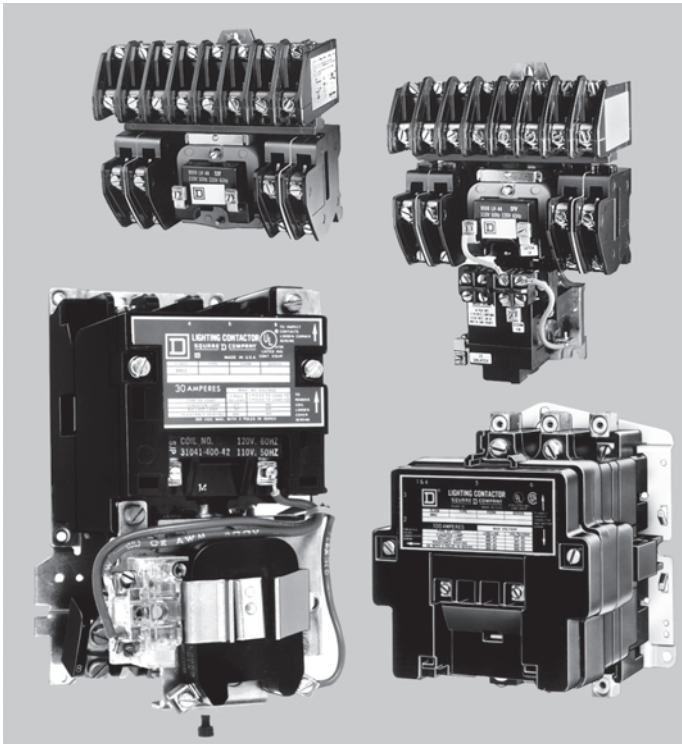


Lighting Contactors

Catalog
8903CT9701R11/15

2016

Class 8903



CONTENTS

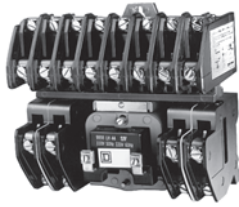
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Lighting Contactors

Multipole Lighting Contactors, Type L and LX—Features and Selection

Multipole Lighting Contactors, Type L and LX

Features



Type L

- 30 A fluorescent lighting rating, 20 A tungsten lighting rating
- Electrically and mechanically held
- 2–12 pole versions
- Field-convertible contacts with N.O. and N.C. indicators (8 N.C. contacts maximum [5])
- Silver-Cadmium-Oxide double break contacts



Type LX

For How-to-Order information, see Table 4 on page 3.

NOTE: When ordering contactors with 10 or more poles, the catalog number configuration is the number of normally open contacts, followed by a 0, then the number of normally closed contacts (for example: for 4 N.O. and 6 N.C. contacts on a 10-pole contactor, order 8903LG406V02).



Table 1: Multipole Lighting Contactors (50-60 Hz) (replace ●●● with the voltage code)

| Contact Ampere Ratings | No. of Poles | NEMA 1 General Purpose Enclosure | NEMA 1 Flush Mounting General Purpose Enclosure with Plaster Adjustment | NEMA 3R Rainproof Enclosure [1] | NEMA 4 & 4X Watertight, Dusttight, and Corrosion-Resistant Glass-Polyester Enclosure | NEMA 4 & 4X Watertight, Dusttight Brushed Stainless Steel Enclosure | NEMA 12/3R [2] Dusttight and Driptight Industrial Use Enclosure | Open Style [3] |
|-----------------------------------|--------------|----------------------------------|---|---------------------------------|--|---|---|----------------|
| | | Type [4] | Type [4] | Type [4] | Type [4] | Type [4] | Type [4] | Type [4] |
| Electrically Held [5] | | | | | | | | |
| 30 | 2 | LG20●●● | LF20●●● | LH20●●● | LWW20●●● | LW20●●● | LA20●●● | LO20●●● |
| | 3 | LG30●●● | LF30●●● | LH30●●● | LWW30●●● | LW30●●● | LA30●●● | LO30●●● |
| | 4 | LG40●●● | LF40●●● | LH40●●● | LWW40●●● | LW40●●● | LA40●●● | LO40●●● |
| | 6 | LG60●●● | LF60●●● | LH60●●● | LWW60●●● | LW60●●● | LA60●●● | LO60●●● |
| 8 | | LG80●●● | LF80●●● | LH80●●● | LWW80●●● | LW80●●● | LA80●●● | LO80●●● |
| | 10 | LG1000●●● | LF1000●●● | LH1000●●● | LWW1000●●● | LW1000●●● | LA1000●●● | LO1000●●● |
| 12 | LG1200●●● | LF1200●●● | LH1200●●● | LWW1200●●● | LW1200●●● | LA1200●●● | LO1200●●● | |
| Mechanically Held [5], [6] | | | | | | | | |
| 30 | 2 | LXG20●●● | LXF20●●● | — | LXWW20●●● | LXW20●●● | LXA20●●● | LXO20●●● |
| | 3 | LXG30●●● | LXF30●●● | — | LXWW30●●● | LXW30●●● | LXA30●●● | LXO30●●● |
| | 4 | LXG40●●● | LXF40●●● | — | LXWW40●●● | LXW40●●● | LXA40●●● | LXO40●●● |
| | 6 | LXG60●●● | LXF60●●● | — | LXWW60●●● | LXW60●●● | LXA60●●● | LXO60●●● |
| 8 | | LXG80●●● | LXF80●●● | — | LXWW80●●● | LXW80●●● | LXA80●●● | LXO80●●● |
| | 10 | LXG1000●●● | LXF1000●●● | — | LXWW1000●●● | LXW1000●●● | LXA1000●●● | LXO1000●●● |
| 12 | LXG1200●●● | LXF1200●●● | — | LXWW1200●●● | LXW1200●●● | LXA1200●●● | LXO1200●●● | |

NOTE: If a holding circuit contact is required for proper operation, order an additional pole.

- [1] Cannot support control transformer forms.
- [2] NEMA 12 enclosures can be field modified for outdoor non-corrosive and non-service entrance rated applications. See page 21 for more information.
- [3] Separate enclosures are available for these devices. It may be possible to improve delivery by ordering an open style contactor and separate Class 9991 enclosure.
- [4] Replace the three bullets (●●●) in the catalog number with the coil voltage code. Refer to the standard voltage codes listed in Table 3 on page 3. All lighting contactors come with separate control as standard.
- [5] Factory conversion of N.O. contacts to N.C.: order by catalog number (for example, for 6 N.O. and 2 N.C. poles on an 8 pole contactor, order as 8903LG62V02). Versions are available from the factory with up to 12 N.C. poles for Type L (electrically held) or 2, 4, or 6 N.C. poles for Type LX (mechanically held). For field conversion, there is a maximum of 8 N.C. poles for Type L (electrically held) and a maximum of 6 N.C. poles for Type LX (mechanically held) contactors.
- [6] When ordering Form C on mechanically held devices, you must also include Form R6.

Lighting Contactors

Multipole Lighting Contactors, Type L and LX—Power Pole Kits

Power Pole Kits

The kits in Table 2 are used to add 30 A power poles to existing Type L contactors when additional circuits are required. Type L lighting contactors come with mounting brackets, so that adder poles may be mounted from the front by a single captive screw. Adder poles come standard with N.O. contacts which are convertible to N.C.

For How-to-Order information, see Table 4.

NOTE: 12 N.C. poles are only available with a 120 V coil (voltage code V02).

Table 2: Power Poles for Type L or LX

| Power Pole Adder Kit [1] | Class 8903 Type | Can Only Be Added to Contactor Type [2] |
|--------------------------|-----------------|---|
| Single Pole | L1L | LO60, LXO60, LO80, LXO80, LO1000, LXO1000 |
| | L1R | |
| Double Pole | L3L | |
| | L3R | |

[1] 8903LO (electrically held) devices can accommodate 10 or 12 N.C. contacts, use only 120 V, 60 Hz coils.

[2] LO60 and LXO60: add single-pole kits only, 1 on each side, for converting to 8-pole. To maintain proper operation, the contactor cannot be converted to more than 8 poles. LO80 and LXO80: use single-pole kits, 1 on each side, for converting to 10-pole and use two-pole kits, 1 on each side, for converting to 12 pole. LO1000 and LXO1000: remove the existing single-pole kit and install two-pole kits, 1 on each side for converting to 12-pole.

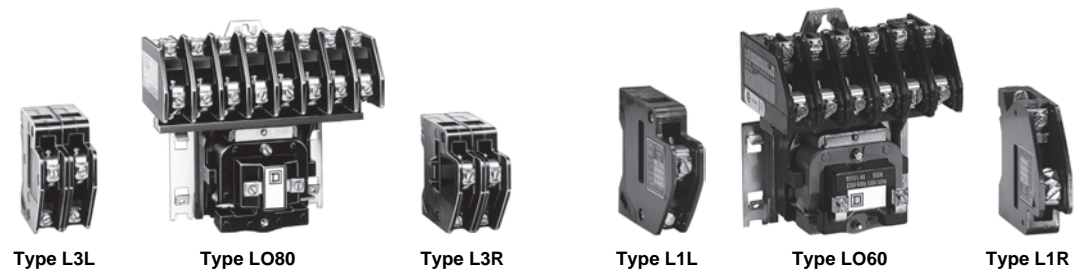


Table 3: Coil Voltage Codes

| Voltage | | Code |
|---------|---------|------|
| 60 Hz | 50 Hz | |
| 24 | — | V01 |
| 120 | 110 | V02 |
| 208 | — | V08 |
| 240 | 220 | V03 |
| 277 | — | V04 |
| 480 | 440 | V06 |
| Specify | Specify | V99 |

Table 4: How to Order

| To Order Specify: | Catalog Number Example | | | |
|--|------------------------|------|--------------|---------|
| <ul style="list-style-type: none"> • Class Number • Type Number • Voltage Code • Form(s) | Class | Type | Voltage Code | Form(s) |
| | | 8903 | LXG60 | V04 |

Factory Modifications (Forms): Table 15 on page 9.

Replacement Coils: See *Digest* Section 16.

Replacement Contacts: See *Digest* Section 16.

Lighting Contactors

Multipole Lighting Contactors, Type S—Features and Selection



File E78427
CCN NRNT



File LR60905
(Open Devices Only)
Class 3231 01

Multipole Lighting Contactors, Type S

Features

- Electrically and mechanically held
- 30–800 A lighting ratings
- 2–5 pole versions (5 poles through 200 A)
- UL Listed short-circuit rating up to 100,000 A
- Factory wired controls and clearly marked termination points
- Quick ship on most items in 5–7 days

Table 5: Multipole Lighting Contactors, Type S, 50–60 Hz (replace ●●● with the voltage code)

| Contact Ampere Ratings | No. of Poles | NEMA 1 General Purpose Enclosure | NEMA 1 Flush-Mounting General Purpose Enclosure with Plaster Adjustment | NEMA 3R Rainproof Enclosure [1] | NEMA 4 & 4X Watertight, Dusttight, and Corrosion-Resistant Glass-Polyester Enclosure | NEMA 4 & 4X Watertight and Dusttight Enclosure [2] | NEMA 12/3R [3] Dusttight and Driptight Industrial Use Enclosure | Open Style |
|------------------------------|--------------|----------------------------------|---|---------------------------------|--|--|---|--------------|
| | | Type [4] | Type [4] | Type [4] | Type [4] | Type [4] | Type [4] | Type [4] |
| Electrically Held [5] | | | | | | | | |
| 30 | 2 | SMG1●●● | SMF1●●● | SMH1●●● | SMW21●●● | SMW1●●● | SMA1●●● | SMO1●●● [6] |
| | 3 | SMG2●●● | SMF2●●● | SMH2●●● | SMW22●●● | SMW2●●● | SMA2●●● | SMO2●●● [6] |
| | 4 | SMG3●●● | SMF3●●● | SMH3●●● | SMW23●●● | SMW3●●● | SMA3●●● | SMO3●●● [6] |
| | 5 | SMG4●●● | SMF4●●● | SMH4●●● | SMW24●●● | SMW4●●● | SMA4●●● | SMO4●●● [6] |
| 60 | 2 | SPG1●●● | SPF1●●● | SPH1●●● | SPW21●●● | SPW1●●● | SPA1●●● | SPO1●●● [6] |
| | 3 | SPG2●●● | SPF2●●● | SPH2●●● | SPW22●●● | SPW2●●● | SPA2●●● | SPO2●●● [6] |
| | 4 | SPG3●●● | SPF3●●● | SPH3●●● | SPW23●●● | SPW3●●● | SPA3●●● | SPO3●●● [6] |
| | 5 | SPG4●●● | SPF4●●● | SPH4●●● | SPW24●●● | SPW4●●● | SPA4●●● | SPO4●●● [6] |
| 100 | 2 | SQG1●●● | SQF1●●● | SQH1●●● | SQW21●●● | SQW1●●● | SQA1●●● | SQO1●●● [6] |
| | 3 | SQG2●●● | SQF2●●● | SQH2●●● | SQW22●●● | SQW2●●● | SQA2●●● | SQO2●●● [6] |
| | 4 | SQG3●●● | — | SQH3●●● | — | SQW3●●● | SQA3●●● | SQO3●●● [6] |
| | 5 | SQG4●●● | — | SQH4●●● | — | SQW4●●● | SQA4●●● | SQO4●●● [6] |
| 200 | 2 | SVG1●●● | — | SVH1●●● | — | SVW1●●● | SVA1●●● | SVO1●●● |
| | 3 | SVG2●●● | — | SVH2●●● | — | SVW2●●● | SVA2●●● | SVO2●●● |
| | 4 | SVG3●●● | — | — | — | SVW3●●● | SVA3●●● | SVO3●●● |
| | 5 | SVG4●●● | — | — | — | SVW4●●● | SVA4●●● | SVO4●●● |
| 300 | 2 | SXG1●●● | — | — | — | SXW1●●● | SXA1●●● | SXO1●●● |
| | 3 | SXG2●●● | — | — | — | SXW2●●● | SXA2●●● | SXO2●●● |
| 400 [7] | 2 | SYG1●●● | — | — | — | SYW1●●● | SYA1●●● | SYO1●●● |
| | 3 | SYG2●●● | — | — | — | SYW2●●● | SYA2●●● | SYO2●●● |
| 600 [7] | 2 | SZG1●●● | — | — | — | SZW1●●● | SZA1●●● | SZO1●●● |
| | 3 | SZG2●●● | — | — | — | SZW2●●● | SZA2●●● | SZO2●●● |
| 800 [7] | 2 | SJG1●●● | — | — | — | SJW1●●● | SJA1●●● | SJO1●●● |
| | 3 | SJG2●●● | — | — | — | SJW2●●● | SJA2●●● | SJO2●●● |
| Mechanically Held [5] | | | | | | | | |
| 30 | 2 | SMG10●●● | SMF10●●● | — | SMW31●●● | SMW10●●● | SMA10●●● | SMO10●●● [6] |
| | 3 | SMG11●●● | SMF11●●● | — | SMW32●●● | SMW11●●● | SMA11●●● | SMO11●●● [6] |
| | 4 | SMG12●●● | SMF12●●● | — | SMW33●●● | SMW12●●● | SMA12●●● | SMO12●●● [6] |
| | 5 | SMG13●●● | SMF13●●● | — | SMW34●●● | SMW13●●● | SMA13●●● | SMO13●●● [6] |
| 60 | 2 | SPG10●●● | SPF10●●● | — | SPW31●●● | SPW10●●● | SPA10●●● | SPO10●●● [6] |
| | 3 | SPG11●●● | SPF11●●● | — | SPW32●●● | SPW11●●● | SPA11●●● | SPO11●●● [6] |
| | 4 | SPG12●●● | SPF12●●● | — | SPW33●●● | SPW12●●● | SPA12●●● | SPO12●●● [6] |
| | 5 | SPG13●●● | SPF13●●● | — | SPW34●●● | SPW13●●● | SPA13●●● | SPO13●●● [6] |
| 100 | 2 | SQG10●●● | SQF10●●● | — | SQW31●●● | SQW10●●● | SQA10●●● | SQO10●●● [6] |
| | 3 | SQG11●●● | SQF11●●● | — | SQW32●●● | SQW11●●● | SQA11●●● | SQO11●●● [6] |
| | 4 | SQG12●●● | — | — | — | SQW12●●● | SQA12●●● | SQO12●●● [6] |
| | 5 | SQG13●●● | — | — | — | SQW13●●● | SQA13●●● | SQO13●●● [6] |
| 200 | 2 | SVG10●●● | — | — | — | SVW10●●● | SVA10●●● | SVO10●●● |
| | 3 | SVG11●●● | — | — | — | SVW11●●● | SVA11●●● | SVO11●●● |
| | 4 | SVG12●●● | — | — | — | SVW12●●● | SVA12●●● | SVO12●●● |
| 300 | 2 | SXG13●●● | — | — | — | SXW13●●● | SXA13●●● | SXO13●●● |
| | 3 | SXG14●●● | — | — | — | SXW14●●● | SXA14●●● | SXO14●●● |
| 400 | 2 | SYG16●●● | — | — | — | SYW16●●● | SYA16●●● | SYO16●●● |
| | 3 | SYG17●●● | — | — | — | SYW17●●● | SYA17●●● | SYO17●●● |
| 600 | 2 | SZG18●●● | — | — | — | SZW18●●● | SZA18●●● | SZO18●●● |
| | 3 | SZG19●●● | — | — | — | SZW19●●● | SZA19●●● | SZO19●●● |

