V

If AC operation is required,
please turn to page 21-22.

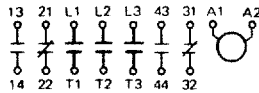
COIL CHARACTERISTICS

Frame Size	Power Consumption (VA)		Pick-up Voltage (V)	Drop-out Voltage (V)	OperatingTime (ms)	
					Coil ON ↓ Contact ON	Coil OFF ↓ Contact OFF
	Inrush Sealed					
0T	9	9	10-14	4-8	40-48	17-21
1Q	9	9	10-14	4-8	40-48	17-21
2F	12	12	10-14	3-7	60-70	15-19
2H	12	12	10-14	3-7	60-70	15-19

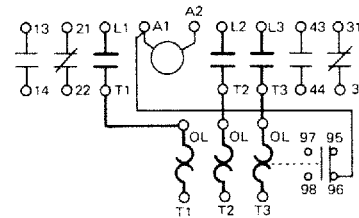
This data is based on 24-26VDC coil, tested at 24VDC.
For additional coil data, please see page 50.

WIRING DIAGRAMS / AUXILIARY CONTACT INFORMATION

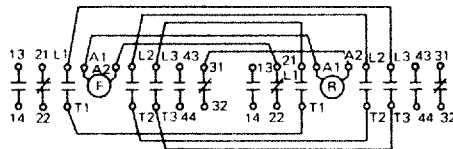
NON-REVERSING CONTACTORS



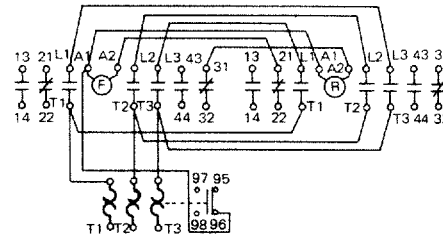
NON-REVERSING MOTOR STARTERS



REVERSING CONTACTORS



REVERSING MOTOR STARTERS



AUXILIARY CONTACT RATINGS

Operating	Contact rating Code Designation	Continuous Ampere Rating	Current-Make/Break (A)			
			110 to 120V	220 to 240V	440 to 480V	550 to 600V
AC	A600	10	60/6	30/3	15/1.5	12/1.2
DC	Q300	10	120V	240V		
			0.55/0.55	0.27/0.27		

Notes:

- 1) All Odyssey series contactors and starters come equipped with 2NO + 2NC auxiliary contacts standard.
- 2) Reversing contactors & starters from Frame size 0T through 2H can be constructed in the field. See Accessories on pages 31-32 for details. Large frame size reversing units only factory assembled.

"ODYSSEY SERIES" AC Contactors, Featuring Supermagnet Technology (AC or DC Operated)



■ NON-REVERSING CONTACTORS UL File No. E42419

1 Phase HP Rating (Full load ampere)		3 Phase HP Ratings (Full load ampere)				Rated thermal current for non inductive / resistive load	Qty. of Aux. Contacts		Part Number	Fuji Type	Frame Size
100-120V	220-240V	200-208V	220-240V	440-480V	550-600V		NO	NC			
2 (24)	5 (28)	71/2 (25.3)	10 (28)	25 (34)	25 (27)	50	2	2	3NC0T0#22/SE	SC-N1/SE	0T
3 (34)	71/2 (40)	10 (32.2)	15 (42)	30 (40)	30 (32)	60	2	2	3NC1Q0#22/SE	SC-N2/SE	1Q
3 (34)	10 (50)	15 (48.3)	20 (54)	40 (52)	40 (41)	80	2	2	3NC2F0#22/SE	SC-N2S/SE	2F
5 (34)	15 (68)	20 (62.1)	25 (68)	50 (65)	50 (52)	100	2	2	3NC2H0#22/SE	SC-N3/SE	2H
71/2 (56)	15 (68)	25 (78.2)	30 (80)	60 (77)	60 (62)	135	2	2	3NC2T0#22/SE	SC-N4/SE	2T
71/2 (56)	15 (68)	30 (92)	30 (80)	60 (77)	75 (77)	150	2	2	3NC3F0#22	SC-N5	3F
10	20	40 (119.6)	40 (104)	75 (96)	100 (99)	150	2	2	3NC3H0#22	SC-N6	3H
15	25	50 (149.5)	50 (130)	100 (124)	125 (125)	200	2	2	3NC4F0#22	SC-N7	4F
-	-	60 (177.1)	60 (154)	150 (180)	150 (144)	260	2	2	3NC4Q0#22	SC-N8	4Q
-	-	75 (220.8)	75 (192)	150 (180)	200 (192)	260	2	2	3NC4H0#22	SC-N10	4H
-	-	100 (285.2)	100 (248)	200 (240)	250 (242)	350	2	2	3NC5F0#22	SC-N11	5F
-	-	125 (358.6)	150 (360)	300 (361)	350 (336)	450	2	2	3NC5H0#22	SC-N12	5H
-	-	200 (552)	200 (480)	500 (590)	600 (578)	660	2	2	3NC6F0#22	SC-N14	6F
-	-	250 (692.3)	300 (720)	600 (722)	700 (672)	800	2	2	3NC6H0#22	SC-N16	6H

6F & 6H frame are only offered as contactor.

■ REVERSING CONTACTORS UL File No. E42419, cUL listed

1 Phase HP Rating (Full load ampere)		3 Phase HP Ratings (Full load ampere)				Rated thermal current for non inductive / resistive load	Qty. of Aux. Contacts		Part Number	Fuji Type	Frame Size
100-120V	220-240V	200-208V	220-240V	440-480V	550-600V		NO	NC			
2 (24)	5 (28)	71/2 (25.3)	10 (28)	25 (34)	25 (27)	50	2	2	3ND0T0#22/SE	SC-N1RM/SE	0T
3 (34)	71/2 (40)	10 (32.2)	15 (42)	30 (40)	30 (32)	60	2	2	3ND1Q0#22/SE	SC-N2RM/SE	1Q
3 (34)	10 (50)	15 (48.3)	20 (54)	40 (52)	40 (41)	80	2	2	3ND2F0#22/SE	SC-N2SRM/SE	2F
5 (34)	15 (68)	20 (62.1)	25 (68)	50 (65)	50 (52)	100	2	2	3ND2H0#22/SE	SC-N3RM/SE	2H
71/2 (56)	15 (68)	25 (78.2)	30 (80)	60 (77)	60 (62)	135	2	2	3ND2T0#22/SE	SC-N4RM/SE	2T
71/2 (56)	15 (68)	30 (92)	30 (80)	60 (77)	75 (77)	150	2	2	3ND3F0#22	SC-N5RM	3F
10	20	40 (119.6)	40 (104)	75 (96)	100 (99)	150	2	2	3ND3H0#22	SC-N6RM	3H
15	25	50 (149.5)	50 (130)	100 (124)	125 (125)	200	2	2	3ND4F0#22	SC-N7RM	4F
-	-	60 (177.1)	60 (154)	150 (180)	150 (144)	260	2	2	3ND4Q0#22	SC-N8RM	4Q
-	-	75 (220.8)	75 (192)	150 (180)	200 (192)	260	2	2	3ND4H0#22	SC-N10RM	4H
-	-	100 (285.2)	100 (248)	200 (240)	250 (242)	350	2	2	3ND5F0#22	SC-N11RM	5F
-	-	125 (358.6)	150 (360)	300 (361)	350 (336)	450	2	2	3ND5H0#22	SC-N12RM	5H
-	-	200 (552)	200 (480)	500 (590)	600 (578)	660	2	2	3ND6F0#22	SC-N14RM	6F
-	-	250 (692.3)	300 (720)	600 (722)	700 (672)	800	2	2	3ND6H0#22	SC-N16RM	6H

EXPLANATION OF PART NUMBER SYSTEM

3 N C 0 T 0 # 2 2 / S E

• **PRODUCT LINE**
3=Odyssey Series

• **OPERATION**
N=AC or DC Coil
(Super Magnet)

• **DESCRIPTION**
C=Non-Reversing Contactor
D=Reversing Contactor

• **FRAME SIZE**

• **FRAME ENCLOSURE**
0=Open Frame, No Enclosure

• **SUPER MAGNET OPTION**
SE=Super Magnet Option "SE" is
an option on frames 0T, 1Q,
2F, 2H & 2T. All other frames
offer Super Magnet standard.

• **QUANTITY OF N.C. AUX. CONTACTS**

• **QUANTITY OF N.O. AUX. CONTACTS**

• **COIL VOLTAGE**
Select code from chart on next page

"ODYSSEY SERIES" AC Contactors, Featuring Supermagnet Technology (AC or DC Operated)

AVAILABLE COILS

Code Letter	AC 50/60Hz	DC
E	24–25V	24V
F	48–50V	48V
1	100–127V	100–120V
2	200–250V	200–240V
Q	380–450V	N/A
4	460–575V	N/A

Note: The coil is energized by either an AC or DC input. (Code letter: E, F, 1, 2)

COIL CHARACTERISTICS

Frame Size	Power Consumption (VA)		Pick-up Voltage (V)	Drop-out Voltage (V)	Operating Time (ms)	
					Coil ON ↓ Contact ON	Coil OFF ↓ Contact OFF
	Inrush	Sealed				
0T/SE, 1Q/SE	137	3.9	70–80	35–50	20–25	20–25
2F/SE, 2H/SE	168	3.8	70–80	35–50	23–28	24–29
2T/SE	130	3.9	70–80	35–50	32–36	30–33
3F	130	3.9	70–80	35–50	32–36	30–33
3H	210	4.4	70–80	35–50	32–36	30–33
4F	210	4.4	70–80	35–50	32–36	30–33
4Q, 4H	277	5.4	70–80	35–50	35–41	37–45
5F, 5H	265	5.9	70–80	35–50	40–47	36–43

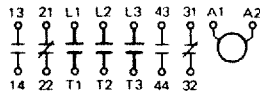
This data is based on 100-120V SUPERMAGNET coil, tested at 120VAC, 60Hz. For additional coil data, please see page 49-50.

0T/SE, 1Q/SE	155	2.6	77–88	28–44	20–25	20–25
2F/SE, 2H/SE	195	2.5	77–88	28–44	23–28	24–29
2T/SE	112	2.6	77–88	28–44	32–36	30–33
3F	112	2.6	77–88	28–44	32–36	30–33
3H	255	3	77–88	28–44	32–36	30–33
4F	255	3	77–88	28–44	32–36	30–33
4Q, 4H	324	4.1	77–88	28–44	35–41	37–45
5F, 5H	340	4.5	77–88	28–44	40–47	36–43

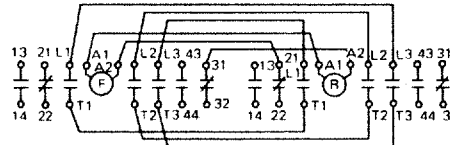
This data is based on 100-120V SUPERMAGNET coil, tested at 110VDC. For additional coil data, please see page 49-50.

WIRING DIAGRAMS / AUXILIARY CONTACT INFORMATION

NON-REVERSING CONTACTORS



REVERSING CONTACTORS



Notes:

- 1) All Odyssey series contactors and starters come equipped with 2NO + 2NC auxiliary contacts standard.
- 2) Reversing contactors & starters from Frame size 0T through 2H can be constructed in the field. See Accessories on pages 31-32 for details. Large frame size reversing units only factory assembled.

AUXILIARY CONTACT RATINGS

Operating	Contact rating Code Designation	Continuous Ampere Rating	Current-Make/Break (A)			
			110 to 120V	220 to 240V	440 to 480V	550 to 600V
AC	A600	10	60/6	30/3	15/1.5	12/1.2
DC	Q300	10	120V		240V	
			0.55/0.55		0.27/0.27	

"ODYSSEY SERIES" AC Motor Starters, Featuring Supermagnet Technology (AC or DC Operated)



■ NON-REVERSING MOTOR STARTERS UL File No. E42419, cUL listed

1 Phase HP Rating (Full load ampere)		3 Phase HP Ratings (Full load ampere)				Rated thermal current for non inductive / resistive load	Qty. of Aux. Contacts		Part Number	Fuji Type	Frame Size
100-120V	220-240V	200-208V	220-240V	440-480V	550-600V		NO	NC			
2(24)	5 (28)	71/2 (25.3)	10 (28)	25 (34)	25 (27)	50	2	2	3NW0T0#*22K/SE	SW-N1/SE2E	0T
3(34)	71/2 (40)	10 (32.2)	15 (42)	30 (40)	30 (32)	60	2	2	3NW1Q0#*22K/SE	SW-N2/SE2E	1Q
3(34)	10 (50)	15 (48.3)	20 (54)	40 (52)	40 (41)	80	2	2	3NW2F0#*22K/SE	SW-N2S/SE2E	2F
5(34)	15 (68)	20 (62.1)	25 (68)	50 (65)	50 (52)	100	2	2	3NW2H0#*22K/SE	SW-N3/SE2E	2H
71/2(56)	15 (68)	25 (78.2)	30 (80)	60 (77)	60 (62)	135	2	2	3NW2T0#*22K/SE	SW-N4/SE2E	2T
71/2(56)	15 (68)	30 (92)	30 (80)	60 (77)	75 (77)	150	2	2	3NW3F0#*22K	SW-N5/2E	3F
10	20	40 (119.6)	40 (104)	75 (96)	100 (99)	150	2	2	3NW3H0#*22K	SW-N6/2E	3H
15	25	50 (149.5)	50 (130)	100 (124)	125 (125)	200	2	2	3NW4F0#*22K	SW-N7/2E	4F
-	-	60 (177.1)	60 (154)	150 (180)	150 (144)	260	2	2	3NW4Q0#*22K	SW-N8/2E	4Q
-	-	75 (220.8)	75 (192)	150 (180)	200 (192)	260	2	2	3NW4H0#*22K	SW-N10/2E	4H
-	-	100 (285.2)	100 (248)	200 (240)	250 (242)	350	2	2	3NW5F0#*22K	SW-N11/2E	5F
-	-	125 (358.6)	150 (360)	300 (361)	350 (336)	450	2	2	3NW5H0#*22K	SW-N12/2E	5H

■ REVERSING MOTOR STARTERS UL File No. E42419, cUL listed

1 Phase HP Rating (Full load ampere)		3 Phase HP Ratings (Full load ampere)				Rated thermal current for non inductive / resistive load	Qty. of Aux. Contacts		Part Number	Fuji Type	Frame Size
100-120V	220-240V	200-208V	220-240V	440-480V	550-600V		NO	NC			
2 (24)	5 (28)	71/2 (25.3)	10 (28)	25 (34)	25 (27)	50	2	2	3NX0T0#*22K/SE	SW-N1RM/SE2E	0T
3 (34)	71/2 (40)	10 (32.2)	15 (42)	30 (40)	30 (32)	60	2	2	3NX1Q0#*22K/SE	SW-N2RM/SE2E	1Q
3 (34)	10 (50)	15 (48.3)	20 (54)	40 (52)	40 (41)	80	2	2	3NX2F0#*22K/SE	SW-N2SRM/SE2E	2F
5 (34)	15 (68)	20 (62.1)	25 (68)	50 (65)	50 (52)	100	2	2	3NX2H0#*22K/SE	SW-N3RM/SE2E	2H
71/2 (56)	15 (68)	25 (78.2)	30 (80)	60 (77)	60 (62)	135	2	2	3NX2T0#*22K/SE	SW-N4RM/SE2E	2T
71/2 (56)	15 (68)	30 (92)	30 (80)	60 (77)	75 (77)	150	2	2	3NX3F0#*22K	SW-N5RM/2E	3F
10	20	40 (119.6)	40 (104)	75 (96)	100 (99)	150	2	2	3NX3H0#*22K	SW-N6RM/2E	3H
15	25	50 (149.5)	50 (130)	100 (124)	125 (125)	200	2	2	3NX4F0#*22K	SW-N7RM/2E	4F
-	-	60 (177.1)	60 (154)	150 (180)	150 (144)	260	2	2	3NX4Q0#*22K	SW-N8RM/2E	4Q
-	-	75 (220.8)	75 (192)	150 (180)	200 (192)	260	2	2	3NX4H0#*22K	SW-N10RM/2E	4H
-	-	100 (285.2)	100 (248)	200 (240)	250 (242)	350	2	2	3NX5F0#*22K	SW-N11RM/2E	5F
-	-	125 (358.6)	150 (360)	300 (361)	350 (336)	450	2	2	3NX5H0#*22K	SW-N12RM/2E	5H

EXPLANATION OF PART NUMBER SYSTEM

3 N W 0 T 0 # * 2 2 K / S E

• **PRODUCT LINE**
3=Odyssey Series

• **OPERATION**
N=AC or DC Coil
(Super Magnet)

• **DESCRIPTION**
W=Non-Reversing Motor Starter
X=Reversing Motor Starter

• **FRAME SIZE**

• **FRAME ENCLOSURE**
0=Open Frame, No Enclosure

• **SUPER MAGNET OPTION**
SE=Super Magnet Option
"SE" is an option on
frames 0T, 1Q, 2F, 2H & 2T.
All other frames offer
Super Magnet standard.

• **OVERLOAD TYPE**
K=Open Phase Protection
offered as a standard

• **QUANTITY OF N.C. AUX. CONTACTS**

• **QUANTITY OF N.O. AUX. CONTACTS**

• **OVERLOAD RANGE**
Select appropriate letter from chart on page 29

• **COIL VOLTAGE**
Select code from chart on next page

"ODYSSEY SERIES" AC Motor Starters, Featuring Supermagnet Technology (AC or DC Operated)

AVAILABLE COILS

Code Letter	AC 50/60Hz	DC
E	24–25V	24V
F	48–50V	48V
1	100–127V	100–120V
2	200–250V	200–240V
Q	380–450V	N/A
4	460–575V	N/A

Note: The coil is energized by either an AC or DC input. (Code letter: E, F, 1, 2)

COIL CHARACTERISTICS

Frame Size	Power Consumption (VA)		Pick-up Voltage (V)	Drop-out Voltage (V)	Operating Time (ms)	
					Coil ON Contact ON	Coil OFF Contact OFF
0T/SE, 1Q/SE	137	3.9	70–80	35–50	20–25	20–25
2F/SE, 2H/SE	168	3.8	70–80	35–50	23–28	24–29
2T/SE	130	3.9	70–80	35–50	32–36	30–33
3F	130	3.9	70–80	35–50	32–36	30–33
3H	210	4.4	70–80	35–50	32–36	30–33
4F	210	4.4	70–80	35–50	32–36	30–33
4Q, 4H	277	5.4	70–80	35–50	35–41	37–45
5F, 5H	265	5.9	70–80	35–50	40–47	36–43

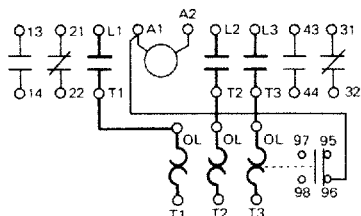
This data is based on 100-120V SUPERMAGNET coil, tested at 120VAC, 60Hz. For additional coil data, please see page 49-50.

0T/SE, 1Q/SE	155	2.6	77–88	28–44	20–25	20–25
2F/SE, 2H/SE	195	2.5	77–88	28–44	23–28	24–29
2T/SE	112	2.6	77–88	28–44	32–36	30–33
3F	112	2.6	77–88	28–44	32–36	30–33
3H	255	3	77–88	28–44	32–36	30–33
4F	255	3	77–88	28–44	32–36	30–33
4Q, 4H	324	4.1	77–88	28–44	35–41	37–45
5F, 5H	340	4.5	77–88	28–44	40–47	36–43

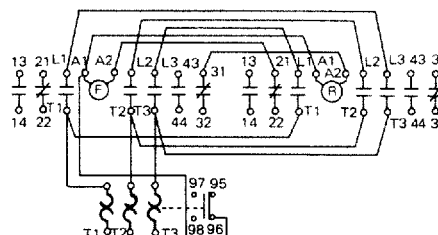
This data is based on 100-120V SUPERMAGNET coil, tested at 110VDC. For additional coil data, please see page 49-50.

