

"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) | |
|--------------|------------------------|-----|---------------------|----------------------|-----------------------|-------------------------|
| | Inrush Sealed | | | | 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 |

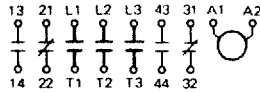
This data is based on 100-120V SUPERMAGNET coil, tested at 120VAC, 60Hz. For additional coil data, please see page 49-50.

| | | | | | | |
|--------------|-----|-----|-------|-------|-------|-------|
| 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 |

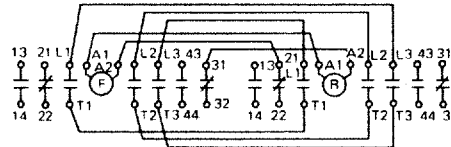
This data is based on 100-120V SUPERMAGNET coil, tested at 110VDC. For additional coil data, please see page 49-50.

WIRING DIAGRAMS / AUXILIARY CONTACT INFORMATION

NON-REVERSING CONTACTORS



REVERSING CONTACTORS



Notes:

- All Odyssey series contactors and starters come equipped with 2NO + 2NC auxiliary contacts standard.
- 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.

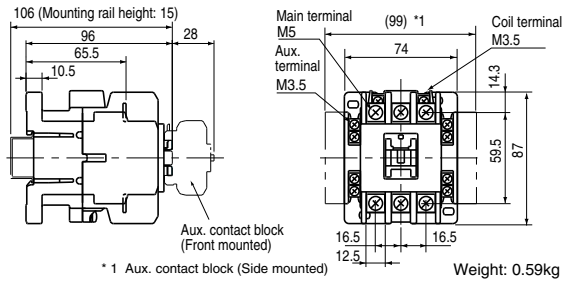
AUXILIARY CONTACT RATINGS

| 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 | |

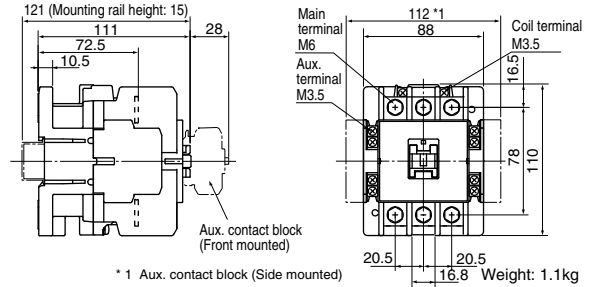
"ODYSSEY SERIES" Dimensions

CONTACTORS/OPEN TYPE Approximate Dimensions, mm

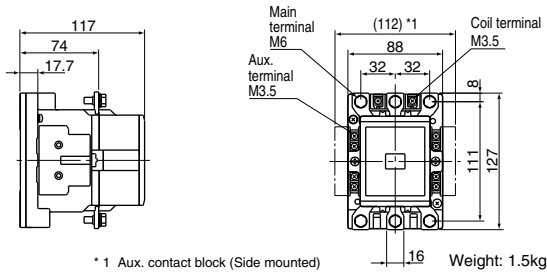
3NC0T0#22
3NC1Q0#22



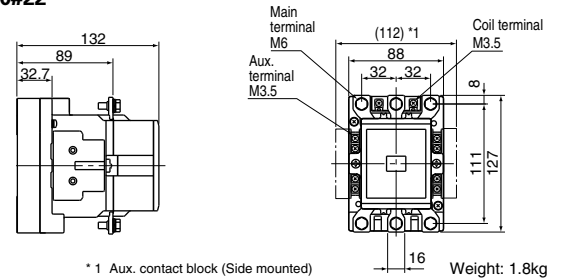
3NC2F0#22
3NC2H0#22



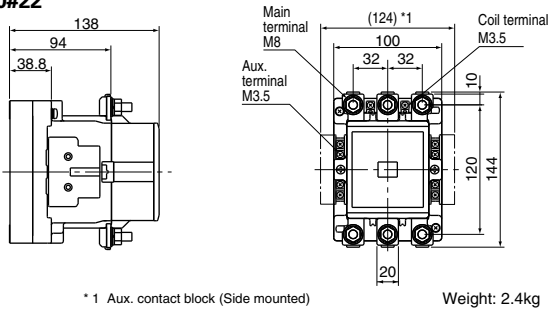
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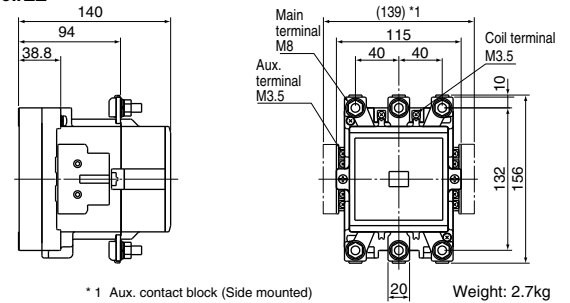
3NC3F0#22