NOTE: If a holding circuit contact is required for proper operation, order an additional contact.

[1] Cannot support control transformer forms.

[2] For contactor sizes 30–300 A, NEMA 4 and 4X enclosures are brush finished stainless steel. Sized 400–800 A are painted sheet steel.

[3] NEMA 12 enclosures can be field modified for outdoor non-corrosive and non-service entrance rated applications. See page 21 for more information.

[4] Replace the three bullets (●●●) in the catalog number with the coil voltage code. Refer to the standard voltage codes in Table 6.

[5] Lighting contactors come with separate control as standard—except electrically held 400, 600, and 800 A devices, which come with common control as standard.

[6] Delivery time might be improved by ordering an open style contactor and a separate Class 9991 enclosure. See “Separate Enclosures” in *Digest* Section 16.

[7] **Form F4T** comes standard; include the line voltage when ordering. Control voltage is 120 V @ 60 Hz.

Lighting Contactors Multipole Lighting Contactors, Type S—Power Pole Kits

Table 6: Coil Voltage Codes

| Voltage | | Code |
|-------------------|---------|--------------------|
| 60 Hz | 50 Hz | |
| 24 ^[1] | — | V01 |
| 120 | 110 | V02 |
| 208 | — | V08 |
| 240 | 220 | V03 |
| 277 | — | V04 ^[2] |
| 480 | 440 | V06 |
| Specify | Specify | V99 |

^[1] 24 V coils are not available for 200–800 A devices. Contact your local Square D field sales office for additional information.

^[2] For voltage code V04, when used on the electrically held 400 A contactor, you must select Form S (separate control).

Power Pole Kits for Type S Only

A single-pole or double-pole kit can be added to any 2 or 3 pole, 30 A or 60 A, Type S lighting contactor to make a 4 or 5 pole device. Factory-assembled 4 and 5 pole contactors use the basic 3 pole device with a single-pole or double-pole kit installed. Only one power pole can be added per contactor. Sufficient room is provided in all enclosure styles for the addition of a power pole kit.

Table 7: Poles for Type S Only

| Rating | Description | Class 9999 Type |
|--------|-----------------------|---------------------|
| 30 A | One N.O. | SB6 |
| | One N.C. | SB7 |
| | One N.O. and One N.C. | SB8 |
| | Two N.O. | SB9 |
| | Two N.C. | SB10 |
| 60 A | One N.O. | SB21 |
| | One N.C. | SB22 ^[1] |
| | One N.O. and One N.C. | SB23 ^[1] |
| | Two N.O. | SB24 ^[1] |
| | Two N.C. | SB25 ^[1] |

^[1] When a power pole is added to a 60 A contactor, a 4-pole coil is also required. Order from the Coil Table in Catalog 9999CT9701. 60 A power poles are suitable for use with copper or aluminum wire.

Lighting Contactors

Combination Lighting Contactors, Type S—Features and Selection

Combination Lighting Contactors, Type S

Features

- Disconnect switch and circuit breaker versions
- Rugged flange-mounted handle
- Easy installation
- Less space occupied
- Increased operator protection
- Ample space for modifications
- Class R fuse clips standard
- Electrically and mechanically held
- 30–600 A



Combination lighting contactors combine switching and overcurrent protection by installing the branch-circuit protective device and lighting contactor in one enclosure. Combination lighting contactors are well suited for industrial, highway, and area lighting applications, or where a lighting circuit may have to be disconnected for periodic maintenance. They may also be used for resistance heating loads.

Table 9: Features

| Contactor Ampere Rating | Fuse Clip Size (A) | Fuse Clip Spacing (V) | NEMA 1 General Purpose Enclosure | NEMA 4 & 4X [1] Watertight and Dusttight Stainless Steel Enclosure | NEMA 12/3R [2] Dusttight, Oiltight, Driptight Industrial Use Enclosure |
|------------------------------|--------------------|-----------------------|----------------------------------|--|--|
| | | | Type [3] | Type [3] | Type [3] |
| Electrically Held [4] | | | | | |
| 30 | None | — | SMG60●●● | SMW60●●● | SMA60●●● |
| | 30 | 600 | SMG61●●● | SMW61●●● | SMA61●●● |
| | 30 | 250 | SMG62●●● | SMW62●●● | SMA62●●● |
| 60 | None | — | SPG60●●● | SPW60●●● | SPA60●●● |
| | 60 | 600 | SPG61●●● | SPW61●●● | SPA61●●● |
| | 60 | 250 | SPG62●●● | SPW62●●● | SPA62●●● |
| 100 | None | — | SQG60●●● | SQW60●●● | SQA60●●● |
| | 100 | 600 | SQG61●●● | SQW61●●● | SQA61●●● |
| | 100 | 250 | SQG62●●● | SQW62●●● | SQA62●●● |
| 200 | None | — | SVG60●●● | SVW60●●● | SVA60●●● |
| | 200 | 600 | SVG61●●● | SVW61●●● | SVA61●●● |
| | 200 | 250 | SVG62●●● | SVW62●●● | SVA62●●● |
| 300 | None | — | SXG60●●● | SXW60●●● | SXA60●●● |
| | 400 | 600 | SXG61●●● | SXW61●●● | SXA61●●● |
| | 400 | 250 | SXG62●●● | SXW62●●● | SXA62●●● |
| Mechanically Held [4] | | | | | |
| 30 | None | — | SMG70●●● | SMW70●●● | SMA70●●● |
| | 30 | 600 | SMG71●●● | SMW71●●● | SMA71●●● |
| | 30 | 250 | SMG72●●● | SMW72●●● | SMA72●●● |
| 60 | None | — | SPG70●●● | SPW70●●● | SPA70●●● |
| | 60 | 600 | SPG71●●● | SPW71●●● | SPA71●●● |
| | 60 | 250 | SPG72●●● | SPW72●●● | SPA72●●● |
| 100 | None | — | SQG70●●● | SQW70●●● | SQA70●●● |
| | 100 | 600 | SQG71●●● | SQW71●●● | SQA71●●● |
| | 100 | 250 | SQG72●●● | SQW72●●● | SQA72●●● |
| 200 | None | — | SVG70●●● | SVW70●●● | SVA70●●● |
| | 200 | 600 | SVG71●●● | SVW71●●● | SVA71●●● |
| | 200 | 250 | SVG72●●● | SVW72●●● | SVA72●●● |
| 300 | None | — | SXG70●●● | SXW70●●● | SXA70●●● |
| | 400 | 600 | SXG71●●● | SXW71●●● | SXA71●●● |
| | 400 | 250 | SXG72●●● | SXW72●●● | SXA72●●● |

Table 8: Coil Voltage Codes

| Voltage | | Code |
|---------|---------|------|
| 60 Hz | 50 Hz | |
| 24 [1] | — | V01 |
| 120 | 110 | V02 |
| 208 | — | V08 |
| 240 | 220 | V03 |
| 277 | — | V04 |
| 480 | 440 | V06 |
| Specify | Specify | V99 |

[1] 24 V coils are not available for 200–800 A devices. Contact the local Square D field sales office for additional information.

[1] For NEMA 4 and 4X watertight, dusttight, and corrosion-resistant glass-polyester enclosures, add Form G18 (limited to 100 A max.). 400 and 600 A enclosures are painted sheet steel (NEMA Type 4 & 4X).

[2] NEMA 12 enclosures can be field modified for outdoor non-corrosive and non-service entrance rated applications. See “Separate Enclosures” in *Digest* Section 16 for more information.

[3] Replace the three bullets (●●●) in the catalog number with the coil voltage code. Refer to the standard voltage codes shown in Table 8.

[4] Lighting contactors come with separate control as standard.



Lighting Contactors

Combination Lighting Contactors, Type S—Features and Selection

Table 10: Circuit Breaker—3-Pole, 50–60 Hz (replace ●●● with the voltage code)

Table 11: Coil Voltage Codes

| Voltage | | Code |
|---------|---------|------|
| 60 Hz | 50 Hz | |
| 24 [1] | — | V01 |
| 120 | 110 | V02 |
| 208 | — | V08 |
| 240 | 220 | V03 |
| 277 | — | V04 |
| 480 | 440 | V06 |
| Specify | Specify | V99 |

[1] 24 V coils are not available for 200–800 A devices. Contact the local Square D field sales office for additional information.



File E16151
CCN NRNT

and



| Contactor Ampere Rating | Circuit Breaker | | NEMA 1 General Purpose Enclosure | NEMA 4 & 4X [1] Watertight and Dusttight Enclosure Stainless Steel (30-300 A) | NEMA 12/3R [2] Dusttight, Oiltight, Driptight, Industrial Use Enclosure |
|------------------------------|-----------------|-----------------|----------------------------------|---|---|
| | Ampere Rating | Maximum Voltage | Type [3] | Type [3] | Type [3] |
| Electrically Held [4] | | | | | |
| 30 | 30 | 600 | SMG81●●● | SMW81●●● | SMA81●●● |
| 60 | 60 | 600 | SPG81●●● | SPW81●●● | SPA81●●● |
| 100 | 100 | 600 | SQG81●●● | SQW81●●● | SQA81●●● |
| 200 | 200 | 600 | SVG81●●● | SVW81●●● | SVA81●●● |
| 300 | 300 | 600 | SXG81●●● | SXW81●●● | SXA81●●● |
| 400 | 400 | 600 | SYG81●●● | SYW81●●● | SYA81●●● |
| 600 | 600 | 600 | SZG81●●● | SZW81●●● | SZA81●●● |
| Mechanically Held [4] | | | | | |
| 30 | 30 | 600 | SMG91●●● | SMW91●●● | SMA91●●● |
| 60 | 60 | 600 | SPG91●●● | SPW91●●● | SPA91●●● |
| 100 | 100 | 600 | SQG91●●● | SQW91●●● | SQA91●●● |
| 200 | 200 | 600 | SVG91●●● | SVW91●●● | SVA91●●● |
| 300 | 300 | 600 | SXG91●●● | SXW91●●● | SXA91●●● |
| 400 | 400 | 600 | SYG91●●● | SYW91●●● | SYA91●●● |
| 600 | 600 | 600 | SZG91●●● | SZW91●●● | SZA91●●● |

[1] For NEMA 4 and 4X watertight, dusttight, and corrosion-resistant glass-polyester enclosures, add Form G18 (limited to 100 A max.). 400 and 600 A enclosures are painted sheet steel (NEMA 4 & 4X).

[2] NEMA 12 enclosures can be field modified for outdoor non-corrosive and non-service entrance rated applications. See “Separate Enclosures” in Digest Section 16 for more information.

[3] Replace the three bullets (●●●) in the catalog number with the coil voltage code. Refer to the standard voltage codes shown in Table 11.

[4] Lighting contactors come with separate control as standard.

For How-to-Order information, see Table 4 on page 3.

Lighting Contactors

Night-Master™ Combination Lighting Contactors—Features and Selection

Night-Master™ Combination Lighting Contactors

NIGHT-MASTER



Long Version



Short Version

UL Approved for
Serviced Entrance



File E16151
CCN NRNT

The Class 8903 Night-Master outdoor combination lighting contactor is UL Listed for Service Entrance. This allows the contactor to be pole mounted when used to control lighting in remote locations such as parks, monuments, group sports facilities, and streets and highways.

Factory modifications such as photocells, time switches, key operated selector switches, and the combination of photocells and time switches (photocell on, time switch off) allow the Night-Master to be located in applications where manual operation of lights is not practical.

Night-Master comes in long and short versions in sizes 30–200 A. Most common modifications can be provided from the factory, or added in the field to the pre-drilled and pre-tapped panels.