WIRING DIAGRAMS / AUXILIARY CONTACT INFORMATION

NON-REVERSING MOTOR STARTERS



REVERSING MOTOR STARTERS



Notes:

- 1) All Odyssey series contactors and starters come equipped with 2NO + 2NC auxiliary contacts standard.
- 2) Reversing contactors & starters from Frame size 0T through 2H can be constructed in the field. See Accessories on pages 31-32 for details. Large frame size reversing units only factory assembled.

AUXILIARY CONTACT RATINGS

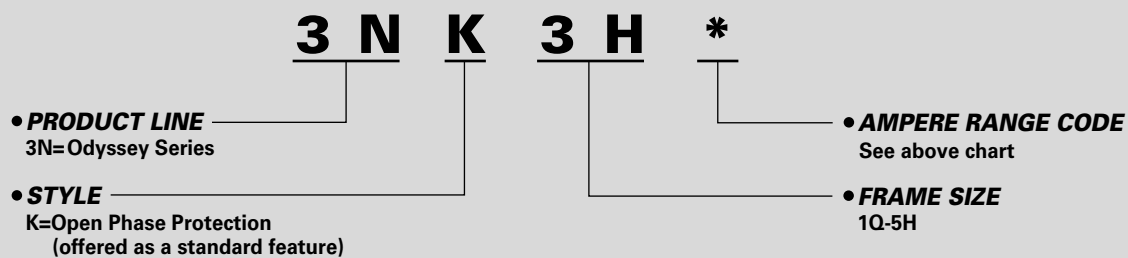
Operating	Contact Rating Code Designation	Continuous Ampere Rating	Current–Make/Break (A)			
			110 to 120V	220 to 240V	440 to 480V	550 to 600V
AC	A600	10	60/6	30/3	15/1.5	12/1.2
DC	Q300	10	120V		240V	
			0.55/0.55		0.27/0.27	

"ODYSSEY SERIES" THERMAL OVERLOAD RELAYS

OVERLOAD PART # [JAPANESE TYPE #]		3NK1Q* [TK-N2]		3NK2H* [TK-N3]		3NK3F* [TK-N5]	
CONTACTOR USED ON		3NC0T... [SC-N1]	3NC1Q... [SC-N2]	3NC2F... [SC-N2S]	3NC2H... [SC-N3]	3NC2T... [SC-N4]	3NC3F... [SC-N5]
AMPERE RANGE CODE LETTER	N	4-6	4-6				
	P	5-8	5-8				
	Q	6-9	6-9				
	S	7-11	7-11	7-11	7-11		
	T	9-13	9-13	9-13	9-13		
	V	12-18	12-18	12-18	12-18		
	W	18-26	18-26	18-26	18-26	18-26	18-26
	Y	24-36	24-36	24-36	24-36	24-36	24-36
	Z			28-40	28-40	28-40	28-40
	A		32-42				
	E			34-50	34-50	34-50	34-50
	F			45-65	45-65	45-65	45-65
	G				48-68		
	H					53-80	53-80
	K						65-95
	M						85-105

OVERLOAD PART # [JAPANESE TYPE #]		3NK3H* [TK-N6]	3NK4F* [TK-N7]	3NK4Q* [TK-N8]	3NK4H* [TK-N10]	3NK5H* [TK-N12]	
CONTACTOR USED ON		3NC3H... [SC-N6]	3NC4F... [SC-N7]	3NC4Q... [SC-N8]	3NC4H... [SC-N10]	3NC5F... [SC-N11]	3NC5H... [SC-N12]
AMPERE RANGE CODE LETTER	F	45-65	45-65				
	H	53-80	53-80				
	K	65-95	65-95	65-95			
	L	85-125	85-125	85-125	85-125		
	N		110-160	110-160	110-160	110-160	110-160
	P			125-185	125-185	125-185	125-185
	Q				160-240	160-240	160-240
	R					200-300	200-300
	S						240-360
	T						300-450

EXPLANATION OF PART NUMBER SYSTEM



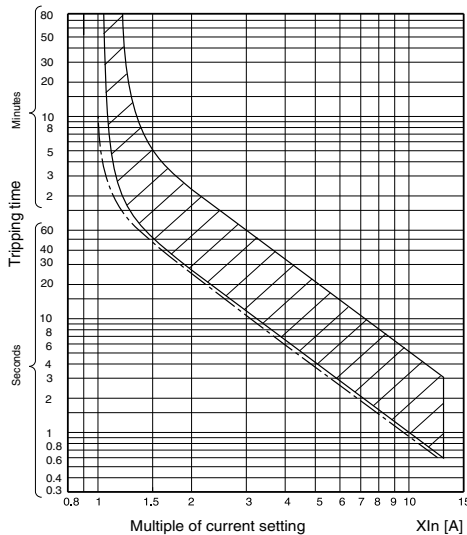
"ODYSSEY SERIES" THERMAL OVERLOAD RELAYS

Overload Trip Curves

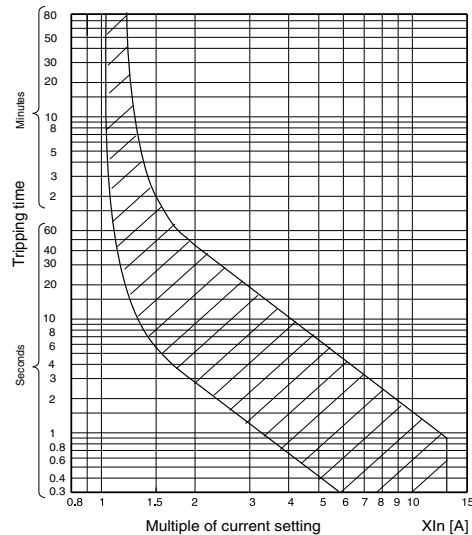
■ THERMAL OVERLOAD RELAYS/OPEN-PHASE PROTECTION TYPE K

3NK1Q* – 3NK4Q*

Cold start

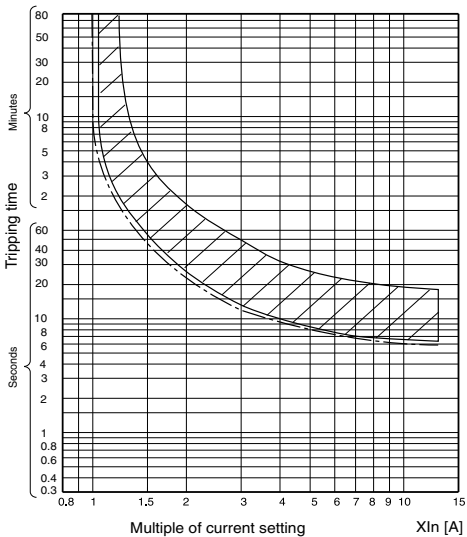


Hot start

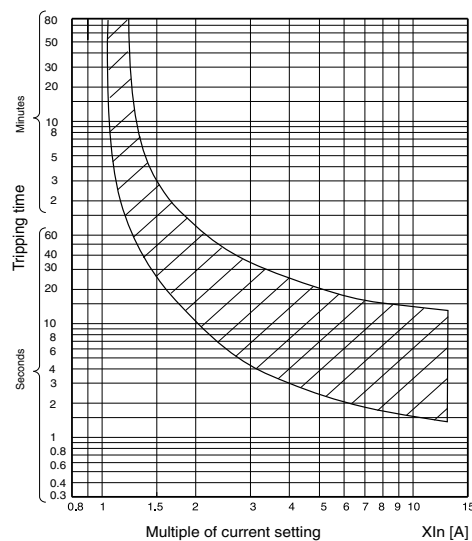


3NK4H* – 3NK5H*

Cold start



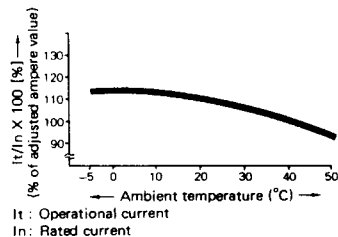
Hot start



■ AMBIENT TEMPERATURE COMPENSATOR

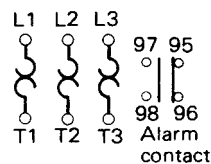
FUJI overload relays are provided with an ambient temperature compensator. Their characteristics limit ampere value changes to approx. 10% as the ambient temperature changes between -5°C and 40°C .

Compensation characteristics
(Average value)

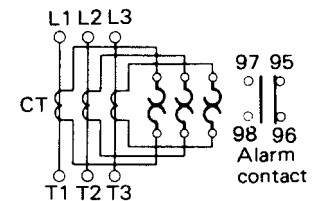


■ WIRING DIAGRAMS

(3NK1Q* through 3NK4Q*)



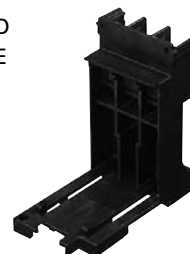
(3NK4H* through 3NK5H*)



■ ALARM CONTACT RATINGS

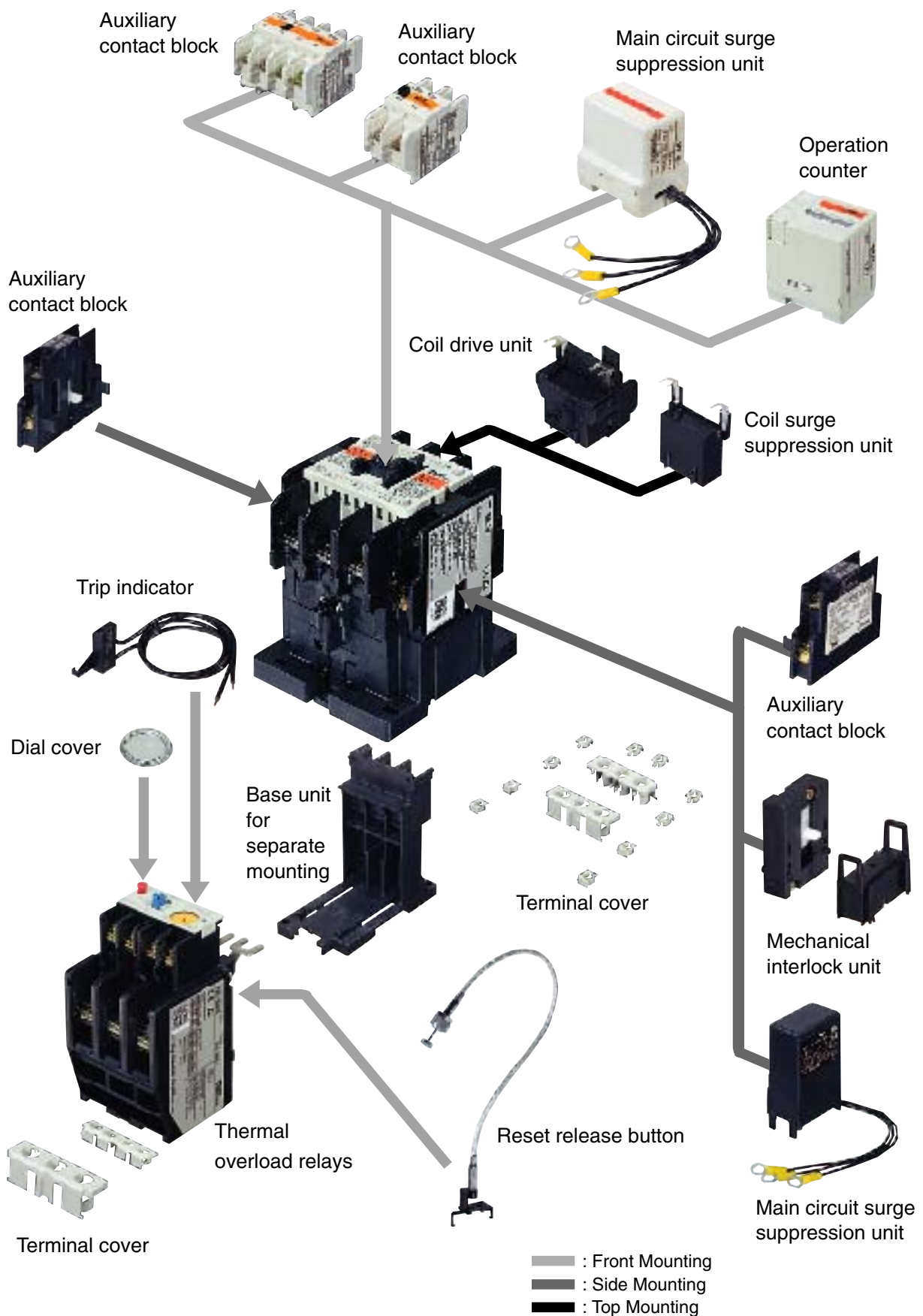
Contact rating Code Designation	Continuous Ampere Rating	Current-Make/Break (A)			
		110 to 120V	220 to 240V	440 to 480V	550 to 600V
C600	2.5	15/1.5	7.5/0.75	3.75/0.375	3.0/0.3

SZ-HD
SZ-HE



Base unit for
separate mounting

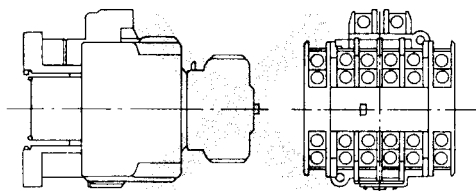
"ODYSSEY SERIES" ACCESSORIES, Frames 0T-2H



"ODYSSEY SERIES" ACCESSORIES, Frames 0T-2H

Description	Type
Auxiliary Contact Block	
●Front mounting	
4NO	SZ-A40
3NO+1NC	SZ-A31
2NO+2NC	SZ-A22
2NO	SZ-A20
1NO+1NC	SZ-A11
2NC	SZ-A02
1NO+1NC (Over lapping)	SZ-A111
2NO+2NC (Over lapping)	SZ-A222
●Side mounting	SZ-AS1
1NO+1NC (Ambidextrous)	

Front mounting type and side mounting type auxiliary contact blocks can not be used simultaneously.



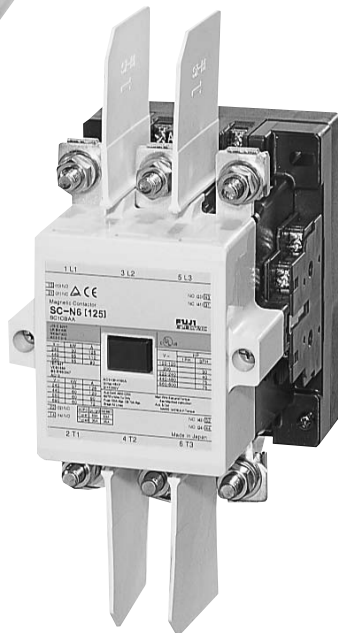
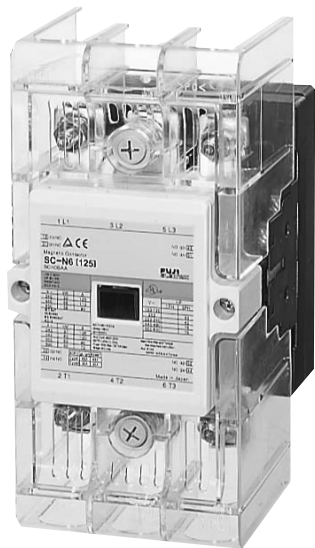
Operating Counter	Without alarm contact	SZ-J
3-pole Parallel Connection Link	For 3NC0T0, 3NC1Q0 (2 pcs.)	SZ-SP3
	For 3NC2F0, 3NC2H0 (2 pcs.)	SZ-SP4
Coil Drive Unit	DC24V relay output	SZ-CD3
	DC24V SSR output	SZ-CD4
Mechanical Interlock Unit	For 3NC0T0-3NC2H0	SZ-RM
Power Connection Kit for Reversing	For 3NC0T0, 3NC1Q0	SZ-RW5
	For 3NC2F0, 3NC2H0	SZ-RW6

Description	Type
Terminal Cover	
●Contactor	
For 0T0, 1Q0	SZ-T22
For 2F0, 2H0	SZ-T23
●Auxiliary contact block	
For 4-pole, front mounting	SZ-T5
For 2-pole, front mounting	SZ-T6
For 2-pole, side mounting	SZ-T7
●Thermal overload relay	
For 3NK1Q	SZ-T16
For 3NK2H	SZ-T17
Base unit for separate mounting:	
For SZ-HD	SZ-T14
For SZ-HE	SZ-T15
Live-section Cover	
●Contactor	
For 0T0, 1Q0	SZ-N1J
For 3NC2F0, 3NC2H0	SZ-N2SJ
●Starter	
For 0T0, 1Q0	SZ-WN1J
For 2F0, 2H0	SZ-WN2SJ
Coil Surge Suppression Unit	
Varistor: 24 to 48V AC/DC	SZ-Z31
100 to 250V AC/DC	SZ-Z32
380 to 440V AC	SZ-Z33
RC: 24 to 48V AC	SZ-Z34
100 to 250V AC	SZ-Z35
24 to 48V DC	SZ-Z36
100 to 250V DC	SZ-Z37
Main Circuit Surge Suppression Unit	
For 0T0, 1Q0	
With delta-connected RC,	
100 to 240V AC	
●Front mounting	SZ-ZM3
●Side mounting	SZ-ZM4
Base Unit for Separate Mounting	
For 3NK1Q	SZ-HD
For 3NK2H	SZ-HE
Dial Cover	Used on all overloads
	SZ-DA
Trip Indicator	
100 to 110V AC	SZ-L100N2
200 to 220V AC	SZ-L200N2
Reset Release Button	
Lead length: 300mm	SZ-R4
500mm	SZ-R5
700mm	SZ-R6

All accessories can be field installed.

"ODYSSEY SERIES" ACCESSORIES, Frames 2T-5H

	Description	Type
Auxiliary Contact Block	Side Mounting 1NO+1NC	SZ-AS2
3-pole Parallel Connection Link	For 2T0, 3F0 (2 pcs.) For 3H0 (2 pcs.) For 4F0 (2 pcs.) For 4Q0, 3NC4H0 (2 pcs.) For 5F0, 5H0 (2 pcs.)	SZ-SP5 SZ-SP6 SZ-SP7 SZ-SP8 SZ-SP9
Coil Drive Unit	DC24V relay output DC24V SSR output	SZ-CD5 SZ-CD6



	Description	Type
Terminal Cover	●Line & Load-side of Contactor Line-side of Starter For 2T0, 3F0 For 3H0 For 4F0 For 4Q0, 4H0 For 5F0, 5H0 ●Load-side of Starter For 2T0, 3F0 For 3H0 For 4F0 For 4Q0 For 4H0 For 5F0, 5H0	SZ-N4T SZ-N6T SZ-N7T SZ-N8T SZ-N11T SZ-WN4T SZ-WN6T SZ-WN7T SZ-WN8T SZ-WN10T SZ-WN11T
Live-section Cover	●Contactor For 2T0, 3F0 For 3H0 For 4F0 For 4Q0, 4H0 For 5F0, 5H0 ●Starter For 2T0, 3F0 For 3H0 For 4F0 For 4Q0 For 4H0 For 5F0, 5H0	SZ-N4J SZ-N6J SZ-N7J SZ-N8J SZ-N11J SZ-WN4J SZ-WN6J SZ-WN7J SZ-WN8J SZ-WN10J SZ-WN11J
Insulation Barrier	For 2T0, 3F0, 3H0, 4F0, 3H, 4F For 4Q0, 4H0, 5F0, 5H0, 3NK4Q, 3NK4H, 3NK5H	SZ-B1 SZ-B2
Coil Surge Suppression Unit for 3NC2T0	Varistor: 24 to 48V AC 100 to 250V AC 380 to 440V AC RC: 24 to 48V AC 100 to 250V AC	SZ-Z41 SZ-Z42 SZ-Z43 SZ-Z44 SZ-Z45
Dial Cover	Used on all overloads	SZ-DA
Trip Indicator	●3NK3F to 3NK4Q 100 to 110V AC 200 to 220V AC ●3NK4H, 3NK5H 200 to 220V AC	SZ-L100N2 SZ-L200N2 SZ-L200
Reset Release Button	●3NK3F to 3NK4Q Lead length: 300mm 500mm 700mm ●3NK4H, 3NK5H Lead length: 300mm 500mm 700mm	SZ-R4 SZ-R5 SZ-R6 SZ-R1 SZ-R2 SZ-R3

Accessories for field-assembly of Reversing Contactors & Starters are not available. However, Reversing models can be assembled in Fuji's New Jersey facilities. Contact Fuji directly for further information.