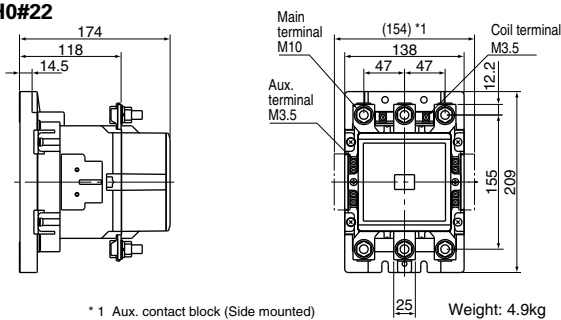
3NC3H0#22



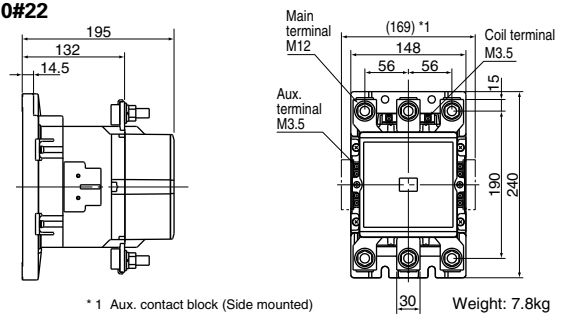
3NC4F0#22



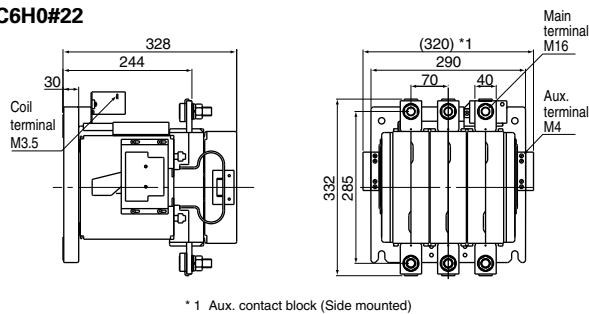
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3NC4H0#22



3NC5F0#22
3NC5H0#22



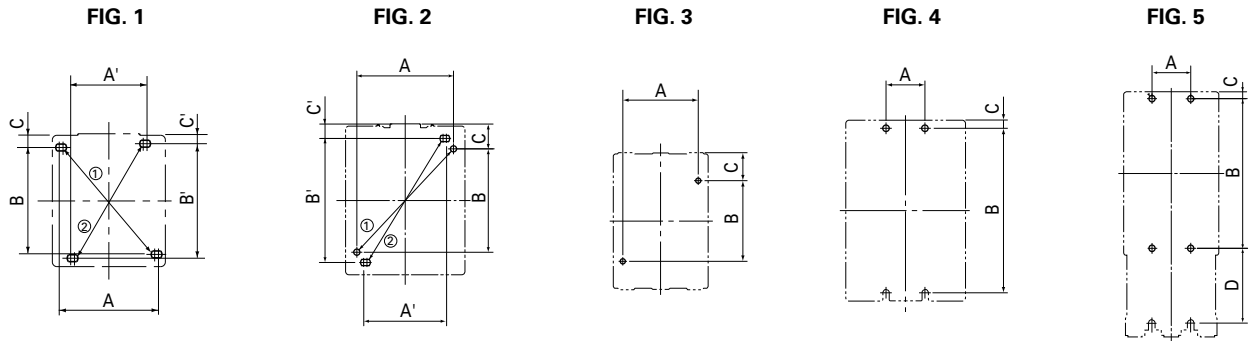
3NC6F0#22
3NC6H0#22



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

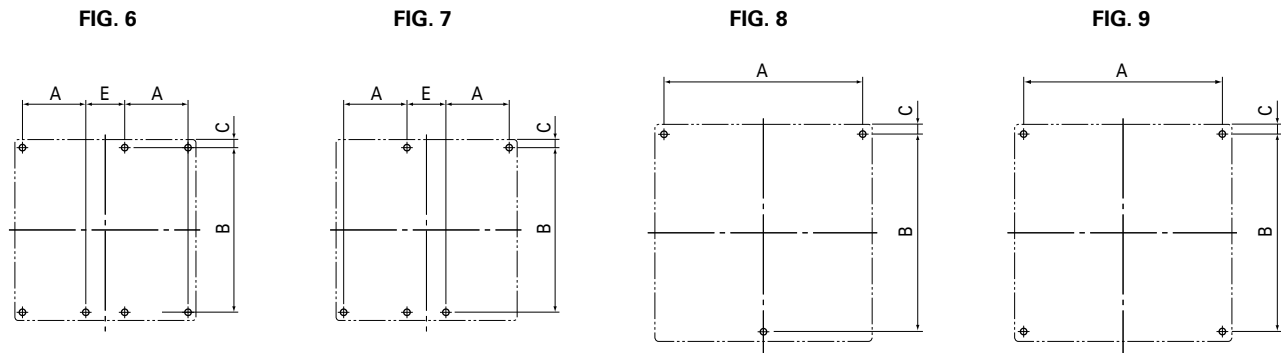
"ODYSSEY SERIES" Mounting Pitch Dimensions