Night-Master outdoor combination lighting contactors offer a disconnecting means, overcurrent protection, and a lighting contactor in one NEMA 3R rainproof enclosure. These combination units satisfy the requirements of the National Electrical Code and UL 508 for service entrance equipment.

Features

- Solid neutral—standard
- Grounding lug—standard
- Padlocking provisions
- Short and long versions available
- Electrically held Type S lighting contactor
- No need for separately mounted safety switches
- Additional panel space—eliminating the need for external mounting of time clocks
- Separate control—standard on all lighting contactors

NOTE: If a holding circuit contact is required for proper operation, order an additional auxiliary contact.

Table 12: Disconnect Switch Type, 3-Pole (replace ●●● with the voltage code)

| Contactor Ampere Rating | Fuse Clip Size (A) | Fuse Clip Spacing (V) | Short Version, NEMA 3R | | Long Version, NEMA 3R | |
|-------------------------|--------------------|-----------------------|------------------------|-------------------------------------|-----------------------|-------------------------------------|
| | | | Class 8903 Type [1] | Stainless Steel Class 8903 Type [1] | Class 8903 Type [1] | Stainless Steel Class 8903 Type [1] |
| 30 | 30 | 600 | SMC61●●● | SMH61●●● | SMC63●●● | SMH63●●● |
| | 30 | 250 | SMC62●●● | SMH62●●● | SMC64●●● | SMH64●●● |
| 60 | 60 | 600 | SPC61●●● | SPH61●●● | SPC63●●● | SPH63●●● |
| | 60 | 250 | SPC62●●● | SPH62●●● | SPC64●●● | SPH64●●● |
| 100 | 100 | 600 | SQC61●●● | SQH61●●● | SQC63●●● | SQH63●●● |
| | 100 | 250 | SQC62●●● | SQH62●●● | SQC64●●● | SQH64●●● |
| 200 | 200 | 600 | SVC61●●● | SVH61●●● | SVC63●●● | SVH63●●● |
| | 200 | 250 | SVC62●●● | SVH62●●● | SVC64●●● | SVH64●●● |

[1] Replace the three bullets (●●●) in the catalog number with the coil voltage code. Refer to the standard voltage codes listed in Table 14.

Table 14: Coil Voltage Codes

| Voltage | | Code |
|---------|---------|------|
| 60 Hz | 50 Hz | |
| 24 [1] | — | V01 |
| 120 | 110 | V02 |
| 208 | — | V08 |
| 240 | 220 | V03 |
| 277 | — | V04 |
| 480 | 440 | V06 |
| Specify | Specify | V99 |

[1] 24 V coils are not available for 200 A devices. Contact your local sales office for additional information.

Table 13: Circuit Breaker Type, 3-Pole (replace ●●● with the voltage code)

| Contactor Ampere Rating | Circuit Breaker | | Short Version | | Long Version | |
|-------------------------|-----------------|---------------|------------------------|--|------------------------|--|
| | Ampere Rating | Maximum Volts | Class 8903 Type 3R [1] | Class 8903 Type 3R Stainless Steel [1] | Class 8903 Type 3R [1] | Class 8903 Type 3R Stainless Steel [1] |
| 30 | 30 | 600 | SMC81●●● | SMH81●●● | SMC83●●● | SMH83●●● |
| 60 | 60 | 600 | SPC81●●● | SPH81●●● | SPC83●●● | SPH83●●● |
| 100 | 100 | 600 | SQC81●●● | SQH81●●● | SQC83●●● | SQH83●●● |
| 200 | 200 | 600 | SVC81●●● | SVH81●●● | SVC83●●● | SVH83●●● |

[1] Replace the three bullets (●●●) in the catalog number with the coil voltage code. Refer to the standard voltage codes listed in Table 14.

For How-to-Order information, see Table 4 on page 3.

Table 15: Lighting Contactor Forms (Factory Modifications)

| Description | Form Letter | NEMA Enclosure Type | Used On | | | | | Rating (A) | | | | | | | | |
|---|------------------------|-----------------------------|----------|----------|-------|-------|-----------------------|------------|-----|----|-------|-------|-------|---------------|-------|-------|
| | | | Standard | | Combo | | Night-Master 30–200 A | Type L 30 | 30 | 60 | 100 | 200 | 300 | 400, 600, 800 | | |
| | | | Elec. | Mech. | Elec. | Mech. | | | | | | | | | EH | MH |
| On-Off push button (momentary contact) | A3 | Any | — | Y | — | Y | — | Y | Y | Y | Y | Y | Y | Y | Y | |
| On-Off push button (with holding circuit interlock) | A12 | Any | Y | — | Y | — | Y | — | Y | Y | Y | Y | Y | Y | Y | |
| Hand-Off-Auto selector switch. To substitute a key operated selector switch, use Form C33 and specify positions, legend marking, and key removal. This form must be used with another selector switch form (example: CC33). | C | 1 | Y | Y [1] | Y | Y [1] | — | Y | Y | Y | Y | Y | Y | Y | Y | |
| | C | 3R, 4, 12 | Y | Y [1] | Y | Y [1] | Y | Y | Y | Y | Y | Y | Y | Y | Y | |
| On-Off selector switch. To substitute a key operated selector switch, use Form C33 and specify positions, legend marking, and key removal. This form must be used with another selector switch form (example: C33C6). | C6 | 1 | Y | Y | Y | Y | — | Y | Y | Y | Y | Y | Y | Y | Y | |
| | C6 | 3R, 4, 12 | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | |
| Control circuit fuse (1 fuse) | F | Any | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | |
| Control circuit fuses (2 fuses) | F4 | Any | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | |
| Control circuit transformer, standard capacity, 50/60 Hz [2] | | | | | | | | | | | | | | | | |
| Primary fuses | Secondary fuses | Transformer capacity | | | | | | | | | | | | | | |
| 2 | 0 | Standard | F4T | 1, 4, 12 | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y [3] | Y [4] |
| 2 | 1 | Standard | FF4T | 1, 4, 12 | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y [3] | Y [4] |
| 2 | 1 | 100 VA Additional | FF4T11 | 1, 4, 12 | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y [3] | Y [3] | Y [4] |
| 2 | 1 | 200 VA Additional | FF4T12 | 1, 4, 12 | Y | Y | Y | Y | Y | Y | Y [3] | Y | Y [3] | Y [3] | Y [3] | Y [4] |
| 2 | 1 | 300 VA Additional | FF4T13 | 1, 4, 12 | Y | Y | Y | Y | Y | Y | Y [3] | Y [3] | Y [3] | Y [3] | Y [3] | Y [4] |
| Noise reduced enclosure and shock mounted panel | G4 | Any | — | Y | — | — | — | — | Y | Y | Y | Y | Y | Y | Y | Y |
| Addition of photoelectric receptacle | G10 | 1 [5], 12/3R | Y | — | Y | — | Y | — | Y | Y | Y | Y | Y | Y | Y | Y |
| Addition of photoelectric receptacle with photocell | G101 | 1 [5], 12/3R | Y | — | Y | — | Y | — | Y | Y | Y | Y | Y | Y | Y | Y |
| Addition of photoelectric receptacle and relay (R6) [6] | G10R6 | 1 [5], 12 | — | Y | — | Y | — | — | Y | Y | Y | Y | Y | Y | Y | Y |
| | G101R6 | 1 [5], 12 | — | Y | — | Y | — | — | Y | Y | Y | Y | Y | Y | Y | Y |
| Addition of terminal blocks (other than standard). The designation xx represents the number of terminals needed. Available in multiples of 5 only. | | | | | | | | | | | | | | | | |
| Wired | G56xx | Any | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Unwired | G50xx | Any | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Addition of 24-hour time clock (120–277 V only) | K14 | 1, 4, 12 | Y | Y | Y | Y | — | — | Y | Y | Y | Y | Y | Y | Y | Y |
| Addition of 24-hour time clock w/day omission (120–277 V) | K141 | 1, 4, 12 | Y | Y | Y | Y | — | — | Y | Y | Y | Y | Y | Y | Y | Y |
| Addition of 7-day time clock (120–277 V) | K142 | 1, 4, 12 | Y | Y | Y | Y | — | — | Y | Y | Y | Y | Y | Y | Y | Y |
| Addition of 24-hour time clock (120–277 V only) | K14 | 3R | — | — | — | — | Y | — | — | Y | Y | Y | Y | — | — | — |
| Addition of 24-hour time clock w/skip day (120–277 V) | K141 | 3R | — | — | — | — | Y | — | — | Y | Y | Y | Y | — | — | — |
| Addition of 7-day time clock (120–277 V) | K142 | 3R | — | — | — | — | Y | — | — | Y | Y | Y | Y | — | — | — |
| Addition of solid neutral terminal block | N | 1, 4, 12 | Y | Y | Y | Y | Standard | Standard | Y | Y | Y | Y | Y | Y | Y | Y |
| Red pilot light | P1 | Any | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Red push-to-test pilot light | P21 | Any | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Interlock needed for pilot light—one for each additional pilot light [7] | | Any | Y | Y | Y | Y | Y | Y | [8] | Y | Y | Y | Y | Y | Y | Y |
| Two-wire interface for mechanically held [6] | R6 | Any | — | Y | — | Y | — | — | Y | Y | Y | Y | Y | Y | Y | Y |
| Addition of undervoltage and overvoltage relay | R46 | Any | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Three wire control for long distance applications [6] | R62 | Any | — | Y | — | Y | — | — | Y | Y | Y | Y | Y | Y | Y | Y |
| Auxiliary contacts (replace ** with the number of N.O. + N.C. contacts) | X** | Any | Y | Y | Y | Y | Y | Y | [8] | Y | Y | Y | Y | Y | Y | Y |
| Addition of DC coil to Type L (7 poles max) | Y48 | Any | Y | — | — | — | — | — | Y | — | — | — | — | — | — | — |
| Auxiliary electrical interlock installed on disconnect switch or circuit breaker operating mechanism | Y74 | Any | — | — | Y | Y | Y | Y | — | Y | Y | Y | Y | Y | Y | Y |
| Coil transient suppressor (120 Vac only) | Y145 | Any | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | — | — | — |
| Addition of lightning arrester | Y1532 | Any | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Substitute copper only lugs for standard | Y157 | Any | Y | Y | Y | Y | Y | Y | — | — | Y | Y | Y | Y | Y | Y |

[1] When ordering **Form C** on mechanically held devices, you must also include **Form R6**.
 [2] Transformer voltage codes (see Table 16 on page 10).
 [3] Single primary voltage must be specified using the codes shown in Table 16.
 [4] Mechanically held only. Electrically held device has a control circuit requiring a 120 V secondary, therefore, a transformer is supplied. The transformer comes wired to L1 and L2 unless **Form S** is called for. It is furnished with two primary and one secondary fuse.
 [5] Photocell mounted on a NEMA 1 enclosure is designed for indoor areas which rely on natural light. Addition of the photocell does not make the enclosure suitable for outdoor (NEMA 3R) installations.
 [6] Available for 24 V, 120 V, 240 V, 277 V, and 480 V applications only.
 [7] Do not use Form X for an interlock wired in series with a pilot light, but do specify how the pilot light and interlock are to be wired into the circuit.
 [8] Electrically held, 20 A multipole contactors cannot add interlocks. Additional poles can be used for the same function, however. Mechanically held contactors (Type LX) provide one double-throw auxiliary contact (or status contact) as standard.

Lighting Contactors Factory Modifications (Forms)—Selection

NOTE: If a UL label is required, consult the Customer Care Center at 1-888-778-2733. Some Forms **are not** UL Listed.

Standard Equipment dimensions and enclosure construction may not apply when certain special features are added. Such cases should be referred to the factory with a complete description when precise dimensions are required.

Table 16: Voltage Codes

| Voltage at 60 Hz (primary–secondary) | Code | Order Example | | | |
|--------------------------------------|------|--|-------------|---------------------|-------------|
| 120–24 | V89 | You have device 8903SMG2V02. V02 means that you need a coil voltage of 120-60/110-50, wired for separate control. | | | |
| 208–120 | V84 | | | | |
| 240–24 | V82 | You want to add Form FF4T, with transformer voltages of 480 V primary, 120 V secondary. The new and complete Class, Type, Voltage Code, and Form number are: | | | |
| 240–120 | V80 | | | | |
| 277–120 | V85 | Class | Type | Voltage Code | Form |
| 480–24 | V83 | 8903 | SMG2 | V81 | FF4T |
| 480–120 | V81 | | | | |
| 480–240 | V87 | | | | |
| 600–120 | V86 | | | | |