"ODYSSEY SERIES" Replacement Parts

■ REPLACEMENT COILS

Frame Size	Conventional AC Coil Use codes from chart 1	Conventional DC Coil Use codes from chart 2	Supermagnet Coil Use codes from chart 3
0T & 1Q	SZ-GM/N1-#	SZ-GG/N1-#	SZ-GS/N1-#
2F & 2H	SZ-GM/N2S-#	SZ-GG/N2S-#	SZ-GS/N2S-#
2T	SZ-GM/N4-#	N/A	SZ-GS/N5-#
3F	N/A	N/A	SZ-GS/N5-#
3H & 4F	N/A	N/A	SZ-GS/N6-#
4Q & 4H	N/A	N/A	SZ-GS/N8-#
5F & 5H	N/A	N/A	SZ-GS/N11-#
6F & 6H	N/A	N/A	SZ-GS/N14-#

Replace the # symbol with the desired code, shown in the charts below.

COIL CHART #1

Code	AC 60Hz	AC 50Hz
24	24-26V	24V
48	48-52V	48V
100	100-110V	100V
110	110-120V	100-110V
120	120-130V	110-120V
200	200-220V	200V
220	220-240V	200-220V
400	400-440V	380-400V
440	440-480V	415-440V
550	550-600V	500-550V

COIL CHART #2

Code	DC
12	12V
24	24V
48	48V
100	100V
110	110V
200	200V
220	220V

COIL CHART #3

Code	AC 50/60Hz	DC
24	24-25V	24V
48	48-50V	48V
100	100-127V	100-120V
200	200-250V	200-240V
400	380-450V	N/A
500	460-575V	N/A

■ BOX LUGS

Frame Size	Contactors Line or Load Side	Motor Starters	
		Line Side	Load Side
0T	NONE	NONE	NONE
1Q	NONE	NONE	NONE
2F & 2H	SZ-TL1	SZ-TL1	SZ-TL11
2T & 3F	SZ-TL2	SZ-TL2	SZ-TL11
3H	SZ-TL3	SZ-TL3	SZ-TL12
4F	SZ-TL4	SZ-TL4	SZ-TL12
4Q & 4H	SZ-TL5	SZ-TL5	SZ-TL5
5F	SZ-TL6	SZ-TL6	SZ-TL6
5H	SZ-TL7	SZ-TL7	SZ-TL7

■ REPLACEMENT CONTACTS

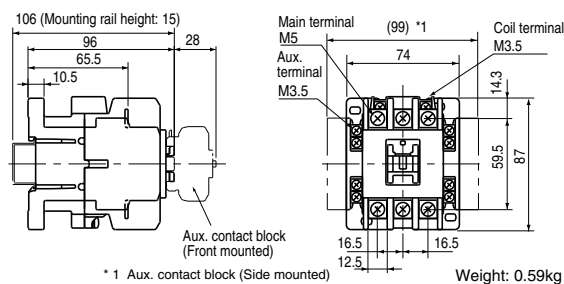
Frame Size	Contact Kit
0T	SZ-MC/SC-N1
1Q	SZ-MC/SC-N2
2F	SZ-MC/SC-N2S
2H	SZ-MC/SC-N3
2T	SZ-MC/SC-N4
3F	SZ-MC/SC-N5
3H	SZ-MC/SC-N6
4F	SZ-MC/SC-N7
4Q	SZ-MC/SC-N8
4H	SZ-MC/SC-N10
5F	SZ-MC/SC-N11
5H	SZ-MC/SC-N12
6F	SZ-MC/SC-N14
6H	SZ-MC/SC-N16

Note: 1) 3 movable and 6 stationary contacts included in each contact kit.
2) Contact kits consist of main contacts only. Auxiliary contacts are not included.

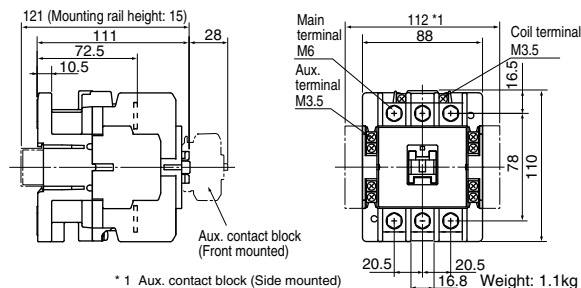
"ODYSSEY SERIES" Dimensions

■ CONTACTORS/OPEN TYPE Approximate Dimensions, mm

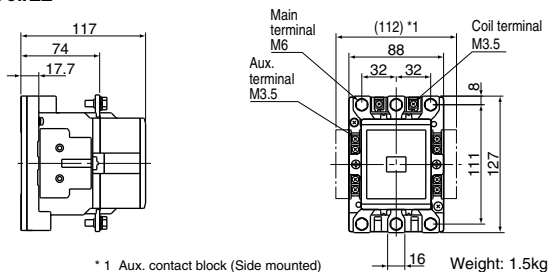
3NC0T0#22
3NC1Q0#22



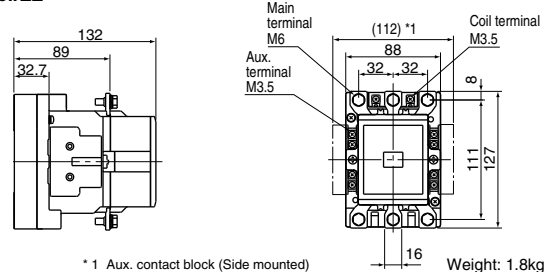
3NC2F0#22
3NC2H0#22



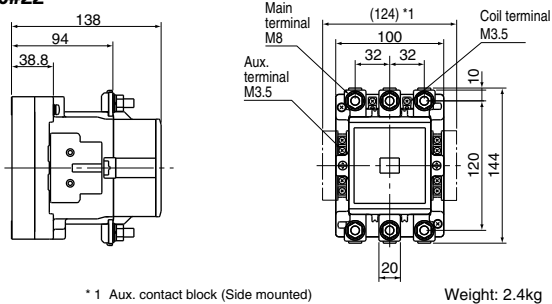
3NC2T0#22



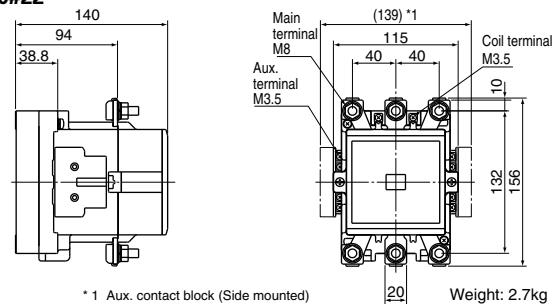
3NC3F0#22



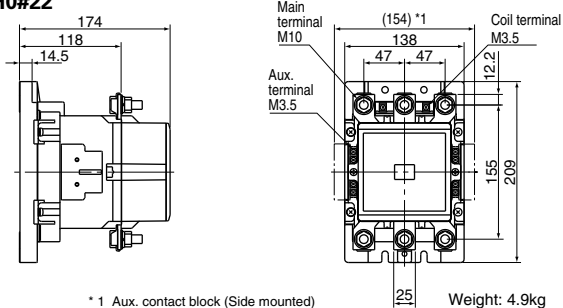
3NC3H0#22



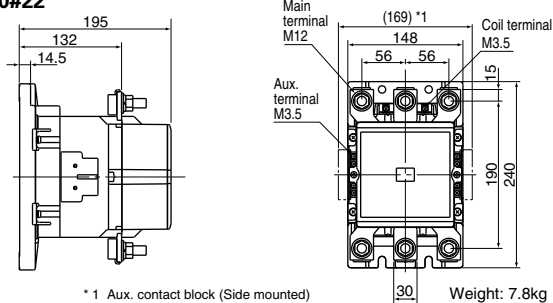
3NC4F0#22



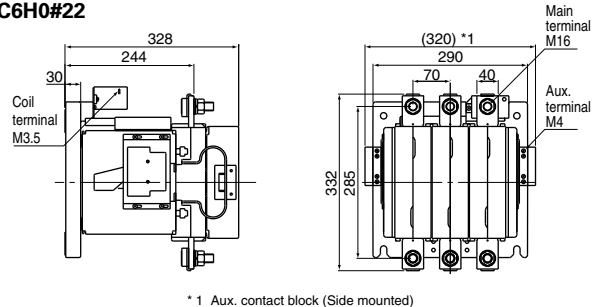
3NC4Q0#22
3NC4H0#22



3NC5F0#22
3NC5H0#22



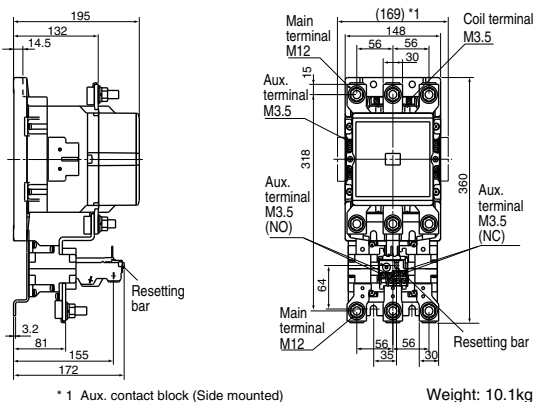
3NC6F0#22
3NC6H0#22



For exact mounting hole locations, please refer to the chart on page 46.

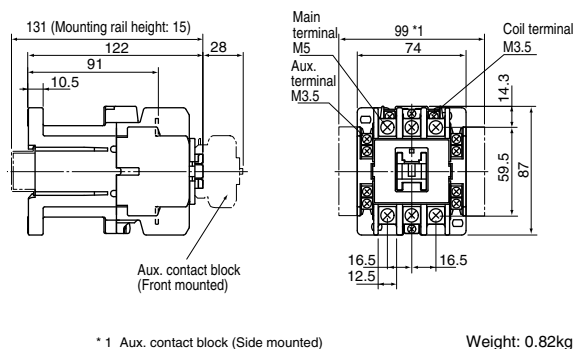
"ODYSSEY SERIES" Dimensions

3NW5F0#*22K
3NW5H0#*22K

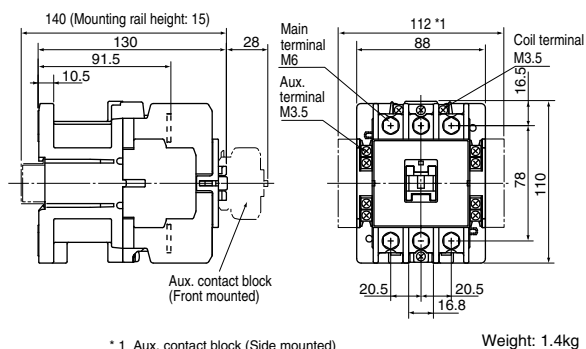


■ DC OPERATED CONTACTORS/OPEN TYPE Approximate Dimensions, mm

3GC0T0#22
3GC1Q0#22

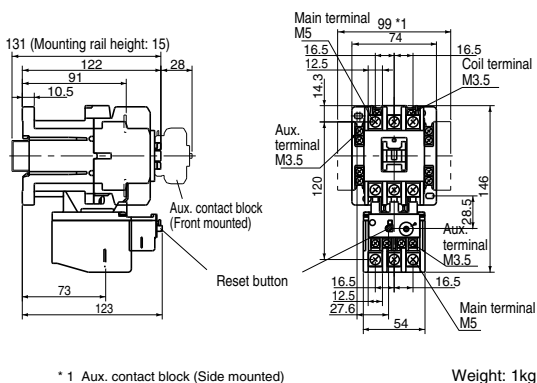


3GC2F0#22
3GC2H0#22

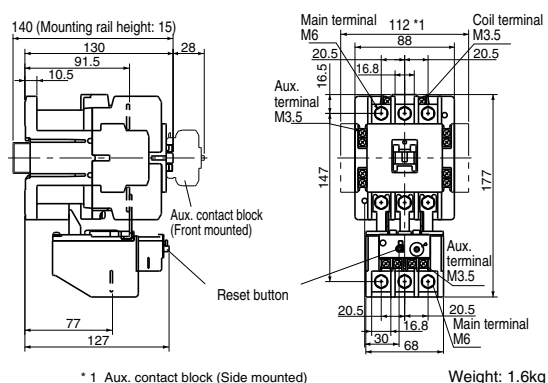


■ DC OPERATED STARTERS/OPEN TYPE Approximate Dimensions, mm

3GW0T0#*22K
3GW1Q0#*22K



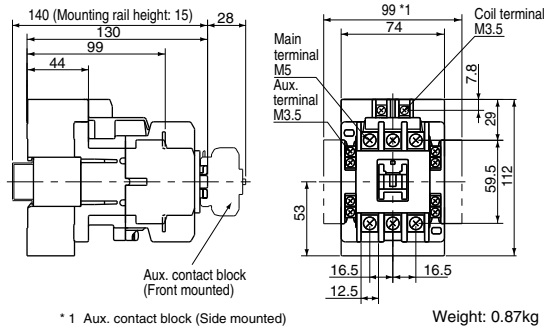
3GW2F0#*22K
3GW2H0#*22K



"ODYSSEY SERIES" Dimensions

■ CONTACTORS WITH "SUPER MAGNET" OPTION/OPEN TYPE Approximate Dimensions, mm

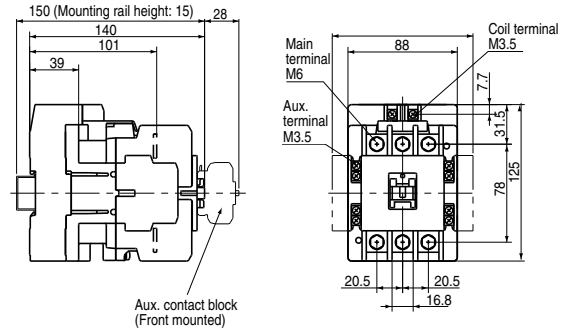
3NC0T0#22/SE
3NC1Q0#22/SE



* 1 Aux. contact block (Side mounted)

Weight: 0.87kg

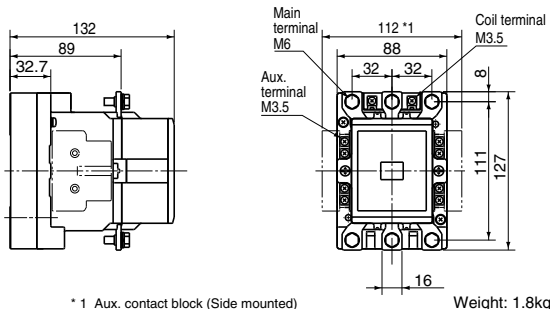
3NC2F0#22/SE
3NC2H0#22/SE



* 1 Aux. contact block (Side mounted)

Weight: 1.3kg

3C2T0#22/SE

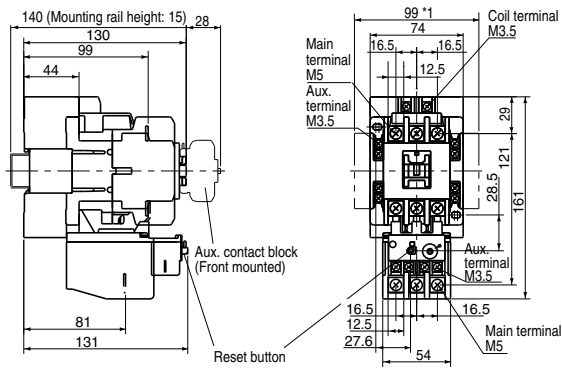


* 1 Aux. contact block (Side mounted)

Weight: 1.8kg

■ STARTERS WITH "SUPER MAGNET" OPTION/OPEN TYPE Approximate Dimensions, mm

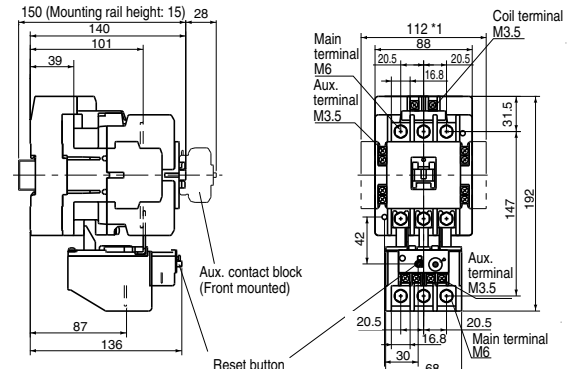
3NW0T0#*22K/SE
3NW1Q0#*22K/SE



* 1 Aux. contact block (Side mounted)

Weight: 1.0kg

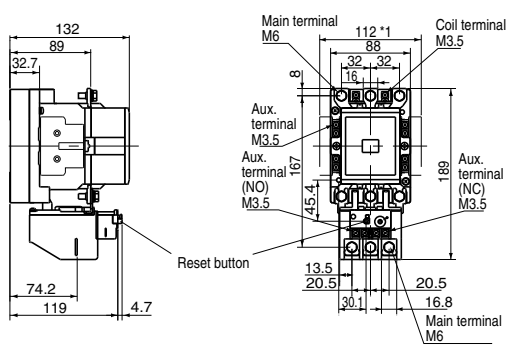
3NW2F0#*22K/SE
3NW2H0#*22K/SE



* 1 Aux. contact block (Side mounted)

Weight: 1.5kg

3NW2T0#*22K/SE



* 1 Aux. contact block (Side mounted)

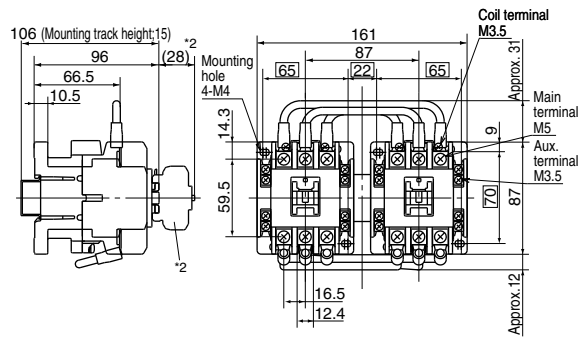
Weight: 2.1kg

For exact mounting hole locations, please refer to the chart on page 46.