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



| Frame Size | Contactors | | | | | | | | Starters | | | | | | | | |
|------------|------------|-------|-----|-----|-------|----|------|--------------------|----------|-------|-----|-----|-------|----|------|---|--------------------|
| | Fig.No. | A | B | C | A' | B' | C' | Correct Screw Size | Fig.No. | A | B | C | A' | B' | C' | D | Correct Screw Size |
| 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



| 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 |

■ AUXILIARY CONTACT RATINGS

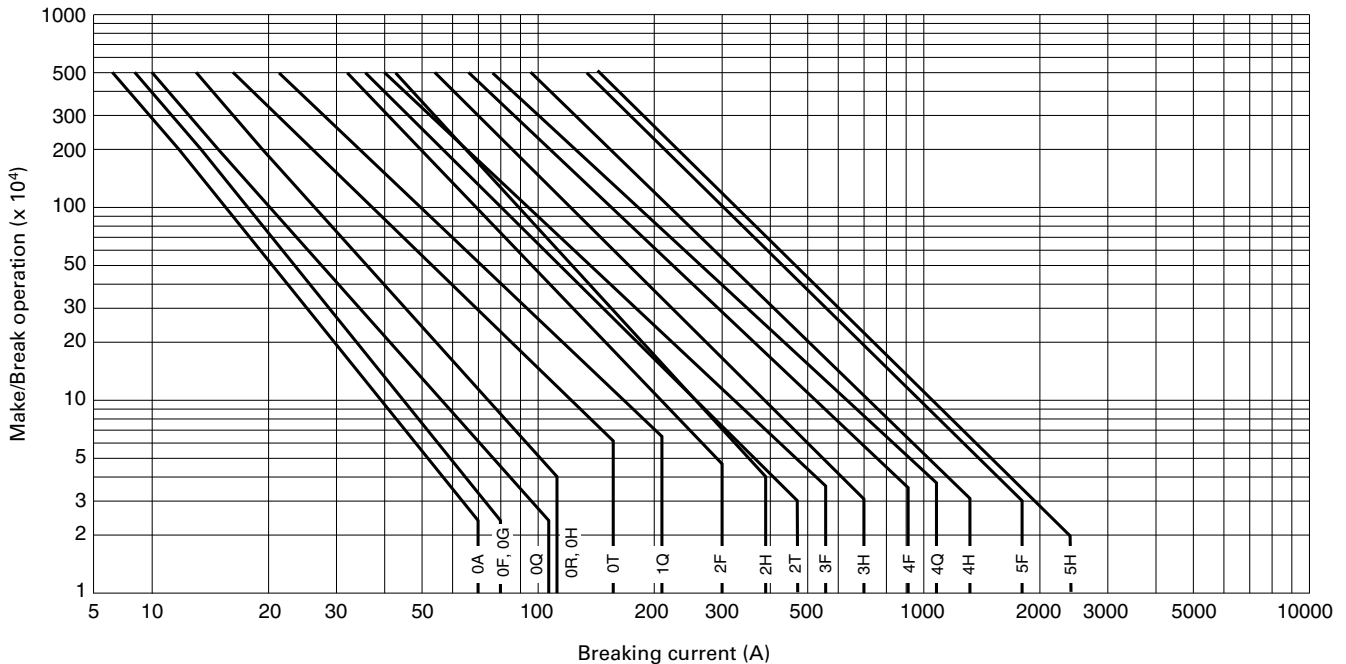
All Frame Sizes

| 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 | |

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.



Terminal Tightening Torque Chart

| Type No. | | Terminal Size | | Cable Size Maximum | | Applicable Max. Width for Ring Terminal | | Tightening Torque | |
|--|------------------------|---------------|------------------------|----------------------------------|----------------------------------|---|------------------------|------------------------------|-----------------------------|
| Contactor or Starter | Thermal Overload Relay | Contactor | Thermal Overload Relay | Contactor | Thermal Overload Relay | Contactor | Thermal Overload Relay | Contactor | 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 | - |