Table 17: Lighting Contactor Field Modification Kits

| Description | Types L, LX | | Type S | | | | | Form No. |
|--|----------------------|-------------|-------------|------------|------------|------------|-----------------|----------|
| | 30 A | 30 A | 60 A | 100 A | 200 A | 300 A | 400, 600, 800 A | |
| | Kit Type | Kit Type | Kit Type | Kit Type | Kit Type | Kit Type | Kit Type | |
| Auxiliary Contacts | | | | | | | | |
| 1 N.O. LH or RH Mounting | — | 9999SX6 | 9999SX6 | 9999SX6 | 9999SX6 | 9999SX6 | 9999SX6 | X |
| 1 N.C. LH or RH Mounting | — | 9999SX7 | 9999SX7 | 9999SX7 | 9999SX7 | 9999SX7 | 9999SX7 | |
| 1 N.C. & 1 N.O. Isolated LH or RH | — | 9999SX8 | 9999SX8 | 9999SX8 | 9999SX8 | 9999SX8 | 9999SX8 | |
| 1 N.O. Overlapping LH or RH | — | 9999SX9 | 9999SX9 | 9999SX9 | 9999SX9 | 9999SX9 | 9999SX9 | |
| 1 N.C. Overlapping LH or RH | — | 9999SX10 | 9999SX10 | 9999SX10 | 9999SX10 | 9999SX10 | 9999SX10 | |
| Control Circuit Fuse Holder | | | | | | | | |
| Single Fuse Unit | 9999LLX and 9999SFR3 | 9999SFR3 | 9999SFR3 | 9999SFR3 | 9999SFR3 | 9999SFR3 | 9999SFR3 | F |
| Two Fuse Unit | 9999LLX and 9999SFR4 | 9999SFR4 | 9999SFR4 | 9999SFR4 | 9999SFR4 | 9999SFR4 | 9999SFR4 | F4 |
| Transformers [1] | 9070TF50 | 9070TF100 | 9070TF100 | 9070TF150 | 9070TF300 | 9070TF500 | 9070TF750 | T |
| Oversized Enclosures (Non-Combo) | | | | | | | | |
| NEMA 1 | 9991SDG3 | 9991SDG3 | 9991SDG3 | — | — | — | — | — |
| NEMA 4 | 9991SDW3 | 9991SDW3 | 9991SDW3 | — | — | — | — | — |
| NEMA 12 | 9991SDA3 | 9991SDA3 | 9991SDA3 | — | — | — | — | — |
| Standard Enclosures | | | | | | | | |
| NEMA 1—Surface Mount | 9991LXG1 | 9991SCG7[2] | 9991SDG7[2] | 9991SFG8 | 9991SFG4 | 9991SGG8 | — | — |
| NEMA 3R | 9991SDH1 | 9991SCH2 | 9991SDH1 | 9991SEH1 | 9991SFH1 | — | — | — |
| NEMA 4—Standard | 9991SDW1 | 9991SCW1 | 9991SDW1 | — | — | — | — | — |
| NEMA 4—With 2 Cvr Mtd. Clsng Plts | 9991SDW11 | 9991SCW11 | 9991SDW11 | 9991SEW11 | — | — | — | — |
| NEMA 4X—Glass Polyester | 9991SDW20 | 9991SCW20 | 9991SDW20 | — | — | — | — | — |
| NEMA 12 | 9991SDA11 | 9991SCA11 | 9991SDA11 | 9991SEA11 | — | — | — | — |
| NEMA 1—Flushmount—Complete | — | — | — | 9991SEF11 | — | — | — | — |
| NEMA 1—Flush Mount Parts | — | — | — | — | — | — | — | — |
| FLUSH PARTS | — | — | — | — | — | — | — | — |
| Standard—Elec. held | 9991SDF13 | 9991SCF11 | 9991SDF11 | — | — | — | — | — |
| Standard—Mech. held | 9991SDF13 | 9991SCF13 | 9991SDF13 | — | — | — | — | — |
| Mounting Strap | 9991SDF2 | 9991SCF2 | 9991SDF2 | — | — | — | — | — |
| Pull Box | 9991SDF1 | 9991SCF1 | 9991SDF1 | — | — | — | — | — |
| Internal Operator Mounting Bracket | 3010215901 | 3010215901 | 3010215901 | 3010215901 | 3010215901 | 3010215901 | 3010215901 | G53 |
| Solid Neutral | 9999SN1 | 9999SN1 | 9999SN1 | 9999SN1 | 9999SN2 | 9999SN2 | 9999SN3 [3] | N |
| Combination Lighting Contactor Disconnect Interlock Kit | | | | | | | | |
| Breaker Type | — | — | — | — | — | — | — | Y74 |
| 1-Pole | — | 9999R26 | 9999R26 | 9999R26 | 9999R26 | 9999R26 | 9999R26 | |
| 2-Pole | — | 9999R27 | 9999R27 | 9999R27 | 9999R27 | 9999R27 | 9999R27 | |
| Disconnect Type | — | — | — | — | — | — | — | |
| 1-Pole | — | 9999TC11 | 9999TC10 | 9999TC10 | 9999R8 | 9999R35 | 9999R26 | Y1532 |
| 2-Pole | — | 9999TC21 | 9999TC20 | 9999TC20 | 9999R9 | 9999R36 | 9999R27 | |
| Lightning Arrestor | | | | | | | | |
| 175 Vac to Ground Max 2 or 3 wire Grounded | SDSA1175 | SDSA1175 | SDSA1175 | SDSA1175 | SDSA1175 | SDSA1175 | SDSA1175 | Y1532 |
| 650 Vac to Ground Max 3 or 4 wire Grounded | SDSA3650 | SDSA3650 | SDSA3650 | SDSA3650 | SDSA3650 | SDSA3650 | SDSA3650 | |

[1] Complete the control transformer Class and Type with the voltage code from section 14 in the current *Digest*.

[2] For electrically held only.

[3] Limited to 400 and 600A versions. 800A is a factory modification only.

Table 18: Voltage Codes

NOTES:

- If a UL label is required, consult the Customer Care Center at 1-888-778-2733. Some Forms are not UL Listed.
- Standard Equipment dimensions and enclosure construction may not apply when certain special features are added. Such cases should be referred to the factory with a complete description when precise dimensions are required.

| Voltage at 60 Hz (primary–secondary) | Code |
|--------------------------------------|------|
| 120–24 | V89 |
| 208–120 | V84 |
| 240–24 | V82 |
| 240–120 | V80 |
| 277–120 | V85 |
| 480–24 | V83 |
| 480–120 | V81 |
| 480–240 | V87 |
| 600–120 | V86 |

| Ordering Example | | | |
|------------------|------|--------------|------|
| Class | Type | Voltage Code | Form |
| 8903 | SMG2 | V81 | FF4T |

You have device 8903SMG2V02. V02 means that you need a coil voltage of 120-60/110-50, wired for separate control. You want to add Form FF4T, with transformer voltages of 480 V primary, 120 V secondary. The new and complete Class, Type, Voltage Code, and Form number are:

Lighting Contactors

Field Modifications—Cover-Mounted Control Units

Cover-Mounted Control Units

Table 19: Mechanically Held

| Description | Form No. | Kit | | | | | | |
|---|----------|---------------------------|-------------|-------------|-------------|-------------|-------------|-----------------|
| | | Type LX | Type S | | | | | |
| | | 30 A | 30 A | 60 A | 100 A | 200 A | 300 A | 400, 600, 800 A |
| Push Button (On-Off) NEMA 1 Enclosure | A3 | 9999BLX | [1] | 9001KA2 | 9001KA2 | 9001KA2 | 9001KA2 | 9001KA2 |
| | | 9999LXPB | | 9999SA3 [2] | 9999SA3 [2] | 9999SA3 [2] | 9999SA3 [2] | 9999SA3 [2] |
| NEMA 3R, 4, or 12 Enclosure | | 9001KA2 | 9001KA2 | 9001KA2 | 9001KA2 | 9001KA2 | 9001KA2 | 9001KA2 |
| | | 9999SA3 [2] | 9999SA3 [2] | 9999SA3 [2] | 9999SA3 [2] | 9999SA3 [2] | 9999SA3 [2] | 9999SA3 [2] |
| Selector Switch (2 Position) NEMA 1 Enclosure | C6 | 9999BLX | 9001KN244 | 9001KN244 | 9001KN244 | 9001KN244 | 9001KN244 | 9001KN244 |
| | | 9999LXS | 9001KS11BH1 | 9001KS11BH1 | 9001KS11BH1 | 9001KS11BH1 | 9001KS11BH1 | 9001KS11BH1 |
| NEMA 3R, 4, or 12 Enclosure | | 9001KN244 | 9001KN244 | 9001KN244 | 9001KN244 | 9001KN244 | 9001KN244 | 9001KN244 |
| | | 9001KS11BH1 | 9001KS11BH1 | 9001KS11BH1 | 9001KS11BH1 | 9001KS11BH1 | 9001KS11BH1 | 9001KS11BH1 |
| Selector Switch (3 Position) NEMA 1 Enclosure (must include two-wire control relay, Form R6) | C | 9999BLX | 9001KN260 | 9001KN260 | 9001KN260 | 9001KN260 | 9001KN260 | 9001KN260 |
| | | 9999SC2 | | | | | | |
| NEMA 3R, 4, or 12 Enclosure | | 9001KN260 | 9001KN260 | 9001KN260 | 9001KN260 | 9001KN260 | 9001KN260 | 9001KN260 |
| | | 9001KS46BH2 | 9001KS46BH2 | 9001KS46BH2 | 9001KS46BH2 | 9001KS46BH2 | 9001KS46BH2 | 9001KS46BH2 |
| Two Wire Control Relay (Form R6) [3] | R6 | 9999RLX CA2SK11... [4] | 8501XO11 | 8501XO11 | 8501XO11 | 8501XO11 | 8501XO11 | 8501XO11 |

[1] No field installed kit available.

[2] Mechanically held contactors need two distinct signals to operate. An N.O. contact block must be added to the Class 9999 Type SA3 push button kit.

[3] Form R6 available for 24 V, 120 V, 240 V and 277 V only.

[4] Replace the bullets (***) with the voltage code in Table 21.

Table 20: Electrically Held

| Description | Enclosure | Form No. | Kit | | | | | | |
|---------------------------------|-------------------|----------|-------------|-------------|-------------|---------------|---------------|---------------|-----------------|
| | | | Type L | Type S | | | | | |
| | | | 30 A | 30 A | 60 A | 100 A | 200 A | 300 A | 400, 600, 800 A |
| Pilot Lights (Red and Green) | NEMA 1 | P1 | 9999SP28R | 9999SP2R | 9999SP3R | 9999SP28R [1] | 9999SP28R [1] | 9999SP28R [1] | 9999SP28R |
| | NEMA 3R, 4, or 12 | | | 9999SP28R | 9999SP28R | 9999SP28R | | | |
| Push Buttons [2] | NEMA 1 | A12 | 9999BLX | 9999SA10 | 9999SA10 | 9999SA3 | 9999SA3 | 9999SA3 | 9999SA3 |
| | NEMA 3R, 4, or 12 | | | 9999SA3 | 9999SA3 | 9999SA3 | 9999SA3 | 9999SA3 | 9999SA3 |
| Selector Switch (2 Position) | NEMA 1 | C6 | 9999BLX | 9999SC22 | 9999SC22 | 9999SC22 | 9001KN24 | 9001KN244 | 9001KN244 |
| | NEMA 3R, 4, or 12 | | | 9999SC229 | 9999SC22 | 9999SC22 | 9999SC22 | 9001KS11BH1 | 9001KS11BH1 |
| | | | 9001KN244 | 9001KN244 | 9001KN244 | 9001KN244 | 9001KN244 | 9001KN244 | |
| | | | 9001KS11BH1 | 9001KS11BH1 | 9001KS11BH1 | 9001KS11BH1 | 9001KS11BH1 | 9001KS11BH1 | |
| Selector Switch (3 Position) | NEMA 1 | C | 9999BLX | 9999SC2 | 9999SC2 | 9999SC8 | 9999SC8 | 9999SC8 | 9999SC8 |
| | NEMA 3R, 4, or 12 | | | 9999SC2 | 9999SC2 | 9999SC8 | 9999SC8 | 9999SC8 | 9999SC8 |
| | | | 9999SC8 | 9999SC8 | 9999SC8 | 9999SC8 | 9999SC8 | 9999SC8 | |

[1] The coil voltage must be the same as the pilot light rating. Kit contains one Class 9001 Type KP1R6, 120 V/60 Hz red pilot light control unit. For other voltages, refer to the Class 9001 Type KP products in *Digest* Section 19.

[2] Requires holding circuit interlock for Type S or additional power pole on Type L devices.

Table 21: CA2SK11... Voltage Codes

| AC Coil (50/60) Hz | Voltage Code |
|--------------------|--------------|
| 24V | B7 |
| 120V | G7 |
| 240V | U7 |
| 277V | W7 |

Ratings and Application Data

Application of Lighting Contactors

Lighting contactors have evolved from the need for more than simple on-off manual control of lights. Often the application requires remote control of lighting from some distant location. This control may or may not be in addition to a master control station at a central location. Certain applications include the use of automatic control by time clocks or photoelectric cells.

Square D lighting contactors offer a time-proven design for better electrical and mechanical performance. They are used wherever reliable, convenient, and economical control of indoor and outdoor lighting is required. Typical installations include:

- parking lots
- industrial plants
- office buildings
- theaters and auditoriums
- hospitals and institutions
- shopping centers
- stadiums
- airports

Tungsten Lamp Loads

Tungsten lamps have a positive resistance characteristic (resistance to the flow of electric current increases as its operating temperature increases), so they exhibit an increase in resistance when the lamp is energized. These lamps have a high inrush current of up to 18 times the normal current, resulting from the low cold resistance of the tungsten. Examples of tungsten lamps include incandescent, iodine, quartz-iodine, and infrared.

Ballast Lighting Loads

A ballast lighting load consists of electric discharge (vapor) lamps. All types of vapor lamps possess a negative resistance characteristic. The resistance within the lamp decreases with an increase in current and vice-versa. Without some form of current limiting device in the electric circuit, the current rises quickly until lamp failure occurs. This current limiting element is known as the ballast. A ballast is an impedance used to stabilize the current in a vapor lamp. It increases in resistance as current through it increases, and decreases in resistance as current decreases. Thus it tends to maintain a constant current. Types of ballast lighting include high intensity discharge (HID) lamps (mercury vapor, metal halide, and high pressure sodium) and fluorescent lamps.

Resistance Loads

Square D lighting contactors are fully rated for resistance loads up to 600 V. They can be used on resistance-type boilers, electric furnaces, electric water heaters, and snow-melting cables and panels.

Motor Loads

These loads consist of motors having an inrush current, or locked-rotor current, of approximately six times the full-load current. Square D Type S lighting contactors are fully rated for motor loads and have a horsepower rating equal to the equivalent NEMA Size motor contactor.

Lighting Contactors for Energy Management

Lighting contactors should be an integral part of any energy management system. They help conserve energy consumption and reduce utility bills by providing three types of control. Lighting contactors offer both centralized and remote control of lighting. Circuits can be turned on and off from a number of remote locations in addition to a master control station. They also offer selective switching of lights. Selective switching is the control of one or more individual lighting circuits, independent of the other circuits. This design allows the potential for turning on only the amount of lighting that is actually

Lighting Contactors

Ratings and Application Data—Lighting Contactors

needed. Lighting contactors can provide automatic control to insure that lights will be turned off when not needed. There are a number of devices that, when used with lighting contactors, offer a convenient and reliable method of automatically controlling lighting loads: program time clock, photoelectric cell, programmable controller, and demand controller.

Installation of Lighting Contactors

For new installations, lighting contactors can either be installed right into the lighting panelboard, or in their own enclosure next to or remote from the panelboard. In existing applications where the lighting control system is being updated, lighting contactors can be installed in their own enclosure next to a lighting panelboard.

Compression Lugs

The Square D™ brand Versa-Crimp® compression lugs for Type S lighting contactors, 100–800 A, are available factory installed (Form Y157-4). They are suitable for both copper and aluminum wire. One VCEL lug (one or two on the 400 and 600 A devices) is required for each line or load terminal. Each Class 9999 Type AI hardware kit includes mounting hardware for three terminals, line or load side. For example, to install compression lugs on a 300 A 3-pole device, line and load sides, order six VCEL-060-12H1 lugs and two Class 9999 Type AI11 hardware kits.