"ODYSSEY SERIES" Dimensions

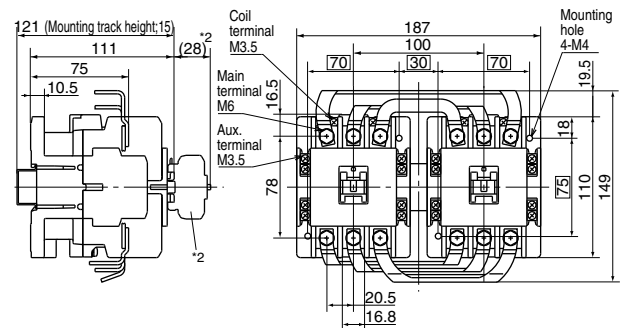
■ REVERSING CONTACTORS/OPEN TYPE Approximate Dimensions, mm

3ND0T0#22
3ND1Q0#22



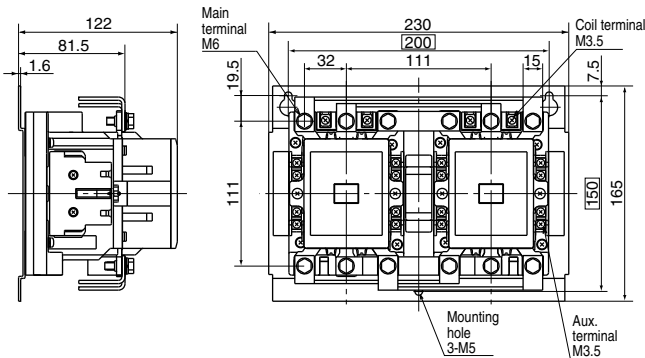
* 2 Aux. contact block. Front mounted (If Used)

3ND2F0#22
3ND2H0#22

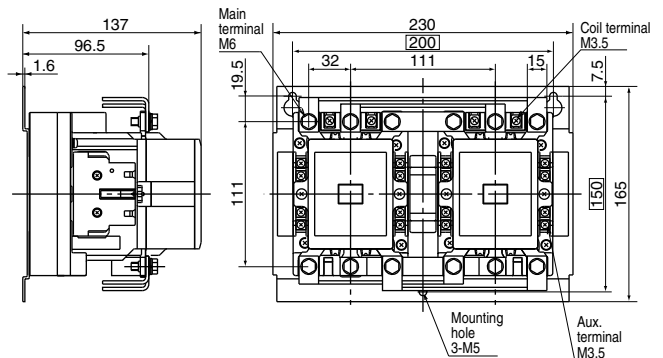


* 2 Aux. contact block. Front mounted (If Used)

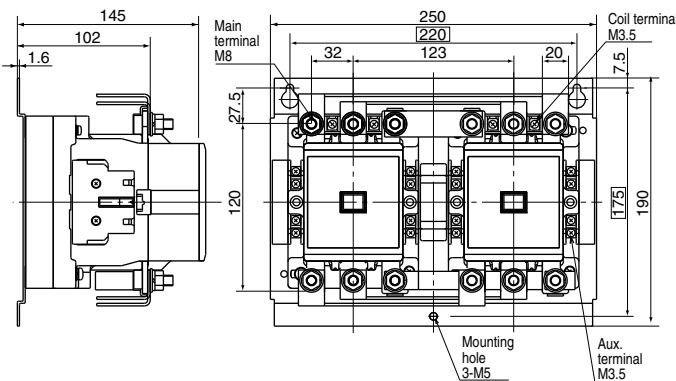
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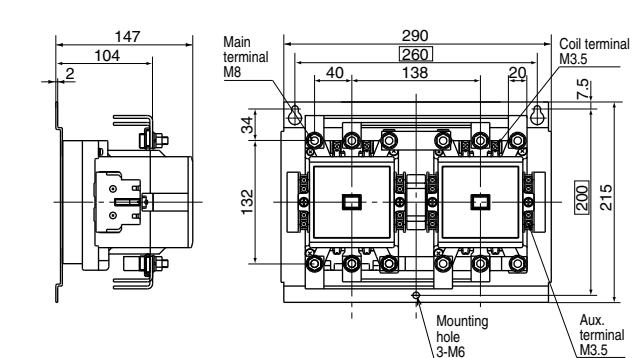
3ND3F0#22



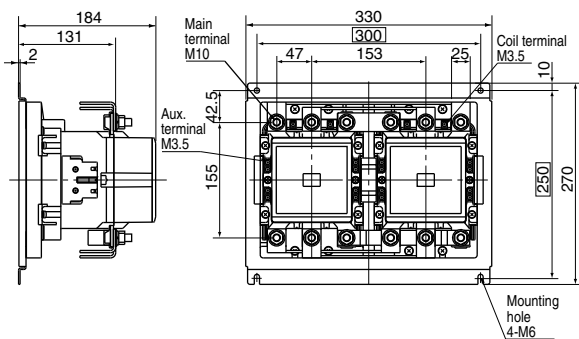
3ND3H0#22



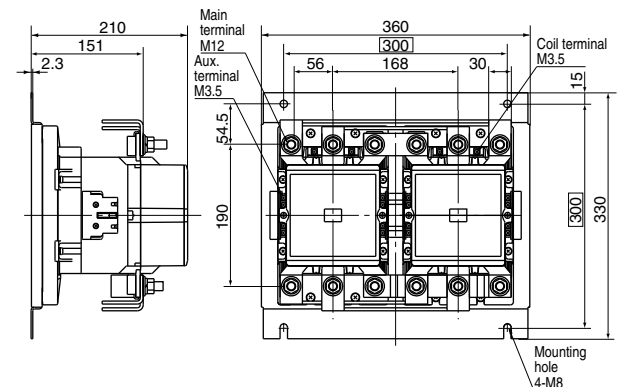
3ND4F0#22



3ND4Q0#22
3ND4H0#22



3ND5F0#22
3ND5H0#22



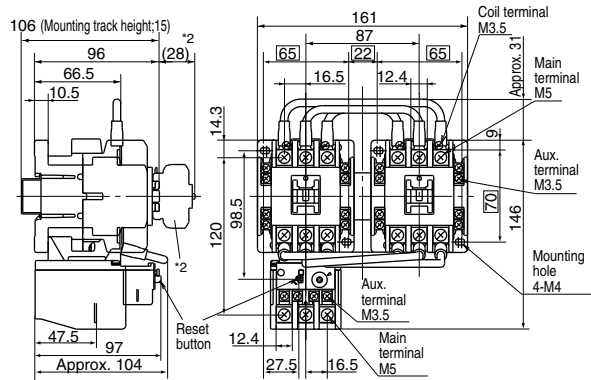
For exact mounting hole locations, please refer to the chart on page 46.

"ODYSSEY SERIES" Dimensions

■ REVERSING STARTERS/OPEN TYPE Approximate Dimensions, mm

3NX0T0#*22K

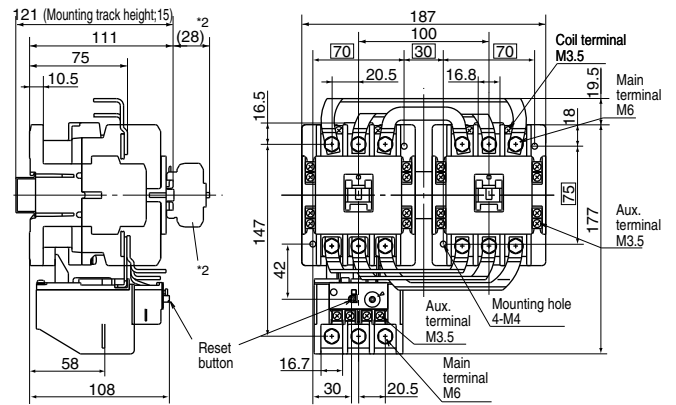
3NX1Q0#*22K



* 2 Aux. contact block. Front mounted (If Used)

3NX2F0#*22K

3NX2H0#*22K



* 2 Aux. contact block. Front mounted (If Used)

3NX2T0#*22K

3NX3F0#*22K

3NX3H0#*22K

3NX4F0#*22K

3NX4H0#*22K

3NX5F0#*22K

3NX5H0#*22K

3NX6F0#*22K

3NX6H0#*22K

3NX7F0#*22K

3NX7H0#*22K

3NX8F0#*22K

3NX8H0#*22K

3NX9F0#*22K

3NX9H0#*22K

3NX10F0#*22K

3NX10H0#*22K

3NX11F0#*22K

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3NX25H0#*22K

3NX26F0#*22K

3NX26H0#*22K

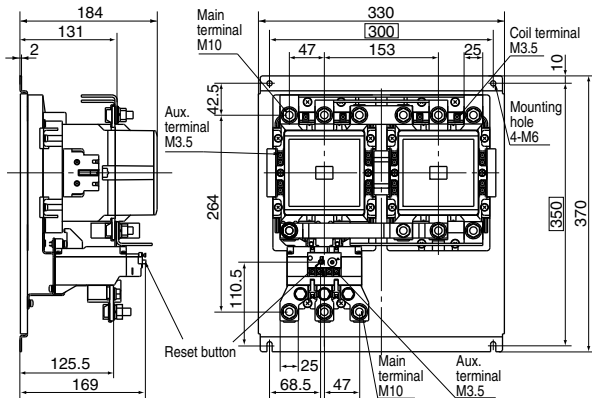
3NX27F0#*22K

3NX27H0#*22K

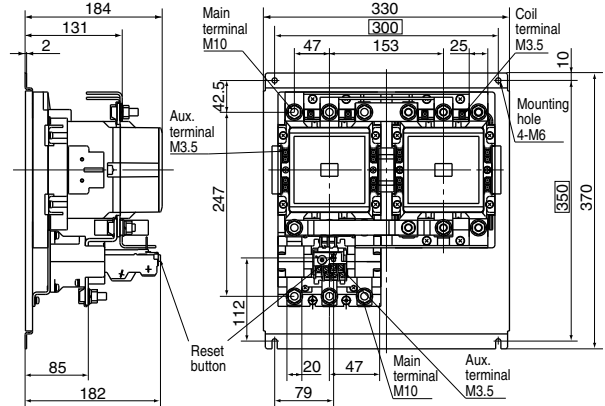
For exact mounting hole locations, please refer to the chart on page 46.

"ODYSSEY SERIES" Dimensions

3NX4Q0#*22K

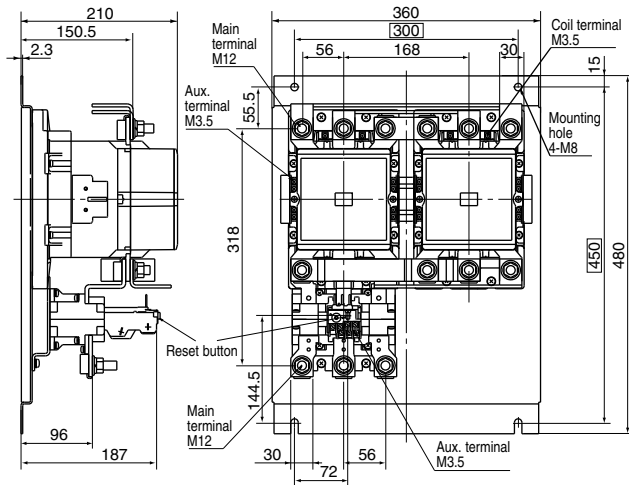


3NX4H0#*22K



3NX5F0#*22K

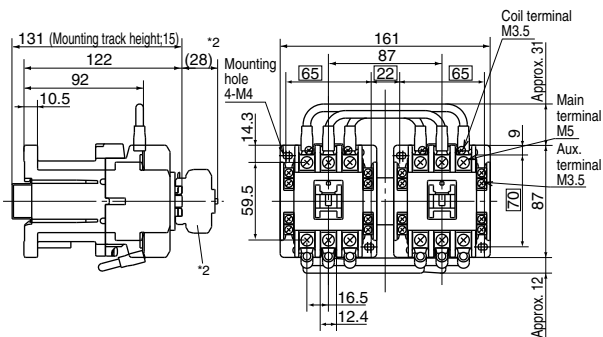
3NX5H0#*22K



■ DC OPERATED REVERSING CONTACTORS/OPEN TYPE Approximate Dimensions, mm

3GD0T0#22

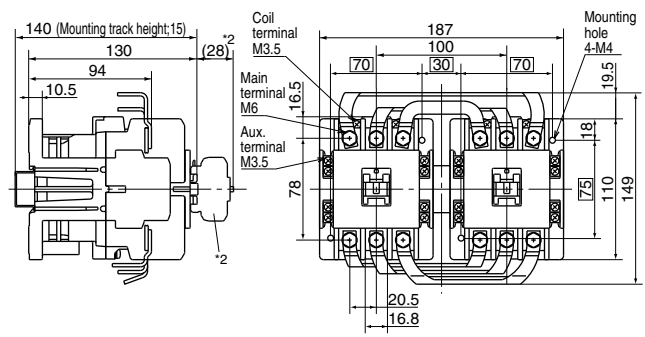
3GD1Q0#22



* 2 Aux. contact block. Front mounted (If Used)

3GD2F0#22

3GD2H0#22



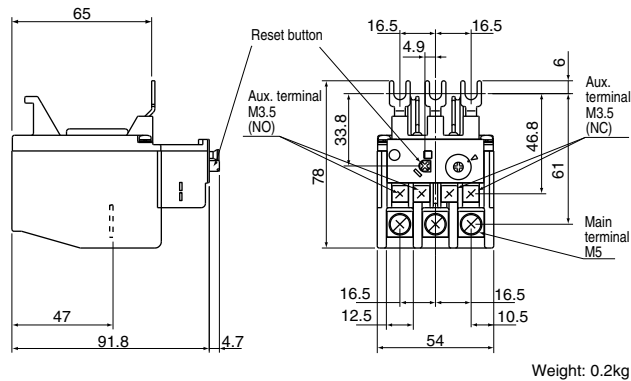
* 2 Aux. contact block. Front mounted (If Used)

For exact mounting hole locations, please refer to the chart on page 46.

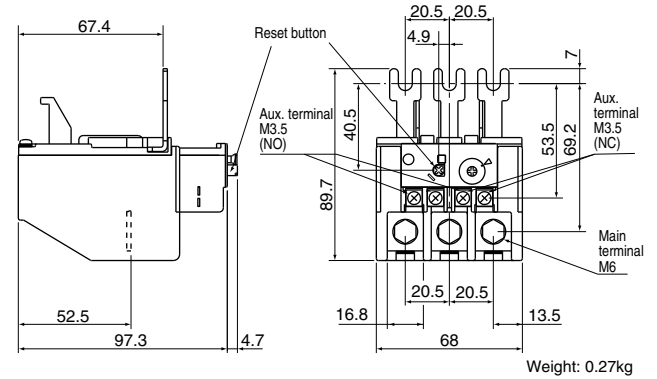
"ODYSSEY SERIES" Dimensions

■ THERMAL OVERLOAD RELAYS FOR USE WITH CONTACTORS Approximate Dimensions, mm

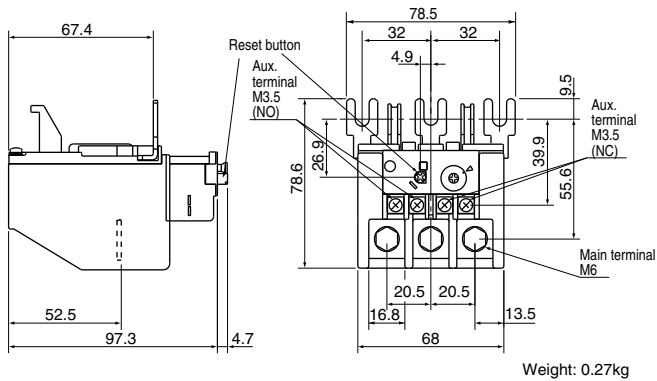
3NK1Q*



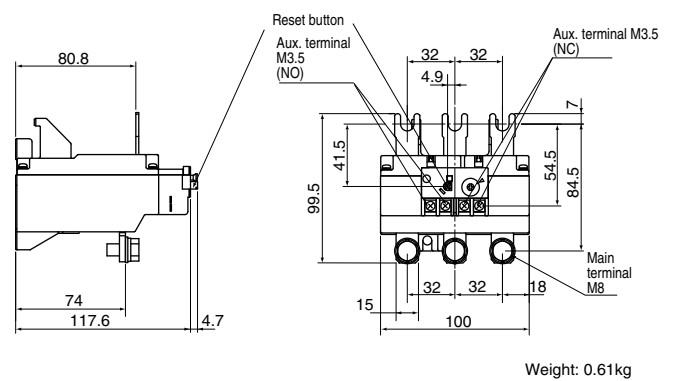
3NK2H*



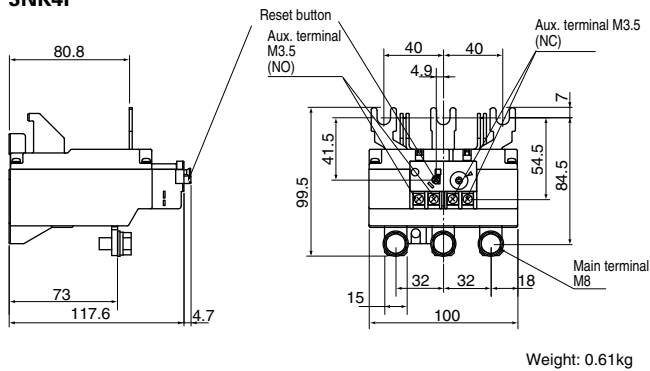
3NK3F*



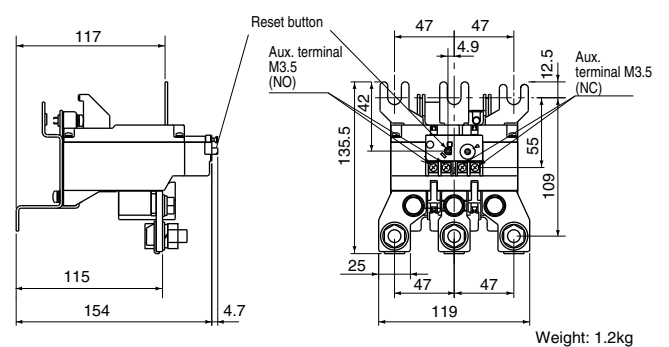
3NK3H*



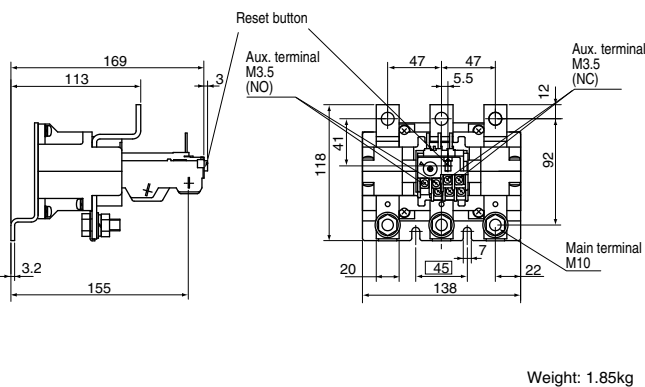
3NK4F*



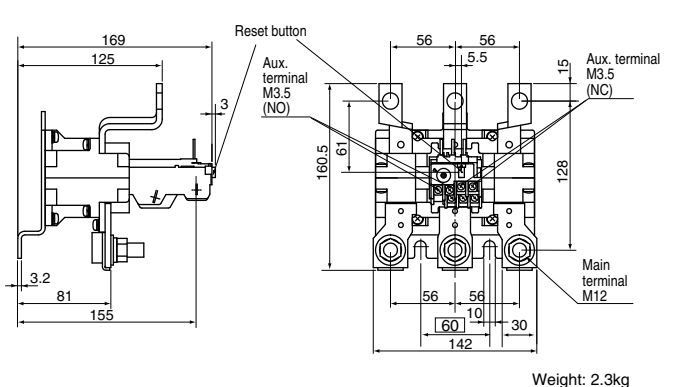
3NK4Q*



3NK4H*



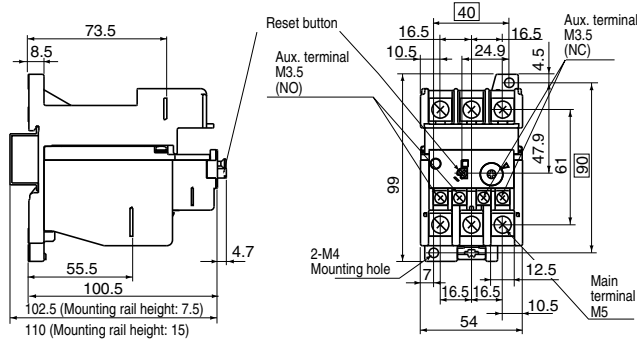
3NK5H*



"ODYSSEY SERIES" Dimensions

■ THERMAL OVERLOAD RELAYS FOR "STAND ALONE" USE Approximate Dimensions, mm

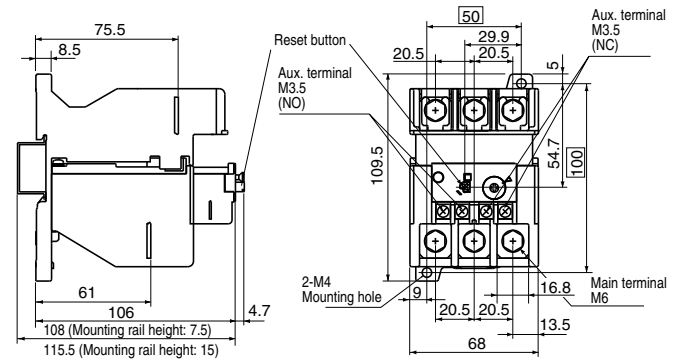
3NK1Q* Installed in SZ-HD mounting bracket