Maximum Voltage Rating

When selecting lighting contactors, consider the maximum voltage rating of the device in addition to its current rating. Table 22 lists the maximum AC voltage ratings of Types L and S lighting contactors for ballast, tungsten, and resistance loads. Lighting contactors also have DC ratings (see Table 23).

Current Ratings

All Class 8903 lighting contactors are fully rated for tungsten, ballast, and resistance loads. This means that a contactor can be used to control a load up to its full nameplate rating. Derating of the contactor (the standard practice with circuit breakers and fuses) is not necessary.

Table 22: AC Voltage Ratings

| Load Type | Connections | | | | | | | |
|--------------------------------|--|---|----------------|---|--|---|----------------------------|---|
| | Types L & LX 30 A | | Type SM 30 A | | Types SP, SQ, SV, SX 60–300 A | | Types SY, SZ, SJ 400–800 A | |
| | 1 Pole to Load | 2 Poles to Load on 1-phase and 3 Poles to Load on 3-phase | 1 Pole to Load | 2 Poles to Load on 1-phase and 3 Poles to Load on 3-phase | 1 Pole to Load | 2 Poles to Load on 1-phase and 3 Poles to Load on 3-phase | 1 Pole to Load | 2 Poles to Load on 1-phase and 3 Poles to Load on 3-phase |
| Tungsten | 20 A 277 Vac | 480 Vac | 277 Vac | 480 Vac | 277 Vac | 480 Vac | — | — |
| Ballast | 277 Vac [1] | 480 Vac [1] | 347 Vac | 600 Vac | 347 Vac | 600 Vac | 347 Vac | 600 Vac |
| Resistance | 600 Vac | 600 Vac | 600 Vac | 600 Vac | 600 Vac | 600 Vac | 600 Vac | 600 Vac |
| Control Circuit (Coil) Voltage | Type L 12–600 Vac; 24, 32, 48, 115/125, 230/250 Vdc Type LX 24–600 Vac | | 24–600 Vac | | 24–600 Vac Type SP 24–600 Vac Types SQ, SV 120–600 Vac Type SX | | 120–600 Vac | |

[1] Types L and LX contactors also have a ballast lamp rating of 15 A 347 Vac when connected 1-pole-to-load, and 600 Vac when connected 2-poles-to-load on 1-phase and 3-poles-to-load on 3-phase.

600 A devices are derated to 540 A for resistance heating loads when aluminum wire is used.

Table 23: DC Voltage Ratings for Tungsten Lamp or Resistance Loads Only

| Type of Load | Types L, LX 20 A | Type SM 30 A | Types SP, SQ, SV, SX 60–300 A | Types SY, SZ, SJ 400–800 A |
|--------------|-------------------|--------------|-------------------------------|----------------------------|
| DC | 2 Poles in Series | 125 Vdc | 125 Vdc | 250 Vdc |
| | 3 Poles in Series | 250 Vdc | 210 Vdc | 250 Vdc |

Table 24 lists the maximum SCCR of the **component** when protected by any circuit breaker or fuse. However, if the maximum component SCCR is 100 kA, for example, and a 25 kA rated circuit breaker is used, then the system rating is 25 kA—the circuit breaker becomes the weakest link.



Lighting Contactors Ratings and Application Data—Lighting Contactors

The minimum requirements for the enclosure size and construction apply to individual contactors. Refer to the individual contactor's instruction bulletin for these details.

Table 24: Contactors Protected by Fusible Disconnect Switches
Ratings apply to circuits with voltages no greater than those listed.

| Catalog Number | Ampere Rating | Maximum Circuit Breaker Size [1] | MaximumSCCR (kA) | Maximum Fuse Size | Maximum SCCR (kA) |
|----------------|---------------|----------------------------------|------------------|-------------------|-------------------|
| 8903/LX | 20, 30 | 30 | 100 | 30 [2] | 100 |
| 8903SM | 30 | 70 | 100 | 60 | 100 |
| 8903SP | 60 | 100 | 100 | 100 | 100 |
| 8903SQ | 100 | 150 | 100 | 200 | 100 |
| 8903SV | 200 | 225 | 100 | 200 [3] | 100 |
| 8903SX | 300 | 400 | 100 | 400 | 100 |
| 8903SY | 400 | 800 | 65 | 600 | 100 |
| 8903SZ | 600 | 800 | 65 | 600 | 100 |
| 8903SJ | 800 | 1200 | 30 | 1600 | 30 |

[1] When protected by any circuit breaker, including thermal-magnetic and magnetic-only.

[2] When protected by any Class RK5, RK1, T, or J fuse.

[3] When protected by any Class T or J fuse.

Table 25: Kilowatt Ratings [1]

| Voltage | Lighting Contactor Size | | | | | | | |
|---------|-------------------------|------|-------|-------|-------|-------|-------|-------|
| | 30 A | 60 A | 100 A | 200 A | 300 A | 400 A | 600 A | 800 A |
| 200 Vac | 10.3 | 20.7 | 34.6 | 69.2 | 103.9 | 138.5 | 207.8 | 277.1 |
| 230 Vac | 11.9 | 23.9 | 39.8 | 79.6 | 119.5 | 159.3 | 239.0 | 318.7 |
| 380 Vac | 19.7 | 39.4 | 65.8 | 131.6 | 197.4 | 263.2 | 394.9 | 526.5 |
| 460 Vac | 23.9 | 47.8 | 79.6 | 159.3 | 239.0 | 318.6 | 478.0 | 637.4 |
| 575 Vac | 30.0 | 60.0 | 99.0 | 199.0 | 299.0 | 398.4 | 597.6 | 796.7 |

[1] Resistance heating only (three-phase system).

Table 26: Motor Load Ratings

| Lighting Contactor Size (A) | Has Same Hp Ratings As Equivalent NEMA Size Contactor |
|-----------------------------|---|
| 30 | NEMA Size 1 |
| 60 | NEMA Size 2 |
| 100 | NEMA Size 3 |
| 200 | NEMA Size 4 |
| 300 | NEMA Size 5 |
| 400 | — |
| 600 | NEMA Size 6 |
| 800 | NEMA Size 7 |

Lighting Contactors
Approximate Dimensions—Open Style

Approximate Dimensions

These dimensions are approximate. For precise dimensions, contact the Customer Care Center at 1-888-778-2733.

Open Style

Table 27: Open Style, Types L, LX, and S

| Ampere Rating | Electrically Held | | | | | | | Mechanically Held | | | | | | |
|---------------|-------------------|--------------|----------------------|----------------|----------------|---|-----------------|-------------------|----------------------|---------------|----------------|---------------|----------------|---------------|
| | Type | No. of Poles | Dimensions, in. (mm) | | | | | Type | Dimensions, in. (mm) | | | | | |
| | | | A | B | C | D | E | | A | B | C | D | E | F |
| 30 | LO | 2-4 | 2.88 (73) | 5 (127) | 4.62 (117) | — | 3.12 (79) | LXO | 2.88 (73) | — | — | 8.81 (224) | 3.25 (83) | 7.70 (196) |
| | | 6 | 4.25 (108) | 5 (127) | 4.62 (117) | — | 3.12 (79) | | 4.25 (108) | — | — | 8.81 (224) | 3.25 (83) | 7.70 (196) |
| | | 8-12 | 5.63 (143) | 5 (127) | 4.62 (117) | — | 3.12 (79) | | 5.63 (143) | — | — | 8.81 (224) | 3.25 (83) | 7.70 (196) |
| 30 | SMO | 2-3 | 4.34 (110) | 3.22 (82) | 4.22 (107) | — | — | SMO | 7.15 (182) | 3.79 (96) | 4.68 (119) | — | — | — |
| | | 4-5 | 4.34 (110) | 4.25 (108) | 4.22 (107) | | | | 7.15 (182) | 4.54 (116) | 4.68 (119) | | | |
| 60 | SPO | 2-3 | 5.33 (135) | 4.31 (110) | 4.94 (125) | — | — | SPO | 8.25 (210) | 4.61 (117) | 5.23 (133) | — | — | — |
| | | 4-5 | 6.22 (158) | 5.61 (143) | 4.94 (125) | | | | 8.70 (221) | 5.90 (150) | 5.23 (133) | | | |
| 100 | SQO | 2-3 | 7.09 (180) | 5.45 (139) | 6.50 (165) | — | — | SQO | 10.13 (257) | 5.94 (151) | 6.72 (171) | — | — | — |
| | | 4-5 | 7.82 (199) | 9.75 (248) | 6.50 (165) | | | | 10.56 (268) | 9.75 (248) | 6.72 (171) | | | |
| 200 | SVO | 2-3 | 9.14 (232) | 6.00 (152) | 6.50 (165) | — | — | SVO | 11.35 (293) | 6.00 (152) | 6.72 (171) | — | — | — |
| | | 4, 5 [1] | 9.14 (232) | 9.75 (248) | 6.50 (165) | | | | 11.55 (293) | 9.75 (248) | 6.72 (171) | | | |
| 300 | SXO | 2-3 | 12.31 (313) | 8.66 (220) | 8.74 (222) | — | — | SXO | 12.31 (313) | 8.66 (220) | 10.50 (267) | — | — | — |
| 400 | SYO | 2-3 | — | 12.33 (313) | 9.00 (229) | — | 27.78 (706) | SYO | — | 8.66 (220) | 10.50 (267) | — | 21.00 (533) | — |
| 600 | SZO | | | | | | | SZO | | | | | | |
| 800 | SJO | 2-3 | — | 12.33 (313) | 11.94 (303) | — | 42.70 (1085) | — | — | — | — | — | — | — |

[1] 5 pole, electrically held only.

Figure 1: Open Style, Types L and LX

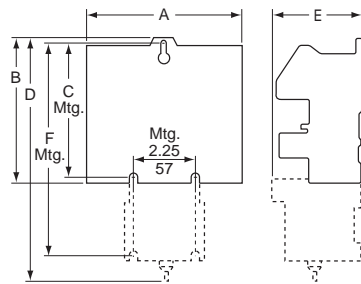
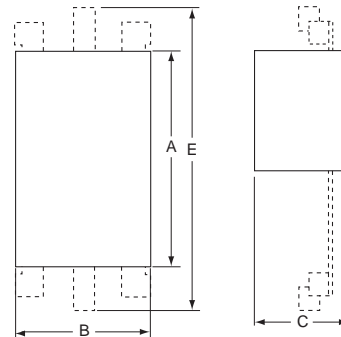


Figure 2: Open Style, Type S

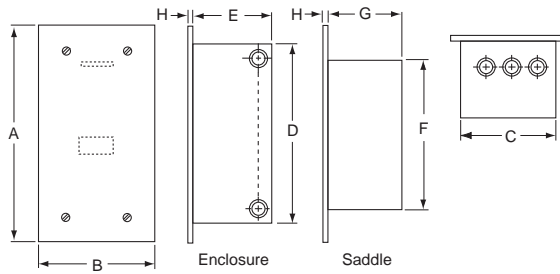


Non-Combination Lighting Contactors

Table 28: NEMA 1 Flush Mounted Non-Combination Lighting Contactors

| Ampere Rating | Type | Form(s) | | Dimensions, in. (mm) | | | | | | |
|---------------|-----------|---------------------------|----------------------------|----------------------|----------------|----------------|----------------|---------------|----------------|---------------|
| | | | | A | B | C | D | E | F | G |
| 30 | LF LXF | Standard, F, Y48, R6 | | 15.19 (386) | 8.94 (227) | 7.63 (194) | 12.88 (327) | 5.44 (138) | 10.94 (278) | 5.13 (130) |
| | | A3, A12, C, C6, T, P | | 24.00 (610) | 17.50 (445) | 15.00 (381) | 19.25 (489) | 7.12 (181) | — | — |
| 30 | SMF | Electrically Held | Standard, A12, C, C6, P, X | 13.44 (341) | 7.19 (183) | 5.88 (149) | 11.13 (283) | 4.75 (121) | 9.19 (233) | 4.50 (114) |
| | | Mechanically Held | Standard, X | | | | | | | |
| | | Electrically Held | T, N | 24.00 (610) | 17.50 (445) | 15.00 (381) | 19.25 (489) | 5.75 (146) | — | — |
| | | Mechanically Held | A3, C, C6, T, N, P, R6 | | | | | | | |
| 60 | SPF | Electrically Held | Standard, A12, C, C6, P, X | 15.19 (386) | 8.94 (227) | 7.63 (194) | 12.88 (327) | 5.44 (138) | 10.94 (278) | 5.13 (130) |
| | | Mechanically Held | Standard, X | | | | | | | |
| | | Electrically Held | T, N | 24.00 (610) | 17.50 (445) | 15.00 (381) | 19.25 (489) | 5.75 (146) | — | — |
| | | Mechanically Held | A3, C, C6, T, N, P, R6 | | | | | | | |
| 100 | SQF | With or Without Any Forms | | 31.00 (787) | 16.75 (425) | 14.25 (362) | 26.25 (667) | 8.00 (203) | — | — |

Figure 3: NEMA 1 Flush Mounted Non-Combination Lighting Contactors



Lighting Contactors

Approximate Dimensions—Non-Combination

Table 29: NEMA 1 Non-Combination Lighting Contactors, Electrically and Mechanically Held

| Rating (A) | Type | No. of Poles | Form(s) | Fig. | Dimensions, in. (mm) | | | | | | | | | | | | |
|------------------------------------|-------------------|--------------|---|----------------------------------|----------------------|-------------|--------------|-------------|----------------|-------------|-------------|--------------|-------------|------------|------------|------------|------------|
| | | | | | A | B | C | D | E | F | G | H | I | J | K | L | |
| 30 | LG, LXG | Any | Standard, A3, A12, C, C6, F, P, R6, Y48 | 4 | 7.81 (198) | 12.69 (322) | 6.03 (153) | — | 1.09 (28) | 10.50 (267) | 1.09 (28) | 1.09 (28) | 5.63 (143) | 5.75 (146) | 1.09 (28) | 5.63 (143) | |
| | | | P, T | 5 | 11.88 (302) | 11.88 (302) | 7.44 (189) | 9.75 (248) | 1.06 (27) | 1.06 (27) | 9.75 (248) | 1.06 (27) | 1.06 (27) | 0.31 (8) | — | — | |
| | | | K14, K141, K142 | 4 | 16.00 (406) | 22.00 (559) | 7.38 (188) | 8.00 (203) | 1.00 (25) | 20.00 (508) | 1.00 (25) | 1.00 (25) | 14.00 (356) | 7.38 (188) | 1.00 (25) | 7.00 (178) | |
| 30 | SMG | 2-5 | Electrically Held | Standard, A12, C, C6, P, X | 4 | 6.00 (152) | 10.00 (254) | 5.28 (134) | 3.00 (76) | 0.88 (22) | 8.13 (206) | 1.00 (25) | 0.94 (24) | 4.13 (105) | 5.00 (127) | — | — |
| | | | Mechanically Held | Standard, X | | — | — | — | — | — | — | — | — | — | — | — | |
| | | | Electrically Held | T | 4 | 6.34 (161) | 15.88 (403) | 5.19 (132) | 14.38 (365) | 4.66 (118) | 0.28 (7) | 0.75 (19) | 0.84 (21) | — | — | — | — |
| | | | N | — | | — | — | — | — | — | — | — | — | — | — | | |
| | | | Mechanically Held | T, N, R6 | 5 | 14.88 (378) | 14.12 (359) | 7.56 (192) | 12.75 (324) | 1.06 (27) | 1.06 (27) | 12.00 (305) | 1.06 (27) | 1.06 (27) | 0.31 (8) | — | — |
| | | | A3, C, C6, P | 5 | | 8.12 (206) | 14.12 (359) | 9.73 (247) | 6.00 (152) | 1.06 (27) | 1.06 (27) | 12.00 (305) | 1.06 (27) | 1.06 (27) | 0.31 (8) | — | — |
| 60 | SPG | 2-3 | Electrically Held | Standard, A12, C, C6, P, X | 4 | 7.81 (198) | 12.69 (322) | 6.03 (153) | — | 1.09 (28) | 10.50 (267) | 1.09 (28) | 1.09 (28) | 5.63 (143) | 5.75 (146) | 1.09 (28) | 5.63 (143) |
| | | 4-5 | Electrically Held | Standard, A12, C, C6, P, X | 5 | 8.12 (206) | 14.12 (359) | 9.73 (247) | 6.00 (152) | 1.06 (27) | 1.06 (27) | 12.00 (305) | 1.06 (27) | 1.06 (27) | 0.31 (8) | — | — |
| | | 2-5 | Electrically and Mechanically Held | T, N, R6 | 5 | 14.88 (378) | 14.12 (359) | 7.56 (192) | 12.75 (324) | 1.06 (27) | 1.06 (27) | 12.00 (305) | 1.06 (27) | 1.06 (27) | 0.31 (8) | — | — |
| | | 2-5 | Mechanically Held | Standard, A3, C, C6, P, X | 5 | 8.12 (206) | 14.12 (359) | 9.73 (247) | 6.00 (152) | 1.06 (27) | 1.06 (27) | 12.00 (305) | 1.06 (27) | 1.06 (27) | 0.31 (8) | — | — |
| 100 | SQG | 2, 3 [1] | Electrically Held | Standard, A12, C, C6, F, P, X, T | 5 | 11.25 (286) | 25.15 (639) | 8.99 (228) | 8.60 (218) | 1.25 (32) | 1.25 (32) | 22.32 (567) | 1.42 (36) | 1.42 (36) | 0.44 (11) | — | — |
| | | | Mechanically Held | Standard, F, X, T | | — | — | — | — | — | — | — | — | — | — | — | |
| | | 2, 3 | Electrically Held | N, R6, T, T10-T13 [2] | 5 | 18.15 (461) | 29.15 (740) | 9.24 (234) | 15.50 (394) | 9.24 (234) | 1.33 (34) | 26.50 (673) | 1.33 (34) | 1.33 (34) | 0.44 (11) | — | — |
| | | | Mechanically Held | A3, C, C6, N, R6, T, T10-T13 [2] | | — | — | — | — | — | — | — | — | — | — | — | |
| | | 4, 5 | Electrically Held | Standard, A12, C, C6, F, P, X | 5 | 11.25 (286) | 25.15 (639) | 8.99 (228) | 8.60 (218) | 1.25 (32) | 1.25 (32) | 22.32 (567) | 1.42 (36) | 1.42 (36) | 0.44 (11) | — | — |
| | | | Mechanically Held | Standard, F, X | | — | — | — | — | — | — | — | — | — | — | — | |
| | | | Electrically Held | [2] | 5 | 18.15 (461) | 29.15 (740) | 9.24 (234) | 15.50 (394) | 9.24 (234) | 1.33 (34) | 26.50 (673) | 1.33 (34) | 1.33 (34) | 0.44 (11) | — | — |
| | | | Mechanically Held | A3, C, C6 [2] | | — | — | — | — | — | — | — | — | — | — | — | |
| Electrically and Mechanically Held | N, R6, T, T10-T13 | 5 | 22.15 (563) | 39.15 (994) | 10.24 (260) | 19.50 (495) | 1.33 (34) | 1.33 (34) | 36.50 (927) | 1.33 (34) | 1.33 (34) | 0.44 (11) | — | — | | | |
| 200 | SVG | All | Electrically and Mechanically Held | Standard and All Forms | 5 | 22.15 (563) | 39.15 (994) | 10.24 (260) | 19.50 (495) | 1.33 (34) | 1.33 (34) | 36.50 (927) | 1.33 (34) | 1.33 (34) | 0.44 (11) | — | — |
| 300 | SXG | All | Electrically and Mechanically Held | Standard and All Forms | 5 | 17.21 (437) | 44.21 (1123) | 12.83 (325) | 13.00 (330) | 2.11 (54) | 2.11 (54) | 40.00 (1016) | 2.11 (54) | 2.11 (54) | 0.56 (14) | — | — |
| 400 and 600 | SYG, SZG | All | Electrically and Mechanically Held | Standard and All Forms | 5 | 20.21 (513) | 65.75 (1670) | 13.10 (333) | 11.00 (972) | 4.61 (117) | 4.61 (117) | 64.50 (1638) | 0.63 (16) | 0.63 (16) | 0.69 (18) | — | — |
| 800 | SJG | 2-3 | With or Without Any Forms | | 6 | 34.50 (876) | 93.00 (2362) | 23.50 (597) | Floor Mounting | | | | | | | | |

[1] Factory transformer only.

[2] All Type K Forms.

NEMA 1 Non-Combination Lighting Contactor Dimensions—See Table 29

Figure 4:

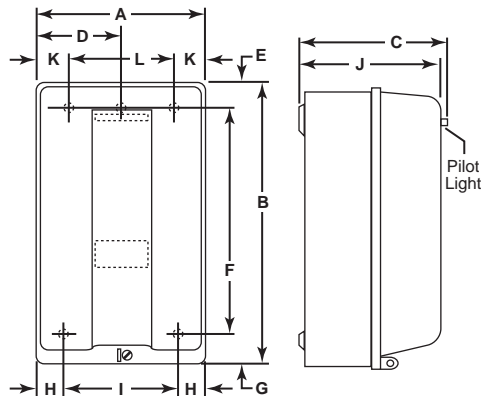


Figure 5:

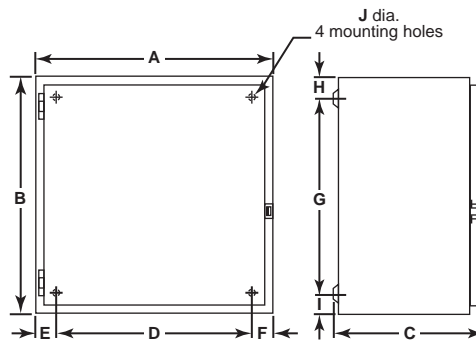
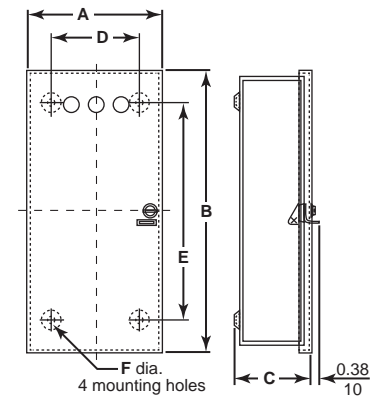


Figure 6:

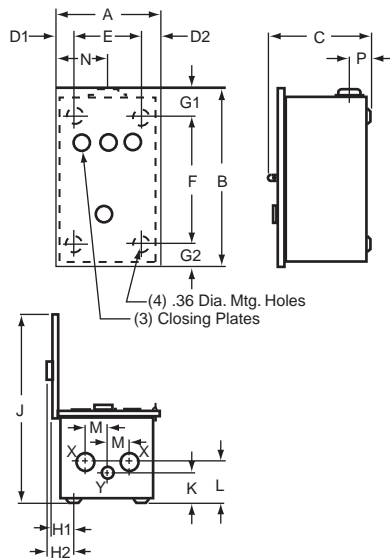


Lighting Contactors Approximate Dimensions—Non-Combination

Table 30: NEMA 3R Non-Combination Lighting Contactors (all pole arrangements)

| Ampere Rating | Type | A | B | C | D1 | D2 | E | F | G1 | G2 | H1 | H2 | J | K | L | M | N | P | Knockouts | |
|---------------|-----------|----------------|-----------------|---------------|--------------|--------------|----------------|----------------|--------------|--------------|--------------|--------------|----------------|--------------|--------------|--------------|---------------|--------------|------------------------|-------------------|
| | | | | | | | | | | | | | | | | | | | X | Y |
| 30 | SMH | 8.83 (224) | 12.30 (312) | 7.12 (181) | 1.39 (35) | 1.44 (37) | 6.00 (152) | 7.50 (191) | 2.64 (67) | 2.16 (55) | 2.08 (53) | 2.62 (66) | 14.28 (363) | 1.37 (35) | 1.37 (35) | 1.88 (48) | 4.38 (111) | 1.83 (46) | 0.50 0.75 1 | 0.50 0.75 1 |
| 30 60 | LH SPH | 9.83 (250) | 16.30 (414) | 8.62 (219) | 1.39 (35) | 1.44 (37) | 7.00 (178) | 11.50 (292) | 2.64 (67) | 2.16 (55) | 2.08 (53) | 2.62 (66) | 16.78 (426) | 1.31 (33) | 1.75 (44) | 2.13 (54) | 4.88 (124) | 1.83 (46) | 1 1.25 1.50 | 0.50 0.75 |
| 100 | SQH | 12.83 (326) | 25.30 (643) | 8.62 (219) | 1.39 (35) | 1.44 (37) | 10.00 (254) | 20.50 (521) | 2.64 (67) | 2.16 (55) | 2.08 (53) | 2.62 (66) | 19.78 (502) | 1.31 (33) | 1.94 (49) | 2.44 (62) | 6.38 (162) | 1.83 (46) | 1 1.25 2 2.50 | 0.50 0.75 |
| 200 | SVH | 12.83 (326) | 40.30 (1024) | 9.12 (232) | 1.39 (35) | 1.44 (37) | 10.00 (254) | 35.50 (902) | 2.64 (67) | 2.16 (55) | 2.08 (53) | 2.62 (66) | 20.28 (515) | 1.31 (33) | 2.31 (59) | 2.69 (68) | 6.38 (162) | 1.83 (46) | 1 1.25 2 2.50 | 0.50 0.75 |

Figure 7: NEMA 3R



Lighting Contactors

Approximate Dimensions—Non-Combination

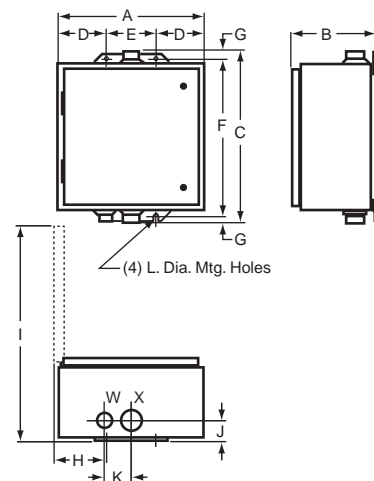
Table 31: NEMA 4 and 4X (Stainless Steel) Non-Combination Lighting Contactors