Available 4-42 Amps

Weight: 0.29kg

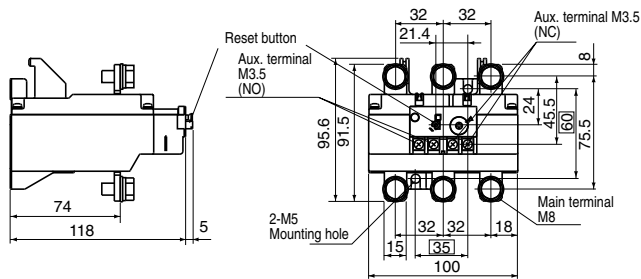
3NK2H* Installed in SZ-HE mounting bracket



Available 7-68 Amps

Weight: 0.38kg

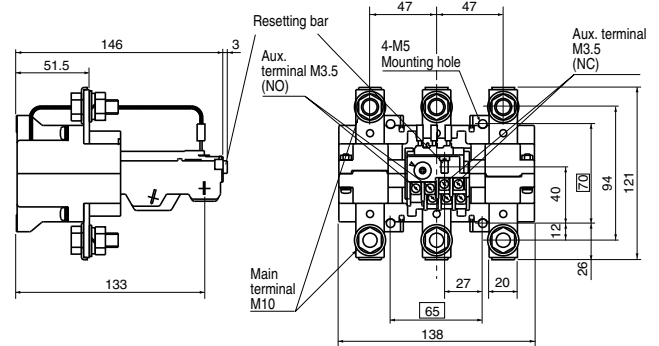
3NK3H*H (Specifically for "Stand Alone" use)



Available 45-125 Amps

Weight: 0.67kg

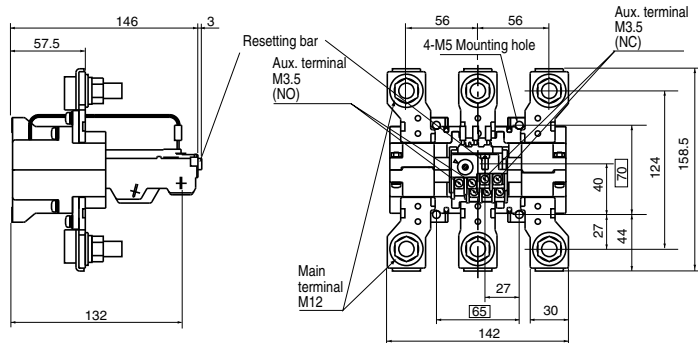
3NK4H*H (Specifically for "Stand Alone" use)



Available 85-240 Amps

Weight: 1.5kg

3NK5H*H (Specifically for "Stand Alone" use)



Available 110-450 Amps

Weight: 2.25kg

"ODYSSEY SERIES" Mounting Pitch Dimensions

■ NON-REVERSING CONTACTORS AND STARTERS Approximate Mounting Dimensions, mm

FIG. 1

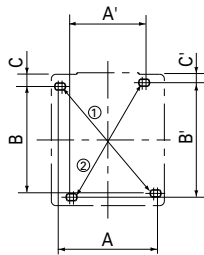


FIG. 2

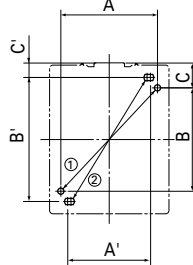


FIG. 3

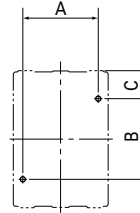


FIG. 4

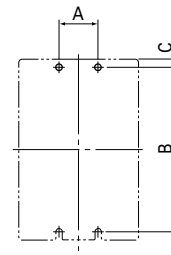
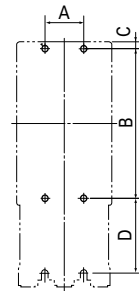


FIG. 5



Frame Size	Contactors								Starters								Correct Screw Size
	Fig.No.	A	B	C	A'	B'	C'	Correct Screw Size	Fig.No.	A	B	C	A'	B'	C'	D	
0T	1	60-65	70	9	45-50	75	6.5	2-M4	1	60-65	70	9	45-50	75	6.5	-	2-M4
1Q	1	60-65	70	9	45-50	75	6.5	2-M4	1	60-65	70	9	45-50	75	6.5	-	2-M4
2F	2	70	75	18	55-60	90	10.5	2-M4	2	70	75	18	55-60	90	10.5	-	2-M4
2H	2	70	75	18	55-60	90	10.5	2-M4	2	70	75	18	55-60	90	10.5	-	2-M4
2T	3	70	75	26	-	-	-	2-M4	3	70	75	26	-	-	-	-	2-M4
3F	3	70	75	26	-	-	-	2-M4	3	70	75	26	-	-	-	-	2-M4
3H	3	80-90	110	17	-	-	-	2-M5	3	80-90	110	17	-	-	-	-	2-M5
4F	3	80-90	110	23	-	-	-	2-M5	3	80-90	110	23	-	-	-	-	2-M5
4Q	4	45	190	9.5	-	-	-	4-M6	4	45	270	9.5	-	-	-	-	4-M6
4H	4	45	190	9.5	-	-	-	4-M6	4	45	270	9.5	-	-	-	-	4-M6
5F	4	60	220	10	-	-	-	4-M8	5	60	220	10	-	-	-	110	4-M8
5H	4	60	220	10	-	-	-	4-M8	5	60	220	10	-	-	-	110	4-M8
6F & 6H	4	250	250	-	-	-	-	4-M10	-	-	-	-	-	-	-	-	-

■ REVERSING CONTACTORS AND STARTERS Approximate Mounting Dimensions, mm

FIG. 6

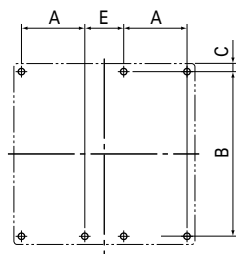


FIG. 7

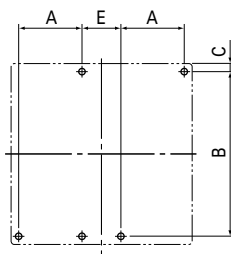


FIG. 8

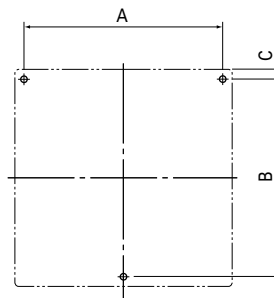
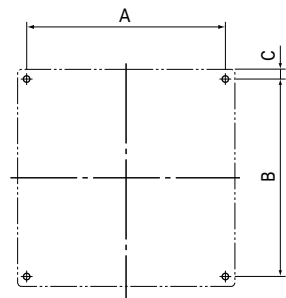


FIG. 9



Frame Size	Reversing Contactors						Reversing Starters					
	Fig.No.	A	B	C	E	Correct Screw Size	Fig.No.	A	B	C	E	Correct Screw Size
0T	6	65	70	9	22	4-M4	6	65	70	9	22	4-M4
1Q	6	65	70	9	22	4-M4	6	65	70	9	22	4-M4
2F	7	70	75	18	30	4-M4	7	70	75	18	30	4-M4
2H	7	70	75	18	30	4-M4	7	70	75	18	30	4-M4
2T	8	200	150	7.5	-	3-M5	8	200	150	7.5	-	3-M5
3F	8	200	150	7.5	-	3-M5	8	200	150	7.5	-	3-M5
3H	8	220	175	7.5	-	3-M5	8	220	175	7.5	-	3-M5
4F	8	260	200	7.5	-	3-M6	8	260	200	7.5	-	3-M6
4Q	9	300	250	10	-	4-M6	9	300	350	10	-	4-M6
4H	9	300	250	10	-	4-M6	9	300	350	10	-	4-M6
5F	9	300	300	15	-	4-M8	9	300	450	15	-	4-M8
5H	9	300	300	15	-	4-M8	9	300	450	15	-	4-M8

TECHNICAL PERFORMANCE DATA

■ STANDARD CONDITIONS

- Ambient temperature should not exceed +40°C and the average over a period of 4 hours should not exceed +35°C. The lower limit of the ambient temperature is -5°C.
- Altitude Restriction
For use at altitudes exceeding 2000 meters (6,600 ft.) please consult Fuji Electric.

■ LIFE EXPECTANCY

Performance Data

Frame size	Current capacity Make/Break	Operating cycles per hour	Life expectancy (million operations)	
			Electrical	Mechanical
0A	12xIe/10xIe	1800	2	10
0F, 0G	12xIe/10xIe	1800	2	10
0Q	12xIe/10xIe	1800	1.5	10
0R, 0H	12xIe/10xIe	1800	2	10
0T, 1Q	12xIe/10xIe	1200	2	10
2F, 2H	12xIe/10xIe	1200	2	5
2T through 5F	12xIe/10xIe	1200	1	5
5H	12xIe/10xIe	1200	0.5	5

Note: Ie: Rated operational current.

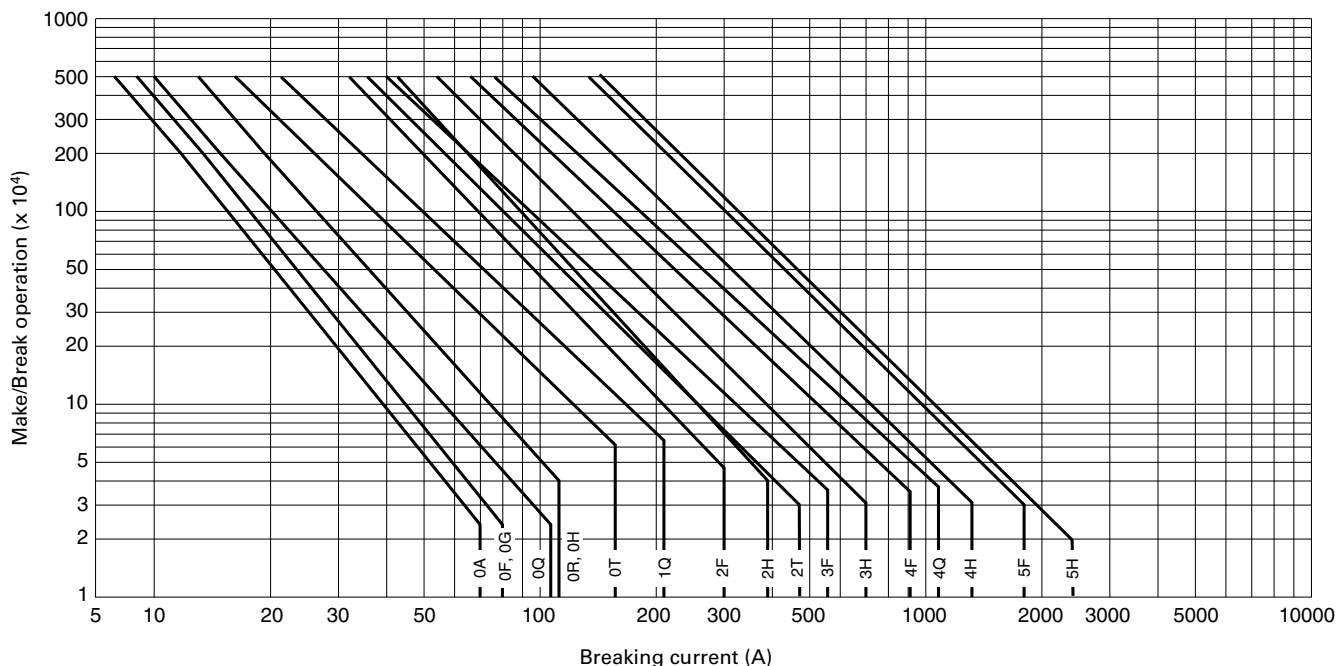
Electrical life test: Conforming to IEC947-4-1, AC3.

The endurance test complies with the requirements of international standard IEC, JIS and JEM.

■ AUXILIARY CONTACT RATINGS

All Frame Sizes

Operating	Contact rating code designation	Continuous ampere rating	Current-Make/Break (A)			
			110 to 120V	220 to 240V	440 to 480V	550 to 600V
AC	A600	10	60/6	30/3	15/1.5	12/1.2
DC	Q300	10	120V	240V		
			0.55/0.55	0.27/0.27		



Terminal Tightening Torque Chart

Type No.		Terminal Size		Cable Size Maximum		Applicable Max. Width for Ring Terminal		Tightening Torque	
Contact or Starter	Thermal Overload Relay	Contact	Thermal Overload Relay	Contact	Thermal Overload Relay	Contact	Thermal Overload Relay	Contact	Thermal Overload Relay
4NC0A0 4NC0F0 4NC0G0 4NW0A0 4NW0F0 4NW0G0	4NK0A	M3.5	M3.5	12AWG (3.3mm ²)	12AWG (3.3mm ²)	7.7mm	7.7mm	7-9 in.lbs. 0.8-1 Nm	7-9 in.lbs. 0.8-1 Nm
4NC0Q0 4NC0R0 4NC0H0 4NW0Q0 4NW0R0 4NW0H0	4NK0H	M4	M4	10AWG (5.3mm ²)	10AWG (5.3mm ²)	9.7mm	9.7mm	11-13 in.lbs. 1.2-1.5 Nm	11-13 in.lbs. 1.2-1.5 Nm
3NC0T0 3NC1Q0 3NW0T0 3NW1Q0	3NK1Q	M5	M5	6AWG (13.3mm ²)	6AWG (13.3mm ²)	12.4mm	12.4mm	18-22 in.lbs. 2-2.5 Nm	18-22 in.lbs. 2-2.5 Nm
3NC2F0 3NC2H0 3NW2F0 3NW2H0	3NK2H	M6	M6	2AWG (33.6mm ²)	4AWG (21.2mm ²)	16.8mm	16.7mm	35-44 in.lbs. 4-5 Nm	35-44 in.lbs. 4-5 Nm
3NC2T0 3NC3F0 3NW2T0 3NW3F0	3NK3F	M6	M6	1/0AWG (53.5mm ²)	2AWG (33.6mm ²)	22.3mm	16.7mm	35-44 in.lbs. 4-5 Nm	35-44 in.lbs. 4-5 Nm
3NC3H0 3NW3H0	3NK3H	M8	M8	1/0AWG (53.5mm ²)	1/0AWG (53.5mm ²)	22.3mm	22.3mm	80-97 in.lbs. 9-11 Nm	80-97 in.lbs. 9-11 Nm
3NC4F0 3NW4F0	3NK4F	M8	M8	3/0AWG (85mm ²)	1/0AWG (53.5mm ²)	28.9mm	22.3mm	80-97 in.lbs. 9-11 Nm	80-97 in.lbs. 9-11 Nm
3NC4Q0 3NW4Q0	3NK4Q	M10	M10	300MCM (152mm ²)	300MCM (152mm ²)	36.5mm	36.5mm	133-177 in.lbs. 15-20 Nm	133-177 in.lbs. 15-20 Nm
3NC4H0 3NW4H0	3NK4H	M10	M10	300MCM (152mm ²)	300MCM (152mm ²)	36.5mm	36.5mm	133-177 in.lbs. 15-20 Nm	133-177 in.lbs. 15-20 Nm
3NC5F0 3NC5H0 3NW5F0 3NW5H0	3NK5H	M12	M12	400MCM (203mm ²)	400MCM (203mm ²)	44.5mm	44.5mm	310-399 in.lbs. 35-45 Nm	310-399 in.lbs. 35-45 Nm
3NC6F0 3NC6H0	–	M16	–	600MCM (304mm ²)	–	51.0mm	–	663-884 in.lbs. 75-100 Nm	–

COIL CHARACTERISTICS, AC COILS

■ COIL CHARACTERISTICS, AC COILS

Contactor Part Number	Power Consumption (VA)		Pick-up Voltage (V)	Drop-out Voltage (V)	Operating Time (ms)	
	Inrush	Sealed			Coil ON ↓ Contact ON	Coil OFF ↓ Contact OFF

Table 1, 110-120Vac Coils, Measured at 120VAC 60Hz

4NC0A0, 4NC0F0, 4NC0G0	95	9	58-68	40-55	9-20	5-16
4NC0Q0, 4NC0R0, 4NC0H0	95	9	65-73	44-60	9-20	5-16
3NC0T0, 3NC1Q0	135	12.4	60-70	43-58	10-17	6-13
3NC0T0.../SE, 3NC01Q.../SE	137	3.9	70-80	35-50	20-25	20-25
3NC2F0, 3NC2H0	190	13.4	65-75	50-60	10-18	8-18
3NC2F0.../SE, 3NC02H.../SE	168	3.8	70-80	35-50	23-28	24-29
3NC2T0	210	14.4	70-75	51-53	16-23	7-17
3NC2T0.../SE	130	3.9	70-80	35-50	32-36	30-33
3NC3F0	130	3.9	70-80	35-50	32-36	30-33
3NC3H0	210	4.4	70-80	35-50	32-36	30-33
3NC4F0	210	4.4	70-80	35-50	32-36	30-33
3NC4Q0, 3NC4H0	277	5.4	70-80	35-50	35-41	37-45
3NC5F0, 3NC5H0	265	5.9	70-80	35-50	40-47	36-43

Table 2, 220 - 240Vac Coils, Measured at 240VAC 60Hz

4NC0A0, 4NC0F0, 4NC0G0	95	9	128-150	88-121	9-20	5-16
4NC0Q0, 4NC0R0, 4NC0H0	95	9	143-161	97-132	9-20	5-16
3NC0T0, 3NC1Q0	135	12.4	132-154	94-127	10-17	6-13
3NC0T0.../SE, 3NC01Q.../SE	155	4.7	140-160	70-100	20-25	20-25
3NC2F0, 3NC2H0	190	13.4	143-165	110-132	10-18	8-18
3NC2F0.../SE, 3NC02H.../SE	190	4.8	140-160	70-100	23-28	24-29
3NC2T0	210	14.4	154-165	112-116	16-23	7-17
3NC2T0.../SE	115	5.1	140-160	70-100	32-36	30-33
3NC3F0	115	5.1	140-160	70-100	32-36	30-33
3NC3H0	275	6.5	140-160	70-100	32-36	30-33
3NC4F0	275	6.5	140-160	70-100	32-36	30-33
3NC4Q0, 3NC4H0	307	6.8	140-160	70-100	35-41	37-45
3NC5F0, 3NC5H0	417	7.1	140-160	70-100	40-47	36-43

Table 3, 24Vac Coils, Measured at 24VAC 60Hz

4NC0A0, 4NC0F0, 4NC0G0	95	9	14-16	10-13	9-20	5-16
4NC0Q0, 4NC0R0, 4NC0H0	95	9	16-18	11-14	9-20	5-16
3NC0T0, 3NC1Q0	135	12.4	14-17	10-14	10-17	6-13
3NC0T0.../SE, 3NC01Q.../SE	129	3.1	17-19.8	8-14.4	20-25	20-25
3NC2F0, 3NC2H0	190	13.4	16-18	12-14	10-18	8-18
3NC2F0.../SE, 3NC02H.../SE	144	2.6	17-19.8	8-14.4	23-28	24-29
3NC2T0	210	14.4	17-18	12-13	16-23	7-17
3NC2T0.../SE	98	3.6	17-19	8-14.4	32-36	30-33
3NC3F0	98	3.6	17-19	8-14.4	32-36	30-33
3NC3H0	165	4	17-19	8-14.4	32-36	30-33
3NC4F0	165	4	17-19	8-14.4	32-36	30-33
3NC4Q0, 3NC4H0	175	5.9	17-19	8-14.4	35-41	37-45
3NC5F0, 3NC5H0	225	6.3	17-19	8-14.4	40-47	36-43

COIL CHARACTERISTICS, DC COILS

■ COIL CHARACTERISTICS, DC COILS

Contactor Part Number	Power Consumption (VA)		Pick-up Voltage (V)	Drop-out Voltage (V)	Operating Time (ms)	
	Inrush	Sealed			Coil ON ↓ Contact ON	Coil OFF ↓ Contact OFF

Table 1, 110VDC Coils, Measured at 110VDC

4GC0A0, 4GC0F0	7	7	48-68	13-29	43-47	22-24
4GC0G0	7	7	47-67	15-31	43-47	22-24
4GC0Q0, 0R0	7	7	51-70	15-31	44-48	22-25
4GC0H0	7	7	51-72	17-33	45-49	22-26
3GC0T0, 3NC1Q0	9	9	44-66	17-39	40-48	17-21
3NC0T0...SE, 3NC01Q.../SE	155	2.6	77-88	28-44	20-25	20-25
3GC2F0, 3GC2H0	12	12	44-66	13-33	60-70	15-19
3NC2F0.../SE, 3NC2H0.../SE	195	2.5	77-88	28-44	23-28	24-29
3NC2T0.../SE	112	2.6	77-88	28-44	32-36	30-33
3NC3F0	112	2.6	77-88	28-44	32-36	30-33
3NC3H0	255	3	77-88	28-44	32-36	30-33
3NC4F0	255	3	77-88	28-44	32-36	30-33
3NC4Q0, 3NC4H0	324	4.1	77-88	28-44	35-41	37-45
3NC5F0, 3NC5H0	340	4.5	77-88	28-44	40-47	36-43

Table 2, 24VDC Coils, Measured at 24VDC

4GC0A0, 4GC0F0	7	7	11-15	3-6	43-47	22-24
4GC0G0	7	7	10-15	3-7	43-47	22-24
4GC0Q0, 0R0	7	7	11-15	3-7	44-48	22-25
4GC0H0	7	7	11-16	4-7	45-49	22-26
3GC0T0, 3NC1Q0	9	9	10-14	4-8	40-48	17-21
3NC0T0...SE, 3NC01Q.../SE	135	3	17-19.2	6-12	20-25	20-25
3GC2F0, 3GC2H0	12	12	10-14	3-7	60-70	15-19
3NC2F0.../SE, 3NC2H0.../SE	168	2.5	17-19.2	6-12	23-28	24-29
3NC2T0.../SE	105	3.4	17-19.2	6-12	32-36	30-33
3NC3F0	105	3.4	17-19.2	6-12	32-36	30-33
3NC3H0	200	3.9	17-19.2	6-12	32-36	30-33
3NC4F0	200	3.9	17-19.2	6-12	32-36	30-33
3NC4Q0, 3NC4H0	250	5.9	17-19.2	6-12	35-41	37-45
3NC5F0, 3NC5H0	305	6.3	17-19.2	6-12	40-47	36-43

AC CONTACTORS IN DC CIRCUITS

DC APPLICATIONS OF MAGNETIC CONTACTORS

■ DESCRIPTION

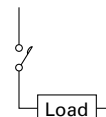
FUJI SC series magnetic contactors are normally used in AC circuit applications. However, they may also be used in DC circuits, and in this case their contacts must be connected in series as shown in the diagram.