| Ampere Rating | Type | No. of Poles | Form(s) <i>E.H. = Electrically Held</i> <i>M.H. = Mechanically Held</i> | | Dimensions, in. (mm) | | | | | | | | | | | | | Hubs, in. | | |
|---------------|------------------------|--------------|---|---|----------------------|------------------------|------------------|----------------|-----------------|-----------------|----------------|-----------------|----------------|---------------|----------------|--------------|---------------|--------------|------|------|
| | | | | | A | B | C | D | E | F | G | H | I | J | K | L | Bottom Only | Top & Bottom | | |
| | | | | | W | X | | | | | | | | | | | | | | |
| 30 | LW LXW | Any | Standard, F, R6, Y48 | | 8.13 (206) | 7.88 (200) | 16.19 (411) | 1.56 (40) | 5.00 (127) | 15.00 (381) | 0.60 (15) | 1.94 (49) | 14.75 (375) | 2.00 (51) | 2.63 (67) | 0.31 (8) | 0.75 | 1.50 | | |
| | | | A3, A12, C, C6, P, T | | 12.62 (321) | 7.81 (198) | 14.69 (373) | 2.56 (65) | 7.50 (191) | 13.50 (343) | 0.63 (16) | 3.38 (86) | 18.44 (468) | 1.69 (43) | 2.31 (59) | 0.31 (8) | 0.75 | 1.0 | | |
| 30 | SMW | 2-5 | E.H. | Standard, A12, C, C6, P, X | 6.38 (162) | 7.13 (181) | 13.19 (351) | 1.56 (40) | 3.25 (83) | 12.00 (305) | 0.63 (16) | 1.91 (30) | 11.81 (300) | 1.63 (41) | 2.31 (59) | 0.31 (8) | 0.75 | 1.0 | | |
| | | | M.H. | Standard, F, X | | | | | | | | | | | | | | | | |
| | | | E.H. | T | 12.63 (321) | 7.11 (181) | 14.69 (373) | 2.56 (65) | 7.50 (191) | 13.50 (343) | 0.63 (16) | 3.19 (81) | 18.50 (470) | 1.64 (42) | 2.31 (59) | 0.31 (8) | 0.75 | 1.0 | | |
| | | | E.H. | N, R6 | 14.88 (378) | 7.25 (184) | 16.31 (414) | 2.56 (65) | 9.75 (248) | 15.00 (381) | 0.63 (16) | 3.19 (81) | 20.88 (530) | 2.06 (52) | 2.63 (67) | 0.31 (8) | 0.75 | 1.50 | | |
| M.H. | A3, C, C6, T, N, P, R6 | | | | | | | | | | | | | | | | | | | |
| 60 | SPW | 2-5 | E.H. | Standard, A12, C, C6, P, X | 8.13 (206) | 7.88 (200) | 16.19 (411) | 1.56 (40) | 5.00 (127) | 15.00 (381) | 0.60 (15) | 1.94 (49) | 14.75 (375) | 2.00 (51) | 2.63 (67) | 0.31 (8) | 0.75 | 1.50 | | |
| | | | M.H. | Standard, A3, C, C6, P, X | | | | | | | | | | | | | | | | |
| | | | E.H. | T, N, R6 | 14.88 (378) | 7.25 (184) | 16.31 (414) | 2.56 (65) | 9.75 (248) | 15.00 (381) | 0.63 (16) | 3.88 (98) | 20.88 (530) | 2.06 (52) | 2.63 (67) | 0.31 (8) | 0.75 | 1.50 | | |
| | | | M.H. | A3, C, C6, T, N, P, R6 | | | | | | | | | | | | | | | | |
| 100 | SQW | 2, 3 | E.H. | Standard, A12, C, C6, F, N, R6, P, T, T10-13, X | 18.15 (461) | 8.77 (223) | 32.21 (818) | 3.08 (78) | 12.00 (305) | 30.50 (775) | 0.61 (15) | 3.67 (93) | 26.71 (678) | 2.58 (66) | 3.19 (81) | 0.44 (11) | 0.75 | 2.50 | | |
| | | | M.H. | Standard, A3, C, C6, F, N, P, R6, T, T10-13, X | | | | | | | | | | | | | | | | |
| | | | E.H. | Standard, A12, C, C6, F, P [1] | 18.15 (461) | 8.77 (223) | 32.21 (818) | 3.08 (78) | 12.00 (305) | 30.50 (775) | 0.61 (15) | 3.67 (93) | 26.71 (678) | 2.58 (66) | 3.19 (81) | 0.44 (11) | 0.75 | 2.50 | | |
| | | | M.H. | Standard, A3, C, C6, P [1] | | | | | | | | | | | | | | | | |
| | | E.H. | N, R6, T, T10-13 | 22.15 (563) | 9.77 (248) | 42.21 (1072) | 3.08 (78) | 16.00 (406) | 40.50 (1029) | 0.61 (15) | 3.67 (93) | 31.71 (805) | 2.33 (59) | 2.88 (73) | 0.44 (11) | 0.75 | 2.50 | | | |
| | | M.H. | N, R6, T, T10-13 | | | | | | | | | | | | | | | | | |
| | | 200 | SVW | All | E.H. and M.H. | Standard and All Forms | 22.15 (563) | 9.77 (248) | 42.21 (1072) | 3.08 (78) | 16.00 (406) | 40.50 (1029) | 0.61 (15) | 3.67 (93) | 31.71 (805) | 2.33 (59) | 2.88 (73) | 0.44 (11) | 0.75 | 2.50 |
| | | 300 | SXW | All | E.H. and M.H. | Standard and All Forms | 17.21 (437) | 12.63 (321) | 47.21 (1199) | 4.11 (104) | 9.00 (229) | 46.00 (1168) | 0.61 (15) | 4.59 (117) | 28.32 (719) | 3.11 (79) | 5.75 (146) | 0.56 (14) | 0.75 | 3.50 |
| 400, 600 | SYW, SZW | All | E.H. and M.H. | Standard and All Forms | 20.21 (513) | 12.13 (308) | 65.21 (1656) | 4.11 (104) | 12.00 (305) | 64.00 (1626) | 0.61 (15) | 4.59 (117) | 30.82 (783) | 2.67 (68) | 4.50 (114) | 0.56 (14) | 0.75 [2] | Two 3.0 [2] | | |
| 800 | SJW | 2-3 | With or Without Any Forms | | 34.50 (876) | 23.50 (597) | 101.00 (2565) | Floor Mounting | | | | | | | | | | | | |

[1] All K forms.

[2] X hub is 0.25 in. left of center. W hub shown is another X hub. K dimension is the distance between two X hubs. Actual W hub is located 3.187 in. to the right of the X hub shown.

Table 32: NEMA 4 & 4X



Lighting Contactors

Approximate Dimensions—Non-Combination

NEMA 12 enclosures can be field modified for outdoor non-corrosive and non-service entrance rated applications:

- Watertight conduit hubs or equivalent provision shall be used for watertight connection at the conduit entrance when the conduit enters at a level higher than the lowest live part.
- Drain holes of 1/8 inch diameter shall be added to the bottom of the enclosure.

Table 33: NEMA 12/3R Non-Combination Lighting Contactors

| Ampere Rating | Type | No. of Poles | Forms <i>E.H. = Electrically Held</i> <i>M.H. = Mechanically Held</i> | | Dimensions, in. (mm) [1] | | | | | | | | | |
|---------------|-----------|--------------|---|---|--------------------------|----------------|-----------------|----------------|----------------|-----------------|--------------|---------------|----------------|--------------|
| | | | | | A | B | C | D | E | F | G | H | I | J |
| 30 | LA LXA | Any | Standard, F, R6, Y48 | | 8.13 (206) | 8.50 (216) | 15.75 (400) | 1.56 (40) | 5.00 (127) | 15.00 (381) | 0.31 (8) | 2.13 (54) | 14.75 (375) | 0.31 (8) |
| | | | A3, A12, C, C6, P, T | | 14.88 (378) | 7.88 (200) | 16.00 (406) | 2.56 (65) | 9.75 (248) | 15.00 (381) | 0.5 (13) | 3.66 (93) | 21.25 (540) | 0.31 (8) |
| 30 | SMA | 2-5 | E.H. | Standard, A12, C, C6, P, X | 6.38 (162) | 8.53 (217) | 12.75 (324) | 1.56 (40) | 3.25 (83) | 12.00 (305) | 0.38 (10) | 3.56 (90) | 12.50 (318) | 0.31 (8) |
| | | | M.H. | Standard, F, P, X | | | | | | | | | | |
| | | | E.H. | T | 11.88 (302) | 7.75 (197) | 13.50 (343) | 2.56 (65) | 6.75 (171) | 12.75 (324) | 0.38 (10) | 3.66 (93) | 18.12 (460) | 0.31 (8) |
| | | | M.H. | A3, C, C6, T, N, P, R6 | | | | | | | | | | |
| 60 | SPA | 2-5 | E.H. | Standard, A12, C, C6, P, X | 8.13 (206) | 9.28 (236) | 16.00 (406) | 1.56 (40) | 5.00 (127) | 15.00 (381) | 0.50 (13) | 3.66 (93) | 15.38 (391) | 0.31 (8) |
| | | | M.H. | Standard, A3, C, C6, P, X | | | | | | | | | | |
| | | | E.H. | T, N, R6 | 14.88 (378) | 7.88 (200) | 15.75 (400) | 2.56 (65) | 9.75 (248) | 15.00 (381) | 0.38 (10) | 3.66 (93) | 21.25 (540) | 0.31 (8) |
| | | | M.H. | A3, C, C6, T, N, P, R6 | | | | | | | | | | |
| 100 | SQA | 2, 3 | E.H. | Standard, A12, C, C6, F, N, R6, P, T, T10-13, X | 18.15 (461) | 9.24 (234) | 31.50 (800) | 3.08 (78) | 12.00 (305) | 30.50 (775) | 0.50 (13) | 3.67 (93) | 26.71 (678) | 0.44 (11) |
| | | | M.H. | Standard, A3, C, C6, F, N, P, R6, T, T10-13, X | | | | | | | | | | |
| | | 4, 5 | E.H. | Standard, A12, C, C6, F, N, P [2] | 22.15 (563) | 10.24 (260) | 41.50 (1054) | 3.08 (78) | 16.00 (406) | 40.50 (1029) | 0.50 (13) | 3.67 (93) | 31.71 (805) | 0.44 (11) |
| | | | M.H. | Standard, A3, C, C6, P [2] | | | | | | | | | | |
| | | | E.H. | N, R6, T, T10-13 [2] | 22.15 (563) | 10.24 (260) | 41.50 (1054) | 3.08 (78) | 16.00 (406) | 40.50 (1029) | 0.50 (13) | 3.67 (93) | 31.71 (805) | 0.44 (11) |
| | | | M.H. | N, R6, T, T10-13 [2] | | | | | | | | | | |
| 200 | SVW | All | E.H. and M.H. | Standard and All Forms | 22.15 (563) | 10.24 (260) | 41.50 (1054) | 3.08 (78) | 16.00 (406) | 40.50 (1029) | 0.50 (13) | 3.67 (93) | 31.71 (805) | 0.44 (11) |
| 300 | SXW | All | E.H. and M.H. | Standard and All Forms | 17.21 (437) | 13.33 (339) | 47.00 (1193) | 4.11 (104) | 9.00 (229) | 46.00 (1168) | 0.50 (13) | 4.59 (117) | 28.32 (719) | 0.56 (14) |
| 400, 600 | SYW, SZW | All | E.H. and M.H. | Standard and All Forms | 20.21 (513) | 12.13 (308) | 65.00 (1651) | 4.11 (104) | 12.00 (305) | 64.00 (1626) | 0.50 (13) | 5.31 (135) | 30.87 (784) | 0.69 (18) |
| 800 | SJW | 2-3 | With or Without Any Forms | | 93.00 (2362) | 34.50 (876) | 23.50 (597) | Floor Mounting | | | | | | |

[1] See Figure 8 for all dimensions except 800 A; for 800 A dimensions, see Figure 9.

[2] All Type K Forms using Class 9001 Type K control units.

Figure 8: NEMA 12/3R, 30-600 A

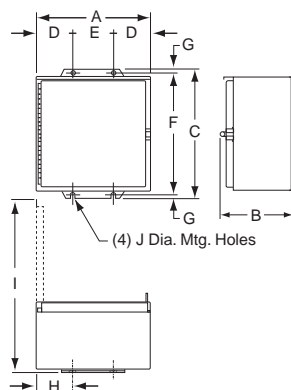
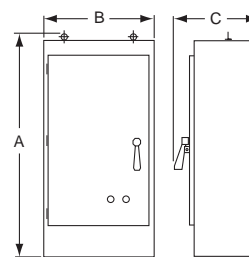


Figure 9: NEMA 12/3R, 800 A



Lighting Contactors

Approximate Dimensions—Combination

Combination Lighting Contactors

Dimensions are the same for Form F4T (standard control transformer), Form F4T11 (100 VA extra capacity), and Form F4T12 (200 VA extra capacity).

Table 34: NEMA 1 Combination Lighting Contactors, 30–60 A

| Ampere Rating | Type | Dimensions, in. (mm) (see Figure 10) | | | | | | | | | | | | | | Top & Bottom, in. | | Sides, in. | |
|---------------|-----------|--------------------------------------|----------------|---------------|----------------|----------------|----------------|--------------|--------------|---------------|--------------|--------------|--------------|--------------|--------------|-------------------|-------------------|-------------------|------|
| | | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | W | X | Y |
| 30 | SMG6-, 8- | 9.50 (241) | 22.50 (572) | 8.37 (213) | 6.38 (162) | 20.50 (521) | 14.68 (373) | 1.81 (46) | 1.69 (43) | 3.37 (86) | 3.38 (86) | 1.06 (27) | 3.25 (83) | 2.18 (55) | 1.25 (32) | 0.87 (22) | 0.50–0.75 | 0.50–0.75 | 0.50 |
| | SMG7-, 9- | 13.75 (349) | 23.00 (584) | 8.36 (212) | 10.63 (270) | 21.00 (533) | 20.07 (510) | 1.87 (47) | 1.88 (48) | 3.76 (96) | 2.06 (52) | 1.06 (27) | 3.25 (83) | 2.18 (55) | 1.25 (32) | 0.87 (22) | 0.50– 0.75–1.0 | 0.50– 0.75–1.0 | 0.50 |
| 60 | SPG6-, 8- | 10.50 (267) | 26.00 (660) | 9.62 (244) | 7.37 (187) | 24.00 (610) | 17.00 (432) | 2.12 (54) | 2.00 (51) | 4.00 (102) | 2.06 (52) | 1.06 (27) | 3.25 (83) | 2.18 (55) | 1.25 (32) | 0.87 (22) | 1.0–1.25 | 0.50–0.75 | 0.50 |
| | SPG7-, 9- | 15.00 (381) | 28.75 (730) | 9.62 (244) | 11.62 (295) | 26.25 (667) | 21.50 (546) | 2.18 (55) | 2.00 (51) | 4.00 (102) | 2.56 (65) | 1.31 (33) | 3.25 (83) | 2.18 (55) | 1.25 (32) | 0.87 (22) | 1.0–1.25 | 0.50–0.75 | 0.50 |

Table 35: NEMA 1 Combination Lighting Contactors, 100–600 A

| Ampere Rating | Type | Dimensions, in. (mm) (see Figure 11) | | | | | | | | | | | | | | Top & Bottom, in. | | Sides, in. | |
|---------------|-------------------------|--------------------------------------|-----------------|----------------|--------------------------|---------------|----------------|-----------------|--------------|---------------|--------------|---------------|---------------|---|--------------|-------------------|--------------------|------------|------|
| | | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | W | X | Y |
| 100 | SQG6-, 7-, SQG81, 91 | 15.25 (387) | 39.50 (1003) | 10.60 (269) | 9.25 (235) | 3.00 (76) | 22.68 (576) | 41.00 (1041) | 2.69 (68) | 5.38 (137) | 2.83 (72) | 3.74 (95) | 5.00 (127) | — | 1.21 (31) | 0.90 (23) | 1.–1.25 2.–2.50 | 0.50–0.75 | 0.50 |
| 200 | SVG6-, 7-, SVG81, 91 | 16.00 (406) | 50.00 (1270) | 10.68 (271) | 10.00 (254) | 3.00 (76) | 23.68 (601) | 51.50 (1308) | 2.69 (68) | 5.38 (137) | 2.83 (72) | 3.74 (95) | 5.00 (127) | — | 1.21 (31) | 0.90 (23) | 2.50 | 0.50–0.75 | 0.50 |
| 200 | SXG6-, 7- | 20.00 (508) | 75.00 (1905) | 14.37 (365) | 12.00 (305) | 4.00 (102) | 29.43 (748) | 77.00 (1956) | 3.19 (81) | — | 3.52 (89) | 7.00 (178) | 9.25 (235) | — | — | — | 0.50–0.75 | 3.00 | — |
| | SXG81, 91 | 20.00 (508) | 63.00 (1600) | 14.37 (365) | 12.00 (305) | 4.00 (102) | 27.43 (697) | 65.00 (1651) | 3.19 (81) | — | 3.52 (89) | 7.00 (178) | 5.00 (127) | — | — | — | 0.50–0.75 | 3.00 | — |
| 400 | SYG81, 91 | 36.00 (914) | 90.00 (2286) | 17.00 (432) | Floor Mounting Enclosure | | | | | | | | | | | — | — | — | |
| 600 | SZG81, 91 | | | | | | | | | | | | | | | — | — | — | |

Figure 10: NEMA 1, 30–60 A

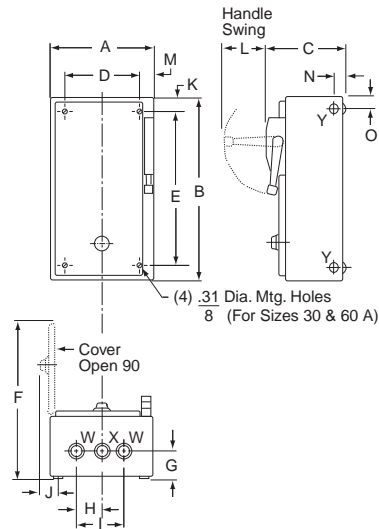
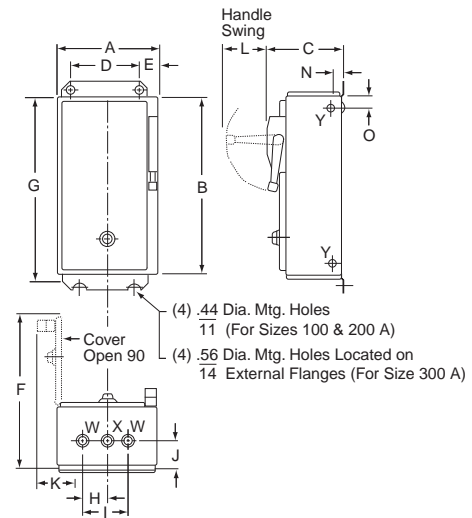


Figure 11: NEMA 1, 100–600 A



Lighting Contactors Approximate Dimensions—Combination

Table 36: NEMA 4, 4X Combination Lighting Contactors

| Ampere Rating | Type | Dimensions, in. (mm) | | | | | | | | | | | | Hubs, in. | |
|---------------|------------------------|----------------------|-------------|--------------|--------------------------|------------|-------------|--------------|-----------|------------|-----------|-----------|-------------|-----------|------|
| | | A | B | C | D | E | F | G | H | I | J | K | L | W | X |
| 30 | SMW6-, 8- | 9.50 (241) | 8.36 (212) | 24.76 (629) | 3.25 (83) | 2.50 (64) | 4.50 (114) | 23.50 (597) | 0.63 (16) | 3.00 (76) | 1.62 (41) | 2.31 (59) | 14.31 (363) | 0.75 | 1.0 |
| | SMW7-, 9- | 13.75 (349) | 8.36 (212) | 25.26 (642) | 3.25 (83) | 4.75 (121) | 4.25 (108) | 24.00 (610) | 0.63 (16) | 5.25 (133) | 1.62 (41) | 2.31 (59) | 20.14 (512) | 0.75 | 1.0 |
| 60 | SPW6-, 8- | 10.50 (267) | 9.61 (244) | 28.26 (718) | 3.25 (83) | 2.50 (64) | 5.50 (140) | 27.00 (686) | 0.63 (16) | 3.00 (76) | 2.00 (51) | 2.63 (67) | 16.56 (421) | 0.75 | 1.50 |
| | SPW7-, 9- | 15.00 (381) | 9.61 (244) | 31.01 (788) | 3.25 (83) | 5.38 (137) | 4.25 (108) | 29.75 (756) | 0.63 (16) | 5.88 (149) | 2.00 (51) | 2.63 (67) | 21.06 (535) | 0.75 | 1.50 |
| 100 | SQW6-, 7- SQW81, 91 | 15.25 (387) | 10.60 (269) | 41.76 (1061) | 5.00 (127) | 2.50 (64) | 10.25 (260) | 40.50 (1028) | 0.63 (16) | 3.24 (82) | 2.61 (66) | 3.19 (81) | 22.18 (563) | 0.75 | 2.50 |
| 200 | SVW6-, 7- SVW81, 91 | 16.00 (406) | 10.56 (268) | 52.26 (1327) | 5.00 (127) | 2.50 (64) | 11.00 (279) | 51.00 (1295) | 0.63 (16) | 3.24 (82) | 2.61 (66) | 3.19 (81) | 23.00 (584) | 0.75 | 2.50 |
| 300 | SXW6-, 7- SXW81, 91 | 20.00 (508) | 14.21 (361) | 78.12 (1984) | 9.25 (235) | 4.00 (102) | 12.00 (305) | 77.00 (1956) | 0.56 (14) | 4.77 (121) | 2.96 (75) | 3.50 (89) | 29.43 (748) | 0.75 | 3.50 |
| | SYW81, 91 | 20.00 (508) | 14.21 (361) | 66.12 (1679) | 5.00 (127) | 4.00 (102) | 12.00 (305) | 65.00 (1651) | 0.56 (14) | 4.77 (121) | 2.96 (75) | 3.50 (89) | 27.43 (697) | 0.75 | 3.50 |
| 400 | SZW81, 91 | 36.00 (914) | 17.71 (450) | 98.00 (2489) | Floor Mounting Enclosure | | | | | | | | | — | — |

Table 37: NEMA 12/3R Combination Lighting Contactors

| Ampere Rating | Type | Dimensions, in. (mm) | | | | | | | | | | |
|---------------|------------------------|----------------------|-------------|--------------|--------------------------|------------|-------------|--------------|-----------|------------|-------------|--|
| | | A | B | C | D | E | F | G | H | I | J | |
| 30 | SMA6-, 8- | 9.50 (241) | 8.36 (212) | 24.26 (616) | 3.25 (83) | 2.50 (64) | 4.50 (114) | 23.50 (597) | 0.38 (10) | 3.25 (83) | 14.31 (363) | |
| | SMA7-, 9- | 13.75 (349) | 10.10 (257) | 24.76 (629) | 3.25 (83) | 4.75 (121) | 4.25 (108) | 24.00 (610) | 0.38 (10) | 5.50 (140) | 22.00 (559) | |
| 60 | SPA6-, 8- | 10.50 (267) | 9.61 (244) | 27.76 (705) | 3.25 (83) | 2.50 (64) | 5.50 (140) | 27.00 (686) | 0.38 (10) | 3.25 (83) | 16.56 (421) | |
| | SPA7-, 9- | 15.00 (381) | 10.98 (279) | 30.51 (775) | 3.25 (83) | 5.38 (137) | 4.25 (108) | 29.75 (756) | 0.38 (10) | 6.13 (156) | 23.43 (595) | |
| 100 | SQA6-, 7- SQA81, 91 | 15.25 (387) | 10.59 (259) | 42.00 (1067) | 5.00 (127) | 3.00 (76) | 9.25 (235) | 41.00 (1041) | 0.50 (13) | 3.75 (95) | 22.31 (567) | |
| 200 | SVA6-, 7- SVA81, 91 | 16.00 (406) | 10.52 (267) | 52.50 (1334) | 5.00 (127) | 3.00 (76) | 10.00 (254) | 51.50 (1308) | 0.50 (13) | 3.75 (95) | 23.00 (584) | |
| 300 | SXA6-, 7- SXA81, 91 | 20.00 (508) | 14.21 (361) | 78.00 (1981) | 9.25 (235) | 4.00 (102) | 12.00 (305) | 77.00 (1956) | 0.50 (13) | 7.75 (197) | 29.43 (748) | |
| | SYA81, 91 | 20.00 (508) | 14.21 (361) | 66.00 (1676) | 5.00 (127) | 4.00 (102) | 12.00 (305) | 65.00 (1651) | 0.50 (13) | 7.75 (197) | 27.43 (697) | |
| 400 | SZA81, 91 | 36.00 (914) | 17.71 (450) | 90.00 (2286) | Floor Mounting Enclosure | | | | | | | |
| 600 | SZA81, 91 | | | | Floor Mounting Enclosure | | | | | | | |

Figure 12: NEMA 4

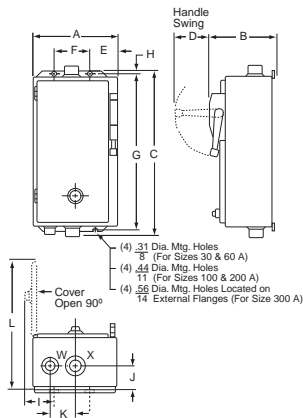
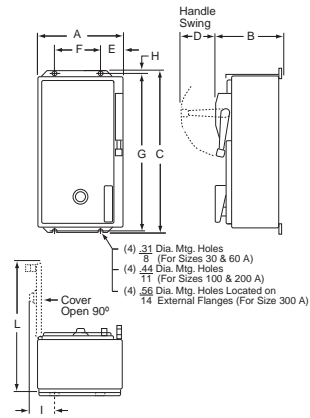


Figure 13: NEMA 12/3R



Lighting Contactors
Approximate Dimensions—Night-Master™

Night-Master™ Outdoor Lighting Contactors

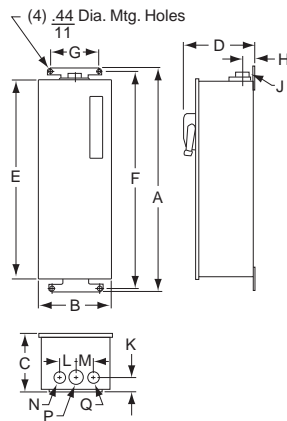
Table 38: Night-Master Outdoor Lighting Contactors (Short Version), NEMA 3R

| Ampere Rating | Description | Type | | | | | | | | | Conduit J | K | L | M | Knockouts | | |
|---------------|------------------------|-----------|-----------------|----------------|---------------|----------------|-----------------|-----------------|---------------|--------------|------------|--------------|--------------|--------------|---------------|----------------------|---------------------|
| | | | A | B | C | D | E | F | G | H | | | | | N | P | Q |
| 30 | Disconnect Switch Type | SMC61, 62 | 23.50 (597) | 15.00 (381) | 8.42 (214) | 10.50 (267) | 19.00 (483) | 22.38 (568) | 7.00 (178) | 2.18 (55) | 1.50 (38) | 2.13 (54) | 2.13 (54) | 2.13 (54) | 0.50– 0.75 | 1.0–1.25 1.50 | 0.50– 0.75 |
| | Circuit Breaker Type | SMC81 | | | | | | | | | | | | | | | |
| 60 | Disconnect Switch Type | SPC61, 62 | 34.53 (877) | 20.00 (508) | 8.42 (214) | 10.50 (267) | 30.04 (763) | 33.41 (849) | 7.00 (178) | 2.18 (55) | 2.0 (2.50) | 2.68 (68) | 2.68 (68) | 3.44 (87) | 0.50– 0.75 | 1.0–1.25 2.0–2.50 | 1.0–1.25 1.5–2.0 |
| | Circuit Breaker Type | SPC81 | | | | | | | | | | | | | | | |
| 100 | Disconnect Switch Type | SQC61, 62 | 48.37 (1229) | 19.00 (483) | 9.12 (232) | 10.53 (267) | 44.00 (1118) | 47.25 (1200) | 7.00 (178) | 2.18 (55) | 2.50 (64) | 2.68 (68) | 2.68 (68) | 3.44 (87) | 0.50– 0.75 | 1.0–1.25 2.0–2.50 | 1.0–1.25 1.5–2.0 |
| | Circuit Breaker Type | SQC81 | | | | | | | | | | | | | | | |
| 200 | Disconnect Switch Type | SVC61, 62 | 56.37 (1432) | 19.00 (483) | 9.12 (232) | 10.53 (267) | 52.00 (1321) | 55.25 (1403) | 7.00 (178) | 2.18 (55) | 2.50 (64) | 2.68 (68) | 2.69 (68) | 3.44 (87) | 0.50– 0.75 | 1.0–1.25 2.0–2.50 | 1.0–1.25 1.5–2.0 |
| | Circuit Breaker Type | SVC81 | | | | | | | | | | | | | | | |

Table 39: Night-Master Outdoor Lighting Contactors (Long Version), NEMA 3R

| Ampere Rating | Description | Type | | | | | | | | | Conduit J | K | L | M | Knockouts | | |
|---------------|------------------------|-----------|-----------------|----------------|---------------|----------------|-----------------|-----------------|---------------|--------------|------------|--------------|--------------|--------------|---------------|----------------------|---------------------|
| | | | A | B | C | D | E | F | G | H | | | | | N | P | Q |
| 30 | Disconnect Switch Type | SMC63, 64 | 38.88 (987) | 15.00 (381) | 8.42 (214) | 10.42 (265) | 34.38 (873) | 37.76 (959) | 7.00 (178) | 2.18 (55) | 1.50 (38) | 2.13 (54) | 2.13 (54) | 2.13 (54) | 0.50– 0.75 | 1.0–1.25 1.50 | 0.50–0.75 |
| | Circuit Breaker Type | SMC83 | | | | | | | | | | | | | | | |
| 60 | Disconnect Switch Type | SPC63, 64 | 42.53 (1080) | 20.00 (508) | 8.42 (214) | 10.42 (265) | 38.04 (966) | 41.41 (1052) | 7.00 (178) | 2.18 (55) | 2.0 (2.50) | 2.68 (68) | 2.68 (68) | 3.44 (87) | 0.50– 0.75 | 1.0–1.25 2.0–2.50 | 1.0–1.25 1.5–2.0 |
| | Circuit Breaker Type | SPC83 | | | | | | | | | | | | | | | |
| 100 | Disconnect Switch Type | SQC63, 64 | 56.37 (1432) | 19.00 (483) | 9.12 (232) | 10.53 (267) | 52.00 (1321) | 55.25 (1403) | 7.00 (178) | 2.18 (55) | 2.50 (64) | 2.68 (68) | 2.69 (68) | 3.44 (87) | 0.50– 0.75 | 1.0–1.25 2.0–2.50 | 1.0–1.25 1.5–2.0 |
| | Circuit Breaker Type | SQC83 | | | | | | | | | | | | | | | |
| 200 | Disconnect Switch Type | SVC63, 64 | 56.37 (1432) | 19.00 (483) | 9.12 (232) | 10.53 (267) | 52.00 (1321) | 55.25 (1403) | 7.00 (178) | 2.18 (55) | 2.50 (64) | 2.68 (68) | 2.69 (68) | 3.44 (87) | 0.50– 0.75 | 1.0–1.25 2.0–2.50 | 1.0–1.25 1.5–2.0 |
| | Circuit Breaker Type | SVC83 | | | | | | | | | | | | | | | |

Figure 14: Night-Master



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