When used in this manner they will be found to be more economical than using contactors exclusively designed for DC applications. Coils are available for both AC and DC.

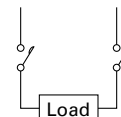
If the following ratings are observed the equipment will have an electrical service life expectancy of 500,000 operations.

■ WIRING CONNECTION

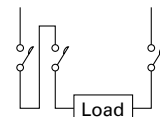
Contactors must be connected in series when the contactors are used in DC applications.



Series Contact 1



Series Contact 2



Series Contact 3

■ RATINGS

Frame Size	No. of Contacts Connected in Series	Rated Operational Current (A)							
		Resistive L/R ≤ 1ms.				DC MOTOR, L/R ≤ 15ms.			
		24V	48V	110V	220V	24V	48V	110V	220V
0A	1	13	13	10	1.2	6	3	2	0.35
	2	13	13	10	6	12	6	4	1.2
	3	15	15	15	15	15	10	8	4
0F	1	13	13	10	1.2	6	3	2	0.35
	2	13	13	10	6	12	6	4	1.2
	3	15	15	15	15	15	10	8	4
0G	1	13	13	10	1.2	6	3	2	0.35
	2	13	13	10	6	12	6	4	1.2
	3	15	15	15	15	15	10	8	4
0Q	1	16	13	10	1.5	8	6	2	0.35
	2	16	16	12	8	16	12	6	1.5
	3	18	18	18	15	18	18	12	6
0R	1	20	15	12	2	10	8	3	0.35
	2	20	20	15	10	20	15	8	2
	3	22	22	20	15	22	22	15	8
0H	1	20	15	12	2	10	8	3	0.35
	2	20	20	15	10	20	15	8	2
	3	22	22	20	15	22	22	15	8
0T	1	25	25	15	2	15	8	3	0.35
	2	25	25	25	20	25	15	8	2
	3	35	35	30	25	35	25	20	8
1Q	1	30	30	20	2	20	15	4	0.35
	2	30	30	30	20	30	20	15	3
	3	45	45	40	35	35	30	30	8
2F	2	60	60	40	20	60	30	20	3.5
	3	60	60	60	40	60	60	60	13
2H	2	80	80	50	20	80	40	20	4
	3	80	80	80	60	80	80	80	20
2T	2	80	80	50	20	80	40	20	4
	3	80	80	80	60	80	80	80	20
3F	2	120	120	80	40	120	80	40	15
	3	120	120	120	120	120	120	120	80
3H	2	120	120	80	40	120	80	40	15
	3	120	120	120	120	120	120	120	80
4F	2	160	160	100	80	160	120	80	40
	3	160	160	160	160	160	160	160	160
4Q	2	200	200	160	160	200	160	120	60
	3	200	200	200	200	200	200	200	200
4H	2	200	200	160	160	200	160	120	60
	3	200	200	200	200	200	200	200	200
5F	2	300	300	200	200	300	200	160	80
	3	300	300	300	300	300	300	300	300
5H	2	400	400	330	300	400	300	200	100
	3	400	400	400	400	400	400	400	400

These values represent usage in accordance with IEC specifications and are not recognized by UL508.

TECHNICAL PERFORMANCE NOTES

"ORANGE LINE" INDUSTRIAL RELAY

Features and Ratings

■ FEATURES

NEW SH SERIES EXPANDABLE INDUSTRIAL RELAY APPLICATIONS (U.S. Catalog No.4SH and 4GH Series)

High contact reliability that accommodates electronic devices.

- All contacts are bifurcated, providing high contact reliability (minimum operational voltage and current: 5V and 3mA DC) and enabling direct input to an electronic control circuit.

A wide variety of optional units.

- In addition to an auxiliary contact block (two or four poles), many function units such as a coil surge suppression unit and terminal covers can be installed on standard industrial relays. This allows for flexibility and easy modification in the field.

Snap-on mounting on an IEC or DIN rail.

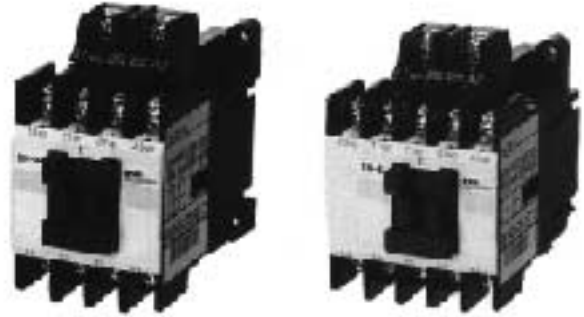
- All models can be mounted on an IEC or DIN Standard 35mm rail.

Meets International Standards.

- The SH Series industrial relays conform to the following International Standards: IEC, NEMA, BS and VDE. They are also UL, CSA, BV and Lloyd approved.

Compatible with conventional models.

- SH Series industrial relays are compatible with the discontinued Fuji SRCa50-3/X, SRCa50-3F/X, and SRC50-05/X



industrial relays. In addition to the mounting holes needed for the compatibility, mounting holes based on the IEC Standard are also provided.

Terminal numbers conforming to IEC Standards.

- Terminal numbers are based on IEC Standards.

New design.

- The arc extinguishing cover is ivory colored with orange accents, providing a new look to the conventional industrial relay.

■ AC OPERATED INDUSTRIAL RELAYS

U.S. Catalog No.	Aux. Contact	Fuji Type
4SH440#%	4NO	SH-4 4 POLE
4SH431#%	3NO+1NC	
4SH422#%	2NO+2NC	
4SH550#%	5NO	SH-5 5 POLE
4SH541#%	4NO+1NC	
4SH532#%	3NO+2NC	
4SH523#%	2NO+3NC	
4SH514#%	1NO+4NC	
4SH505#%	5NC	
4SH880#%	8NO	SH-4 8 POLE
4SH871#%	7NO+1NC	
4SH862#%	6NO+2NC	
4SH853#%	5NO+3NC	
4SH844#%	4NO+4NC	

■ DC OPERATED INDUSTRIAL RELAYS

U.S. Catalog No.	Aux. Contact	Fuji Type
4GH440#%	4NO	SH-4/G 4 POLE
4GH431#%	3NO+1NC	
4GH422#%	2NO+2NC	
4GH550#%	5NO	SH-5/G 5 POLE
4GH541#%	4NO+1NC	
4GH532#%	3NO+2NC	
4GH523#%	2NO+3NC	
4GH514#%	1NO+4NC	
4GH505#%	5NC	
4GH880#%	8NO	SH-4/G 8 POLE
4GH871#%	7NO+1NC	
4GH862#%	6NO+2NC	
4GH853#%	5NO+3NC	
4GH844#%	4NO+4NC	

EXPLANATION OF PART NUMBER SYSTEM

4 S H \$ @ @ # %

- **APPROVAL**
4=UL Listed
JIS Approved

- **OPERATION**
S=AC Coil
G=DC Coil

- **DESCRIPTION**
H=Industrial Relay

- **TOTAL NUMBER OF CONTACTS (Poles)**
4, 5 or 8

- **TERMINAL OPTION**
Blank: Standard
Y: Optional, non removable terminal cover accessory.

- **COIL VOLTAGE**
Select code from chart on next page
For AC: use Table 1
For DC: use Table 2

● QUANTITY OF AUX. CONTACTS

4 pole	5 pole	8 pole
40 : 4NO	50 : 5NO	80 : 8NO
31 : 3NO+1NC	41 : 4NO+1NC	71 : 7NO+1NC
22 : 2NO+2NC	32 : 3NO+2NC	62 : 6NO+2NC
	23 : 2NO+3NC	53 : 5NO+3NC
	14 : 1NO+4NC	44 : 4NO+4NC
	05 : 5NC	

"ORANGE LINE" INDUSTRIAL RELAY

Coil and Operating Characteristics, and Performance Data

AVAILABLE COILS

■ TABLE 1: AC Coils

Code Letter	AC coil 60Hz	AC coil 50Hz
E	24–26V	24V
F	48–52V	48V
A	100–110V	100V
1	110–120V	100–110V
G	127–140V	120–127V
B	200–220V	200V
2	220–240V	200–220V
4	440–480V	415–440V
5	550–600V	500–550V

■ TABLE 2: DC Coils

Code Letter	DC coil
T	12V
M	24V
N	48V
1	100V
R	110V
2	200V
S	220V

■ COIL CHARACTERISTICS

Power Consumption		Pick-Up Voltage (V)		Drop-Out Voltage (V)		Watt Loss (W)	
Inrush (VA)	Sealed (VA)	200V, 50Hz.	220V, 60Hz.	200V, 50Hz.	220V, 60Hz.	200V, 50Hz.	220V, 60Hz.
95	9	108–128	120–144	62–90	74–100	2.7	2.8

■ OPERATING CHARACTERISTICS

Coil Type	Voltage	Frequency (Hz)	Pick-Up Time (m sec.)		Drop-Out Time (m sec.)	
			No Contact ON	NC Contact OFF	NO Contact OFF	NC Contact ON
AC	200V AC	50	9–20	5–15	5–15	9–20
DC	200V DC	–	45–50	35–40	20–25	20–30

■ RATINGS UL File No. E44592, CSA File No. LR20479

Continuous Current (A)	Rated Operational Current (A)						Code	
	AC Volts	Make	Break	DC Volts	Make	Break	AC	DC
10	120 240 480 600	60 30 15 12	6 3 1.5 1.2	125 250	0.55 0.27	0.55 0.27	A600	Q300

■ PERFORMANCE DATA (AC11) Life Expectancy (Conforming to JIS C4531, JEM1230)

Operating Cycles Per Hour	Mechanical Life (Operations)	Electrical Life (Operations)				
		AC11		AC13		DC11, 14
		220V	440V	220V	440V	24V~220V
1,800	10 Million	500,000	500,000	250,000	250,000	500,000

"ORANGE LINE" INDUSTRIAL RELAY

Combinations and Contact Arrangements

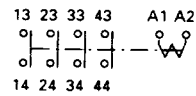
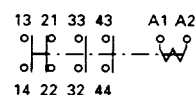
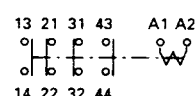
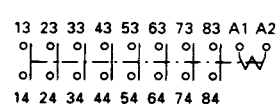
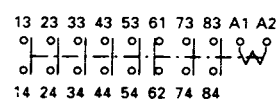
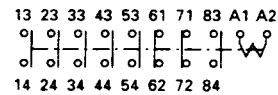
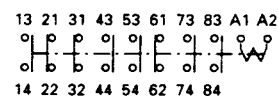
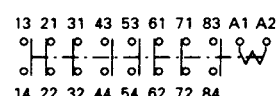
COMBINATION OF INDUSTRIAL RELAY AND AUXILIARY CONTACT BLOCK

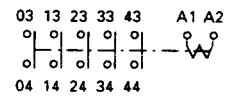
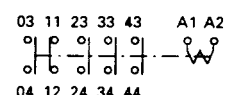
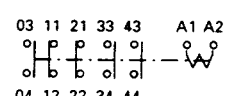
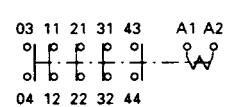
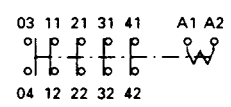
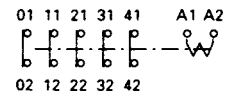
The standard type industrial relays can be used with a combination of the auxiliary contact blocks shown below.

Industrial Relay		Auxiliary Contact Block								
		Front Mounting						Side Mounting		
Type (U.S. Cat. No.)	Contact Arrangement	SZ-A40 4NO	SZ-A31 3NO + 1NC	SZ-A22 2NO + 2NC	SZ-A20 2NO	SZ-A11 1NO + 1NC	SZ-A02 2NC	SZ-AS1 2NO + 2NC	SZ-AS1 1NO + 1NC	SZ-AS1 1NO + 1NC
SH-4 (4SH4) • SH-4/G (4GH4)	4NO 3NO + 1NC 2NO + 2NC	8NO 7NO + 1NC 6NO + 2NC	7NO + 1NC 6NO + 2NC 5NO + 3NC	6NO + 2NC 5NO + 3NC 4NO + 4NC	6NO 5NO + 1NC 4NO + 2NC	5NO + 1NC 4NO + 2NC 3NO + 3NC	4NO + 2NC 3NO + 3NC 2NO + 4NC	6NO + 2NC 5NO + 3NC 4NO + 4NC	5NO + 1NC 4NO + 2NC 3NO + 3NC	5NO + 1NC 4NO + 2NC 3NO + 3NC
SH-5 (4SH5) • SH-5/G (4GH5)	5NO 4NO + 1NC 3NO + 2NC 2NO + 3NC 1NO + 4NC 5NC	9NO 8NO + 1NC 7NO + 2NC 6NO + 3NC 5NO + 4NC 4NO + 5NC	8NO + 1NC 7NO + 2NC 6NO + 3NC 5NO + 4NC — —	7NO + 2NC 6NO + 3NC 5NO + 4NC — — —	7NO 6NO + 1NC 5NO + 2NC 4NO + 3NC 3NO + 4NC 2NO + 5NC	6NO + 1NC 5NO + 2NC 4NO + 3NC 3NO + 4NC — —	5NO + 2NC 4NO + 3NC 3NO + 4NC — — —	7NO + 2NC 6NO + 3NC 5NO + 4NC — — —	6NO + 1NC 5NO + 2NC 4NO + 3NC 3NO + 4NC — —	6NO + 1NC 5NO + 2NC 4NO + 3NC 3NO + 4NC — —

Note: Auxiliary contact blocks cannot be mounted both front mounting and side mounting at the same time.

CONTACT ARRANGEMENT

U.S. Catalog No.	Fuji Type	NO 	NC 	Contact Arrangement
4SH440# 4GH440#	SH-4 4-Pole • SH-4/G 4-Pole	4NO		
4SH431# 4GH431#		3NO + 1NC		
4SH422# 4GH422#		2NO + 2NC		
4SH880# 4GH880#	* SH-4 8-Pole • SH-4/G 8-Pole	8NO		
4SH871# 4GH871#		7NO + 1NC		
4SH862# 4GH862#		6NO + 2NC		
4SH853# 4GH853#		5NO + 3NC		
4SH844# 4GH844#		4NO + 4NC		

U.S. Catalog No.	Fuji Type	NO 	NC 	Contact Arrangement
4SH550# 4GH550#	SH-5 5-Pole • SH-5/G 5-Pole	5NO		
4SH541# 4GH541#		4NO + 1NC		
4SH532# 4GH532#		3NO + 2NC		
4SH523# 4GH523#		2NO + 3NC		
4SH514# 4GH514#		1NO + 4NC		
4SH505# 4GH505#		5NC		

*Note: 8 pole units are made from standard 4 pole frames with 4 pole Aux. contacts added. The 5 available configurations are made as follows:

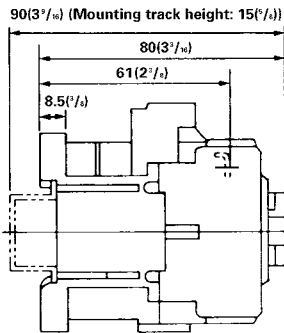
- 4_H880# (8NO, no NC) = 4_H440# Base + SZ-A40 Aux.
- 4_H871# (7NO + 1 NC) = 4_H440# Base + SZ-A31 Aux.
- 4_H862# (6NO + 2 NC) = 4_H440# Base + SZ-A22 Aux.
- 4_H853# (5NO + 3 NC) = 4_H422# Base + SZ-A31 Aux.
- 4_H844# (4NO + 4 NC) = 4_H422# Base + SZ-A22 Aux.

"ORANGE LINE" INDUSTRIAL RELAY

Dimensions

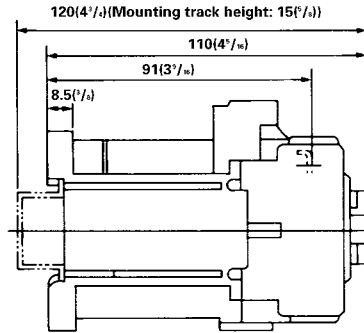
■ **DIMENSIONS:** mm (inches)

SH-4/4-Pole (U. S. Catalog No. 4SH4)

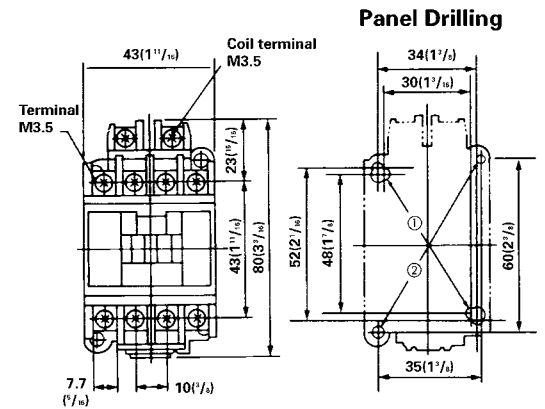


Net weight: 0.32kg (.71 lbs.)

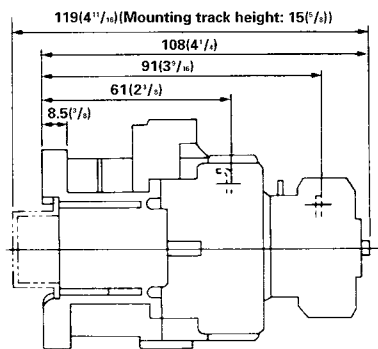
SH-4/G, 4-Pole (U. S. Catalog No. 4GH4)



Net weight: 0.55kg (1.2 lbs.)

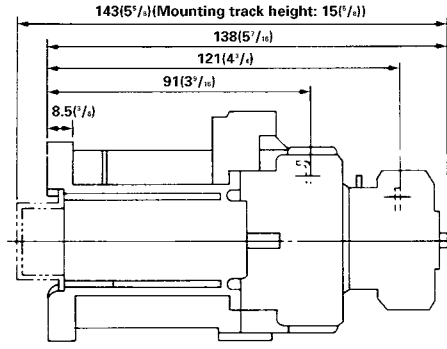


SH-4/8-Pole (U. S. Catalog No. 4SH8)

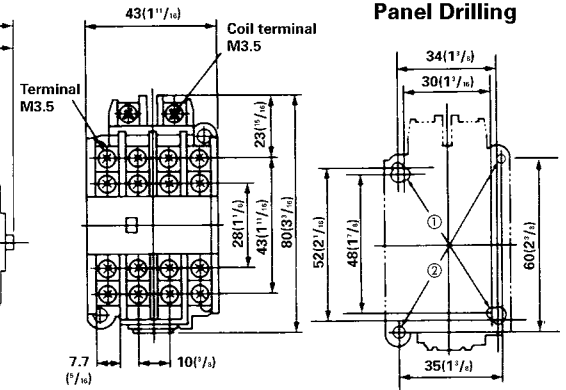


Net weight: 0.36kg (.8 lbs.)

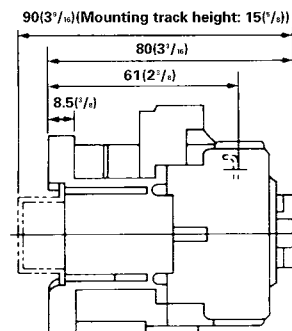
SH-4/G, 8-Pole (U. S. Catalog No. 4GH8)



Net weight: 0.59kg (1.3 lbs.)

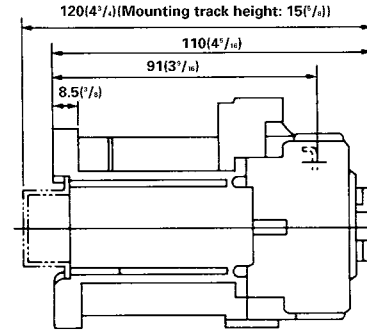


SH-5/5-Pole (U. S. Catalog No. 4SH5)

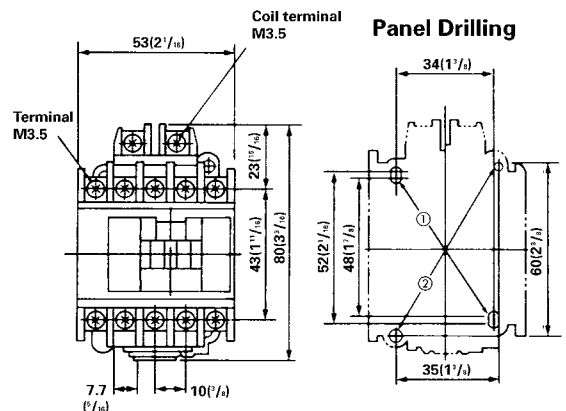


Net weight: 0.34kg (.75 lbs.)

SH-5/G, 5-Pole (U. S. Catalog No. 4GH5)



Net weight: 0.58kg (1.3 lbs.)



Notes: Panel Drilling -

- Use the two mounting holes on a diagonal line to mount a relay.
- Mounting holes indicated by ① are compatible with those of SRC type.
- Mounting holes indicated by ② conform to IEC Standards.

"MICRO LINE" AC Contactors & Starters, DC Operated

■ FEATURES

CAN BE DIRECTLY DRIVEN BY TRANSISTOR OUTPUT OF PROGRAMMABLE LOGIC CONTROLLER (PLC)

Direct driving by DC output of programmable logic controller (PLC) or other electronic equipment.

- The power consumption of the SJ-0G contactor is 1.4W, thanks to the highly efficient polarized electromagnet.
- This contactor can be driven by transistor output of a PLC or electronic equipment such as photoelectric switch, or a proximity limit switch. Therefore, no interface relay is needed before this contactor for driving a 3-phase induction motor.

Highly reliable auxiliary contacts permitting direct input to an electronic circuit.

- Highly reliable bifurcated auxiliary contacts can be used in a low-level (5VDC, 3mA) circuit. Therefore, the contact output signal can be directly input to other electronic equipment.

Built-in surge suppression circuit.

- The surge suppression circuit, connected in parallel with the coil, prevents malfunction or damage of devices by surge voltage generated when the contactor operates.

Compact design.

- Installation space is reduced to 72% of conventional FUJI DC operated contactors achieving high performance.



Application to 440V AC circuits.

- Contactors can be applied to 440V AC circuits since the rated isolation voltage is 500V AC.

Snap-on mounting on an IEC or DIN rail.

- Besides screw mounting, snap-on mounting on an IEC or DIN standard 35mm rail is possible, reducing working costs.

Finger protection cover (standard accessory).

- The SJ-0G has a standard finger protection cover to prevent the live parts from being exposed and ensuring safety during maintenance and inspection. Because terminal numbers conform to IEC standards displayed on the front of the body, the contact arrangement can be confirmed visually.

■ RATINGS UL File No. E42419, CSA File No. LR20479

Size	Type		Max. Motor Capacity (HP)					Continuous Current (A)	Auxiliary Contact	Coil Voltage *2
	Contactor	Starter (Non-Reversing, Open Type)	Single-Phase		Three-Phase					
			110V-120V	220V-240V	110V-120V	200V	220V-240V			
0A	SJ-0G	SJ-0WG/2E	1/3	1	1	2	3	15	1NO*1	DC12V DC24V

Note: Ensure proper polarity on the terminals.

*1 - Auxiliary contact 1NC is available.

*2 - Coil voltage tolerance: 85 to 120% of rated voltage.

■ AUXILIARY CONTACT RATINGS

Size	Type	Continuous Current (A)	Rated Operational Current (A)			AC	Minimum Operational Voltage and Current
			Voltage (VAC)	Make	Break		
0A	SJ-0G	6	120	60	6	A300	5VDC, 3mA
			240	30	3		

EXPLANATION OF PART NUMBER SYSTEM

■ DC OPERATED CONTACTOR

SJ-0G DC24V 1a

● **BASIC TYPE OF SJ-0G**

● **COIL VOLTAGE**

See Code Letter: Table 1 on next page

● **AUXILIARY CONTACT ARRANGEMENT**

1A
1B

■ DC OPERATED STARTER

SJ-0WG / 2E DC24V 0.15-0.24 1a

● **BASIC TYPE OF SJ-0WG**

● **COIL VOLTAGE**

See Code Letter: Table 1 on next page

● **THERMAL OVERLOAD RELAY**

AMPERE RANGE

See Code Letter: Table 2 on next page

● **AUXILIARY CONTACT ARRANGEMENT**

1A
1B

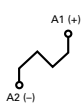
"MICRO LINE" AC Contactors & Starters, DC Operated

COIL INFORMATION

■ TABLE 1: COIL VOLTAGE

DC Coil
12V
24V

■ OPERATION COIL
COIL VOLTAGE

Voltage	Wiring
12V DC 24V DC	

■ CLIP TO MOUNT CONTACTOR AND
OVERLOAD TOGETHER

SJ-0WG/X_B.KIT_

Notes: (1) Coil voltage tolerance: 85 to 120% of rated voltage.
(2) Ensure proper polarity on coil terminals.

CHARACTERISTICS (In the case of Coil Voltage: 24V DC)

Power Consumption	Pick-Up Voltage	Drop-Up Voltage	Operating Time	
			Coil ON → Main Contact ON	Coil OFF → Main Contact OFF
0.5 W	20.4V DC or Less	2.4V DC or More	35~60 ms	12~22 ms

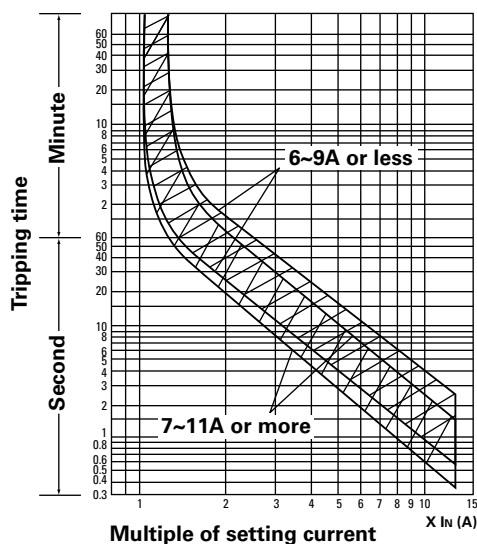
WIRING DIAGRAMS / AUXILIARY CONTACT INFORMATION

■ TABLE 2: THERMAL
OVERLOAD RELAY

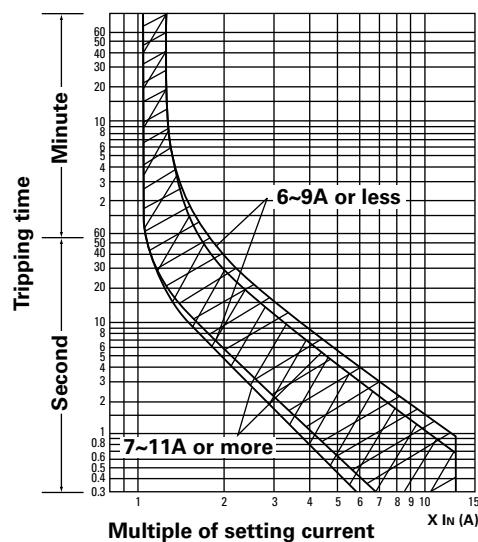
Ampere Setting Range
0.1~0.15
0.15~0.24
0.24~0.36
0.36~0.54
0.48~0.72
0.64~0.96
0.8~1.2
0.94~1.45
1.4~2.2
1.7~2.6
2.2~3.4
2.8~4.2
4~6
5~8
6~9
7~9.6

■ THERMAL OVERLOAD RELAY TR-0/UL (U.S. Catalog No.1TR0A□)
CHARACTERISTIC CURVES

Cold Start



Hot Start



"MICRO LINE" Contactors & Starters, DC Operated

■ WIRE SIZE AND TIGHTENING TORQUE

Type	Main Circuit						Control Circuit Terminal					
	Wire Size (Max.) (Copper) (AWG)		Screw Size		Tightening Torque (kgf • cm)		Wire Size (Max.) (Copper) (AWG)		Screw Size		Tightening Torque (kgf • cm)	
	Line Side (Contactor)	Load Side (OL Relay)	Line Side (Contactor)	Load Side (OL Relay)	Line Side (Contactor)	Load Side (OL Relay)	Line Side (Contactor)	Load Side (OL Relay)	Line Side (Contactor)	Load Side (OL Relay)	Line Side (Contactor)	Load Side (OL Relay)
SJ-0G	14	14	M 3.5	M 3.5	8~9	8~9	14	14	M 3.5	M 3.5	8~9	8~9
SJ-0WG												

■ WIRINGS

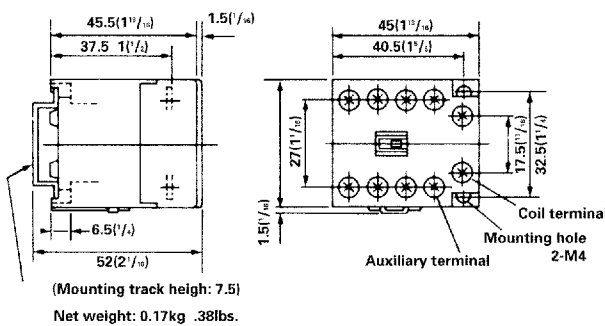
- The SJ-0G contactor is provided with a surge suppression circuit, so no external surge suppression device is required for the ordinary sequence circuit. Coil surge voltage: 50V or below.
- Connect the contactor to a DC output device as shown below.

Output Circuit	Without Surge Suppression Diode	With Surge Suppression Diode		
Connection				
Device	DC Output Device	NPN Output Photoelectric	Proximity Limit Switch	Programmable Logic Controller

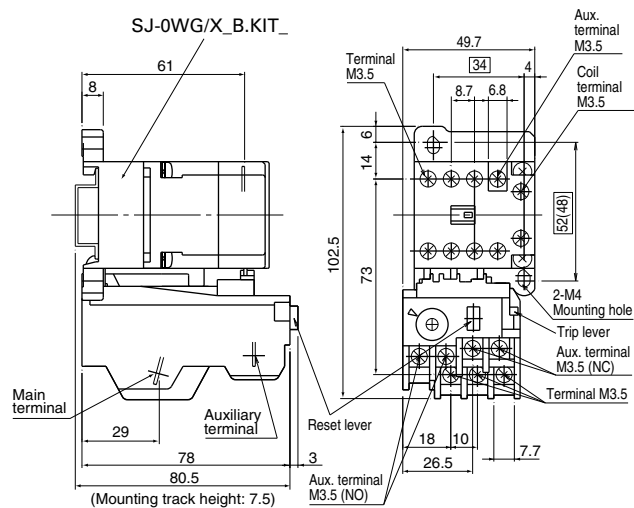
- Note that the polarity of operation coil terminal A1 is positive (+) and terminal A2 is negative (-).
- Apply the normal power and voltage to the operation coil.
- Note that with the Surge Suppression Diode, the reset time is prolonged.

■ DIMENSIONS: mm (inches)

SJ-0G



SJ-0WG/2E



MAGNETIC CONTACTORS SF SERIES

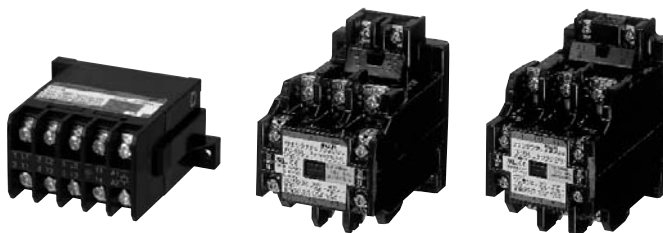
DESCRIPTION

FUJI SF 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 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

- 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.
- 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.

ORDERING INFORMATION

Specify the following:

1. Ordering code
2. Operating coil voltage code
3. Auxiliary 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		Frame
200V 240V	380V 440V	200V 240V	380V 440V		NO	NC	US PIN	Fuji Type	
3	2.5	12	6	20	1	–	SF12B1A-■10	FC-0UL	0
3	2.5	12	6	20	–	1	SF12B1A-■01	FC-0UL	0
3.5	4.5	15	10	20	1	–	SF15B1A-■10	FC-0SUL	0S
3.5	4.5	15	10	20	–	1	SF15B1A-■01	FC-0SUL	0S
5.5	5.5	20	13	30	1	1*1	SF20B1A-■11	FC-1UL	1
7.5	7.5	27	18	30	1	1*1	SF26B1A-■11	FC-1SUL	1S
1.5	–	8	–	8	1	–	SF08BBA-■10	FC-0A	0A
1.5	–	8	–	8	–	1	SF08BBA-■01	FC-0A	0A
3	2.5	12	6	20	1	–	SF12B3A-■10	FC-0TUL	0T
3	2.5	12	6	20	–	1	SF12B3A-■01	FC-0TUL	0T
3.5	4.5	15	10	20	1	–	SF15B3A-■10	FC-0STUL	0ST
3.5	4.5	15	10	20	–	1	SF15B3A-■01	FC-0STUL	0ST
3	2.5	12	6	20	1	–	SF12B1G-■10	FC-0/GUL	0
3	2.5	12	6	20	–	1	SF12B1G-■01	FC-0/GUL	0
3.5	4.5	15	10	20	1	–	SF15B1A-■10	FC-0S/GUL	0S
3.5	4.5	15	10	20	–	1	SF15B1A-■01	FC-0S/GUL	0S
3	2.5	12	6	20	1	–	SF12B3G-■10	FC-0T/GUL	0T
3	2.5	12	6	20	–	1	SF12B3G-■01	FC-0T/GUL	0T
3.5	4.5	15	10	20	1	–	SF15B3G-■10	FC-0ST/GUL	0S
3.5	4.5	15	10	20	–	1	SF15B3G-■01	FC-0ST/GUL	0S
1.5	–	8	–	8	1	–	SF08BBG-■10	FC-0A/G	0A
1.5	–	8	–	8	–	1	SF08BBG-■01	FC-0A/G	0A

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

*2 Thermal current (A)

■ ORDERING CODE SYSTEM

● Contactor

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

① PRODUCT CATEGORY

Description	Code
Contactors	S

② SERIES CATEGORY

Description	Code
F series	F

③ ④ FRAME SIZE

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

⑤ VERSION

Description	Code
Non-reversing, open	
Contactors	
Standard	1
With tab terminal	T
Starter	
Standard	A

⑥ COIL SPECIFICATION

Description	Code
AC operating coil	A
DC operating coil	G

⑧ COIL VOLTAGE

● AC coil

Operating coil voltage		Code
50Hz	60Hz	
24V	24 — 26V	E
48V	48 — 52V	F
100V	100 — 110V	1
100 — 100V	110 — 120V	H
110 — 120V	120 — 130V	K
200V	200 — 220V	2
200 — 220V	220 — 240V	M
220 — 260V	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

⑨ ⑩ 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

SF SERIES

■ TYPES AND RATINGS (IEC60947-4-1)

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	10	110	100	10	10
		220	60	6	10
		440	60	6	10

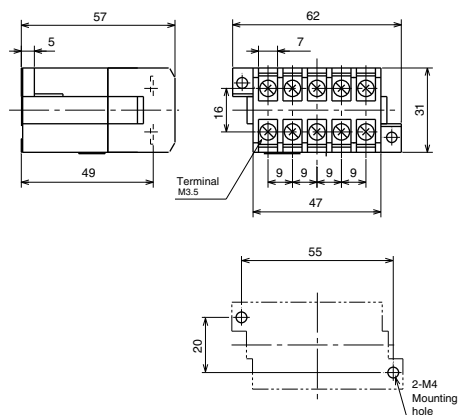
■ PERFORMANCE DATA

Frame size	Making capacity (A)	Breaking capacity (A)	Operating cycles per hour	Life expectancy (operations)	
				Electrical	Mechanical
0 to 1S	10 X I _e	10 X I _e	600	250,000	1 million

I_e: Rated operational current

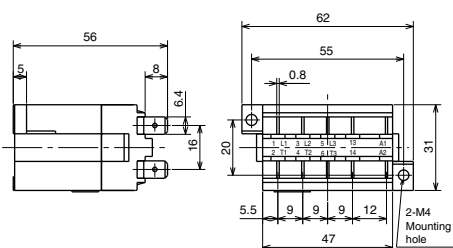
■ DIMENSIONS, mm

Frame 0, 0S



Mass: 160g

Frame 0T, 0ST



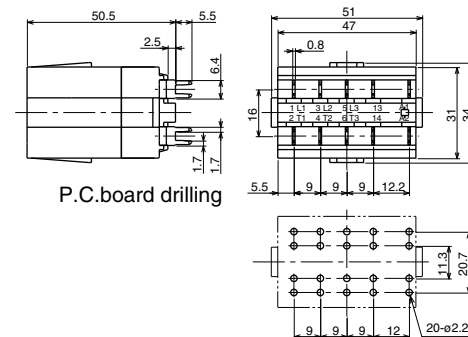
Mass: 160g

■ COIL RATINGS

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

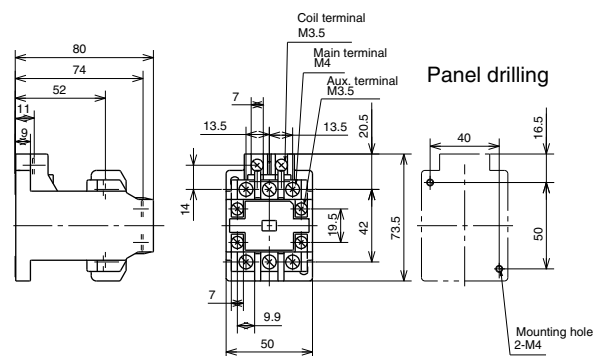
Notes: * Other voltages between 24V and 440V AC are available. DC operated type FC-0/G and FC-0T/G are also available. Coil voltage: 24, 48, 60, 100, 120, 200, 210 and 220V DC

Frame 0A



Mass: 140g

Frame 0T, 0ST



Mass: 160g

Cross chart from old contactor to latest contactor

1. Contactor

Latest Contactor	US part number	4NC0A0	4NC0A0	4NC0G0	4NC0Q0	4NC0R0	4NC0H0	4NC0H0+SZ-A11	3NC0T0	3NC1Q0	3NC2F0
	Japanese part number	SC-03	SC-0	SC-05	SC-4-0	SC-4-1	SC-5-1	SC-5-1+SZ-A11	SC-N1	SC-N2	SC-N2S
	Dimensions (mm)	W43*H80*D80	W43*H80*D80	W53*H80*D80	W53*H80*D81	W53*H80*D81	W64*H80*D81	W64*H80*D109	W74*H87*D96	W74*H87*D96	W88*H110*D111
	Installation hole pitch (mm)	W30*H48	W30*H48	W34*H52 (48)	W34*H52 (48)	W34*H52 (48)	W35*H60	W35*H60	W45 (50)*H75	W45 (50)*H75	W60 (55)*H90
2NC Contactor	Adapter plate for 2NC installation holes	W34*H52 (48)	W34*H52 (48)	W35*H60	W35*H60	W35*H60	W50*H60	W50*H60	W65 (60)*H70	W65 (60)*H70	W70*H75
	US part number	SC-03	SC-0	SC-05	SC-4-0	SC-4-1	SC-5-1	SC-5-1+SZ-A11	SC-N1	SC-N2	SC-N2S
	Dimensions (mm)	W43*H80*D80	W43*H80*D80	W53*H80*D80	W53*H80*D81	W53*H80*D81	W64*H80*D81	W64*H80*D109	W74*H87*D96	W74*H87*D96	W88*H110*D111
	Installation hole pitch (mm)	W30*H48	W30*H48	W34*H52 (48)	W34*H52 (48)	W34*H52 (48)	W35*H60	W35*H60	W45 (50)*H75	W45 (50)*H75	W60 (55)*H90
1RC, 1SC (SRC, SC) Contactor	US part number	SC-03	SC-0	SC-05	SC-4-0	SC-4-1	SC-5-1	SC-5-1+SZ-A11	SC-N1	SC-N2	SC-N2S
	Dimensions (mm)	W43*H80*D80	W43*H80*D80	W53*H80*D80	W53*H80*D81	W53*H80*D81	W64*H80*D81	W64*H80*D109	W74*H87*D96	W74*H87*D96	W88*H110*D111
	Installation hole pitch (mm)	W30*H48	W30*H48	W34*H52 (48)	W34*H52 (48)	W34*H52 (48)	W35*H60	W35*H60	W45 (50)*H75	W45 (50)*H75	W60 (55)*H90
	Adapter plate for 2NC installation holes	W34*H52 (48)	W34*H52 (48)	W35*H60	W35*H60	W35*H60	W50*H60	W50*H60	W65 (60)*H70	W65 (60)*H70	W70*H75
Old SRC, SC Contactor	US part number	SC-03	SC-0	SC-05	SC-4-0	SC-4-1	SC-5-1	SC-5-1+SZ-A11	SC-N1	SC-N2	SC-N2S
	Dimensions (mm)	W43*H80*D80	W43*H80*D80	W53*H80*D80	W53*H80*D81	W53*H80*D81	W64*H80*D81	W64*H80*D109	W74*H87*D96	W74*H87*D96	W88*H110*D111
	Installation hole pitch (mm)	W30*H48	W30*H48	W34*H52 (48)	W34*H52 (48)	W34*H52 (48)	W35*H60	W35*H60	W45 (50)*H75	W45 (50)*H75	W60 (55)*H90
	Adapter plate for 2NC installation holes	W34*H52 (48)	W34*H52 (48)	W35*H60	W35*H60	W35*H60	W50*H60	W50*H60	W65 (60)*H70	W65 (60)*H70	W70*H75

Latest Contactor	US part number	3NC2H0	3NC2T0	3NC3F0	3NC3H0	3NC4F0	3NC4Q0	3NC4H0	3NC5F0	3NC5H0
	Japanese part number	SC-N3	SC-N4	SC-N5	SC-N6	SC-N7	SC-N8	SC-N10	SC-N11	SC-N12
	Dimensions (mm)	W88*H110*D111	W88*H127*D117	W88*H127*D132	W100*H144*D138	W115*H156*D140	W138*H209*D174	W138*H209*D174	W148*H240*D195	W148*H240*D195
	Installation hole pitch (mm)	W60 (55)*H90 W70*H75	W70*H75	W70*H75	W90 (80)*H110	W90 (80)*H110	W45*H190	W45*H190	W60*H220	W60*H220
2NC Contactor	Adapter plate for 2NC installation holes	Not required	Not required	SZ-N5/AP	Not required	SZ-N7/AP	Not required	Not required	SZ-N11/AP	Not required
	US part number	2NC2H0	2NC2T0	2NC3F0	2NC3H0	2NC4F0	2NC4Q0	2NC4H0	2NC5F0	2NC5H0
	Japanese part number	SC-3N	SC-4N	SC-5N	SC-6N	SC-7N	SC-8N	SC-10N	SC-11N	SC-12N
	Dimensions (mm)	W88*H110*D118	W88*H125*D137.5	W100*H148*D151	W100*H148*D151	W120*H167*D167.5	W138*H210*D194	W138*H210*D194	W148*H230*D208.5	W163*H240*D230.5
1RC, 1SC (SRC, SC) Contactor	Installation hole pitch (mm)	W70*H75	W70*H75	W80*H110	W80*H110	W100*H130	W45*H190	W45*H190	W50*H210	W60*H220
	US part number	1SC2H0	-	1SC3F0	1SC4F0	-	-	1SC4H0	-	-
	Japanese part number	SC-3	SC-4	SC-4S	SC-6	-	SC-8	SC-10	-	SC-12
	Dimensions (mm)	W88*H120*D122.5	W100*H132*D136	W100*H148*D136	W120*H160*D152	-	W138*H210*D180	W148*H230*D194.5	-	W173*H240*D218.5
Old SRC, SC Contactor	Installation hole pitch (mm)	W70*H75	W80*H110	W80*H110	W100*H130	-	W45*H190	W50*H210	-	W60*H220
	US part number	-	-	-	-	-	-	-	-	-
	Japanese part number	SRC3631-3	SRC3631-4	SRC3631-4T	SRC3631-6	-	SRC3631-8	SRC3631-10	-	SRC3631-12
	Dimensions (mm)	W104*H117*D140	W160*H155*D109	W160*H166*D109	W195*H199*D130	-	W204*H223*D153	W212*H257*D168	-	W300*H283*D200
Old SRC, SC Contactor	Installation hole pitch (mm)	W90*H85	W57*H138	W57*H138	W70*H175	-	W70*H165	W80*H190	-	W115*H222
	US part number	-	-	-	-	-	-	-	-	-
	Japanese part number	-	-	-	-	-	-	-	-	-
	Dimensions (mm)	-	-	-	-	-	-	-	-	-

2. Motor Starter

Latest Motor Starter	US part number (Contact + Overload)	4NW0A0 (4NC0A0 + 4NK0A)	4NW0F0 (4NC0F0 + 4NK0A)	4NW0G0 (4NC0G0 + 4NK0A)	4NW0Q0 (4NC0Q0 + 4NK0H)	4NW0R0 (4NC0R0 + 4NK0H)	4NW0H0 (4NC0H0 + 4NK0H)	4NW0H0+SZ-A11 (4NC0H0 + 4NK0H)	3NW0T0 (3NC0T0 + 3NK1Q)	3NW1Q0 (3NC1Q0 + 3NK1Q)	3NW2F0 (3NC2F0 + 3NK2H)
	Japanese part number (Contact + Overload)	SW-03 (SC-03 + TK-0N)	SW-0 (SC-0 + TK-0N)	SW-05 (SC-05 + TK-0N)	SW-4-0 (SC-4-0 + TK-5-1N)	SW-4-1 (SC-4-1 + TK-5-1N)	SW-5-1 (SC-5-1 + TK-5-1N)	SW-5-1+SZ-A11 (SC-5-1 + TK-5-1N)	SW-N1 (SC-N1 + TK-N2)	SW-N2 (SC-N2 + TK-N2)	SW-N2S (SC-N2S + TK-N3)
	Dimensions (mm)	W44*H120*D80	W44*H120*D80	W53*H120*D80	W53*H126*D81	W53*H126*D81	W53*H126*D81	W64*H126*D81	W74*H146*D96	W74*H146*D96	W88*H177*D111
	Installation hole pitch (mm)	W30*H48 W34*H52 (48) W35*H60	W30*H48 W34*H52 (48) W35*H60	W34*H52 (48) W35*H60	W34*H52 (48) W35*H60	W34*H52 (48) W35*H60	W34*H52 (48) W35*H60	W35*H60 W50*H60 W54*H60 (56)	W45 (50)*H75 W65 (60)*H70	W45 (50)*H75 W65 (60)*H70	W60 (55)*H90 W70*H75
2NW Motor Starter	Adapter plate for 2NW installation holes								Not required	Not required	SZ-N2SW/AP
	US part number (Contact + Overload)								2NW0T0 (2NC0T0 + 2NK1Q)	2NW1Q0 (2NC1Q0 + 2NK1Q)	2NW2F0 (2NC2F0 + 2NK2H)
	Japanese part number (Contact + Overload)								SW-1N (SC-1N + TK-2N)	SW-2N (SC-2N + TK-2N)	SW-2SN (SC-2SN + TK-3N)
	Dimensions (mm)								W74*H141*D103	W74*H141*D103	W88*H215*D123
1RW, 1SW Motor Starter	Installation hole pitch (mm)								W65 (60)*H70	W65 (60)*H70	W70*H200
	US part number (Contact + Overload)		1RW0A0 (1RC0A0 + 1TR0A)	1RW0B0 (1RC0B0 + 1TR0A or 1TK0F)				1RW0F0 (1RC0F0 + 1TK0F)	-	1RW1F0 (1RC1F0 + 1TK1F)	-
	Japanese part number (Contact + Overload)	SRCa3931-02 (SRC3631-02 + TR-0)	SRCb3931-0 (SRCa3631-0 + TR-0)	SRCa3931-05 (SRCa3631-05 + TR-0 or TR-1S)				SRC3931-5-1 (SRC3631-5-1 + RCa3737-1C or TR-1S)	SRCa3931-5-2 (SRC3631-5-2 + TR-2)	SRCa3931-2 (SRCa3631-2 + TR-2)	SW-2S (SC-2S + TR-3)
	Dimensions (mm)	W50*H93.5*D70	W51.5*H104.5*D79.5	W53*H104.5*D79.5 W68*H126*D94.5				W68*H99*D79 W68*H150*D94	W78*H150*D114	W92*H172*D110	W88*H215*D127.5
Old SRC Motor Starter	Installation hole pitch (mm)	W30*H48	W34*H52 (48)	W34*H52 (48) W50*H115				W54*H59 (56) W55*H140	W60*H140	W71 (68)*H65	W70*H200
	US part number (Contact + Overload)								-	-	
	Japanese part number (Contact + Overload)	SRC3931-02 (SRC3631-02 + TH-0)	SRCa3931-0 (SRCa3631-0 + TH0)	SRC3931-05 (SRC3631-05 + TH-0)				SRC3931-5-1 (SRC3631-5-1 + RCa3737-1H)	SRC3931-5-2 (SRC3631-5-2 + ACH-2HM)	SRC3931-2 (SRC3631-2 + RC3737-4)	SRC3931-2T (SRC3631-2T + RC3737-4)
	Dimensions (mm)	W48.5*H84*D65	W50.5*H97.5*D75.5	W53*H97.5*D75				W68*H99*D79	W76*H150*D105	W92*H172*D110	W99*H189*D110
Old SRC Motor Starter	Installation hole pitch (mm)	W30*H48	W34*H52 (48)	W34*H52 (48) W50*H115				W54*H59 (56) W67*H140	W60*H140	W67*H160	W67*H160

Latest Motor Starter	US part number (Contractor + Overload)	3NW2H0 (3NC2H0 + 3NK2H)	3NW2T0 (3NC2T0 + 3NK3F)	3NW3F0 (3NC3F0 + 3NK3F)	3NW3H0 (3NC3H0 + 3NK3H)	3NW4F0 (3NC4F0 + 3NK4F)	3NW4Q0 (3NC4Q0 + 3NK4Q)	3NW4H0 (3NC4H0 + 3NK4H)	3NW5F0 (3NC5F0 + 3NK5H)	3NW5H0 (3NC5H0 + 3NK5H)
	Japanese part number (Contractor + Overload)	SW-N3 (SC-N3 + TK-N3)	SW-N4 (SC-N4 + TK-N5)	SW-N5 (SC-N5 + TK-N5)	SW-N6 (SC-N6 + TK-N6)	SW-N7 (SC-N7 + TK-N7)	SW-N8 (SC-N8 + TK-N8)	SW-N10 (SC-N10 + TK-N10)	SW-N11 (SC-N11 + TK-N12)	SW-N12 (SC-N12 + TK-N12)
	Dimensions (mm)	W88*H177*D111	W88*H189*D117	W88*H189*D132	W100*H225*D138	W115*H237*D140	W138*H305*D174	W138*H287*D174	W148*H360*D195	W148*H360*D195
	Installation hole pitch (mm)	W60 (S5)*H90 W70*H75	W70*H75	W70*H75	W90 (80)*H110	W90 (80)*H110	W45*H270	W45*H270	W60*(H220+H330)	W60*(H220+H330)
2NW Motor Starter	Adapter plate for 2NW installation holes	SZ-N2SW/AP	SZ-N4W/AP	SZ-N5W/AP	SZ-N5W/AP	SZ-N7W/AP	SZ-N8W/AP	SZ-N8W/AP	SZ-N11W/AP	SZ-N12W/AP
	US part number (Contractor + Overload)	2NW2H0 (2NC2H0 + 2NK2H)	2NW2T0 (2NC2T0 + 2NK2T)	2NW3F0 (2NC3F0 + 2NK4F)	2NW3H0 (2NC3H0 + 2NK4H)	2NW4F0 (2NC4F0 + 2NK4F)	2NW4Q0 (2NC4Q0 + 2NK4Q)	2NW4H0 (2NC4H0 + 2NK4H)	2NW5F0 (2NC5F0 + 2NK5F)	2NW5H0 (2NC5H0 + 2NK5H)
	Japanese part number (Contractor + Overload)	SW-3N (SC-3N + TK-3N)	SW-4N (SC-4N + TK-4N)	SW-5N (SC-5N + TK-6N)	SW-6N (SC-6N + TK-6N)	SW-7N (SC-7N + TK-6N)	SW-8N (SC-8N + TK-8N)	SW-10N (SC-10N + TK-10N)	SW-11N (SC-11N + TK-11N)	SW-12N (SC-12N + TK-12N)
	Dimensions (mm)	W88*H215*D123	W88*H240*D142.5	W119*H265*D156	W119*H265*D156	W120*H218*D174.5	W138*H317*D194	W148*H320*D194	W173*H370*D208.5	W173*H370*D230.5
1RW, 1SW (SRC, SW) Motor Starter	Installation hole pitch (mm)	W70*H200	W70*H225	W80*H250	W80*H250	W100*H275	W45*H300	W45*(H190+H300)	W50*(H210+H350)	W60*(H220+H350)
	US part number (Contractor + Overload)	1SW2H0 (1SC2H0 + 1TK2H)	-	1SW3F0 (1SC3F0 + 1TK4F)	1SW4F0 (1SC4F0 + 1TK4F)	-	-	1SW4H0 (1SC4H0 + 1TK4H)	-	-
	Japanese part number (Contractor + Overload)	SW-3 (SC-3 + TR-3)	SW-4 (SC-4 + TR-4)	SW-4S (SC-4S + TR-6)	SW-6 (SC-6 + TR-6)	-	SW-8 (SC-8 + TR-8)	SW-10 (SC-10 + TR-10)	-	SW-12 (SC-12 + TR-12)
	Dimensions (mm)	W88*H215*D127.5	W100*H265*D141	W119*H266*D141	W120*H265*D141	-	W138*H317*D180	W148*H320*D194.5	-	W173*H370*D218.5
Old SRC Motor Starter	Installation hole pitch (mm)	W70*H200	W80*H250	W80*H250	W100*H250	-	W45*H300	W50*(H210+H300)	-	W60*(H220+H350)
	US part number (Contractor + Overload)	-	-	-	-	-	-	-	-	-
	Japanese part number (Contractor + Overload)	SRC3931-3 (SRC3931-3 + RC3737-4)	SRC3931-4 (SRC3931-4 + RC3737-4)	SRC3931-4T (SRC3931-4T + RC3737-10T)	SRC3931-6 (SRC3931-6 + RC3737-10)	-	SRC3931-8 (SRC3931-8 + RC3737-10)	SRC3931-10 (SRC3931-10 + RC3737-20N)	SRC3931-12 (SRC3931-12 + RC3737-30N)	SRC3931-12 (SRC3931-12 + RC3737-30N)
	Dimensions (mm)	W104*H192*D145	W160*H214*D109	W168.5*H292*D109	W204.5*H325*D130	W70, W52.5* (H175+H305)	W215.5*H345*D153	W221*H393*D168	W300*H411*D200	W300*H411*D200
Old SRC Motor Starter	Installation hole pitch (mm)	W90*H177	W57*H138	W57, W22.5* (H138+H305)	W70, W52.5* (H175+H305)	W70, W51.5* (H165+H292)	W70, W51.5* (H165+H292)	W80, W59* (H190+H355)	W115, W60, W70* (H222+H361)	W115, W60, W70* (H222+H361)

Cross chart from old contactor to latest contactor

3. Industrial Relay

Latest SH Industrial Relay	US part number	4SH4	4SH5	4SH4 + SZ-A11 SH-4 + SZ-A11	4SH4 + SZ-A20 or SZ-A02 or SZ-A11 SH-4 + SZ-A20 or SZ-A02 or SZ-A11	4SH8	4SH5 + SZ-A40 or SZ-A22 SH-4 (8pole) + SZ-A40 or SZ-A22
	Japanese part number	SH-4 (4pole)	SH-5	6	6	8	9
	Number of contacts	4	5				
	Contact arrangement	4NO, 3NO1NC, 2NO2NC	5NO, 4NO1NC, 3NO2NC, 2NO3NC, 1NO4NC, 5NC	3NO3NC	6NO, 4NO2NC, 5NO1NC, 3NO3NC	8NO, 7NO1NC, 6NO2NC, 5NO3NC, 4NO4NC	9NO, 8NO1NC, 7NO2NC, 6NO3NC, 5NO4NC, 4NO5NC
Old RH Industrial Relay	Dimensions (mm)	W43*H80*D80	W53*H80*D80	W43*H80*D108	W43*H80*D108	W43*H80*D108	W53*H80*D108
	Installation hole pitch (mm)	W30*H48	- W34*H52 (48)	W30*H48	W30*H48	W30*H48	W34*H52 (48)
		W34*H52 (48)	W34*H52 (48)	W34*H52 (48)	W34*H52 (48)	W34*H52 (48)	W35*H60
		W35*H60	W35*H60	W35*H60	W35*H60	W35*H60	
Old RH Industrial Relay	US part number	1RH4	-	-	-	1RH8	-
	Japanese part number	SRCa50-3/X	SRC50-05/X	SRC50-2F/X	SRC50-2U/X	SRC50-3FS/X	SRC50-4F/X
	Number of contacts	4	5	6	6	5	10
	Contact arrangement	4NO, 3NO1NC, 2NO2NC	5NO, 4NO1NC, 3NO2NC	3NO3NC	6NO, 4NO2NC, 5NO1NC, 3NO3NC	4NO4NC	8NO, 6NO2NC, 5NO3NC, 4NO4NC
	Dimensions (mm)	W43*H71*D81	W53*H71*D81	W37.5*H67.5*D90	W37.5*H67.5*D94.5	W44*H64*D92.5	W68*H71*D111.5
	Installation hole pitch (mm)	W34*H52 (48)	W34*H52 (48)	W27*H54 (52)	W27*H54 (52)	W34*H52 (48)	W54*H59 (56)

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