



# Bulletin 500/500F/509 Contactors and Starters Installation

**WARNING**  
**AVERTISSEMENT**  
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To prevent electrical shock, disconnect from power source before installing or servicing. Install in suitable enclosure. Keep free from contaminants.

Avant le montage et la mise en service, couper l'alimentation secteur pour éviter toute décharge. Prévoir une mise en coffret ou armoire appropriée. Protéger le produit contre les environnements agressifs.

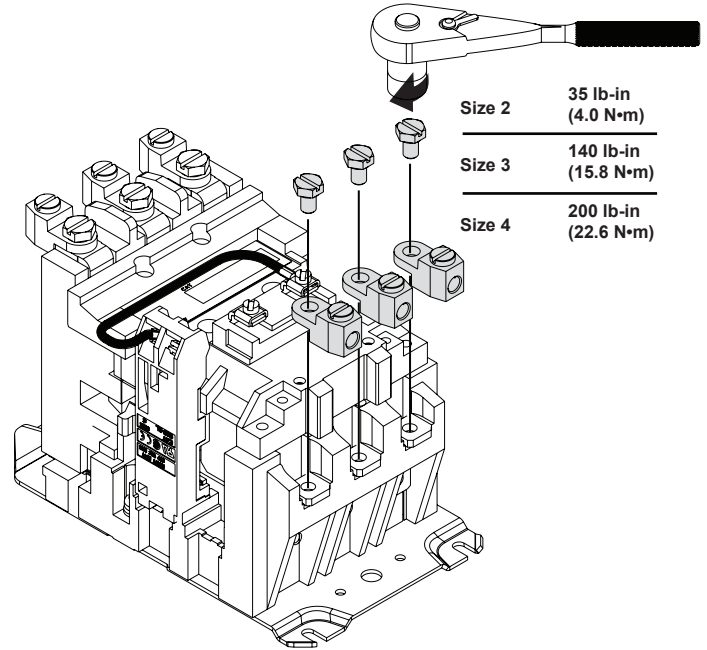
Desconéctese de la corriente eléctrica, antes de la instalación o del servicio, a fin de impedir sacudidas eléctricas. Instálelo en una caja apropiada. Manténgalo libre de contaminantes.

For all Catalog Numbers:  
 Control Connections Wire Range: AWG 18 -12  
 Control Connections Tightening Torque: 12 lb-in (1.4 N·m)

**Power Wires and Tightening Torques**

CONTACTOR/STARTER	NEMA SIZE	WIRE RANG (AWG)	TIGHTENING TORQUE lb-in(N·m)		
			LUG TO TERMIANL	WIRE IN LUG	OVERLOAD RELAY TO CONTACTOR
500-A/500F-A/509-A	0	14 - 8	-	20(2.3)	23(2.6)
500-B/500F-B/509-B	1	14 - 8	-	20(2.3)	23(2.6)
500-C/500F-C/509-C	2	14 - 8	35(4.0)	45(5.1)	35(4.0)
500-D/500F-D/509-D	3	8 - 1/0	140(15.8)	150(17.0)	140(15.8)
500-E/500F-E/509-E	4	8 - 1/0	200(22.6)	275(31.1)	200(22.6)

NOTE: Use 60° / 75° C Copper Wire Only.



NOTE: For NEMA Sizes 0, 1 and 2, if space is critical, the overload relay mounting plate can be detached from the contactor mounting plate by removing the (2) #8-32 screws.

## Short Circuit Current Ratings

**High Fault Short Circuit Ratings**

Contactors and Starters Protected by Fuses, Inverse-Time and Instantaneous-Trip Circuit Breakers

CONTACTOR/STARTER	NEMA SIZE	VOLTAGE	MAX. FUSE RATING			MAX. A-B BUL.			
						140G CIRCUIT BREAKER / 140MG CIRCUIT PROTECTOR (note c)			
			CLASS R	CLASS J	SCCR (kA)	CONTACTORS AND STARTERS	STARTERS ONLY	SCCR (kA)	RATING (A)
500-A*/500F-A*/509-A*	0 (note d)	240	30	30	100	140G-G/H -C30	140MG-G/H -C30	65	30
		480	30	30		140G-G/H -C30	140MG-G/H -C30	65	30
		600	30	30		140G-H/HC -C15	140MG-H -C15	25	15
500-B*/500F-B*/509-B*	1	240	60	100	100	140G-G/H -C30	140MG-G/H -C30	65	30
		480	30	50		140G-G/H -C30	140MG-G/H -C30	65	30
		600	30	50		140G-H/HC -C30	140MG-H -C30	25	30
500-C*/500F-C*/509-C*	2	240	100	200	100	140G-G/H -D10	140MG-G/H -D10	65	100
		480	60	100		140G-G/H -C50	140MG-G/H -C50	65	50
		600	60	200		140G-H/HC -C50	140MG-H -C50	25	50
500-D*/500F-D*/509-D*	3	240	300	500	100	140G-I/J -D15	140MG-I/J -D15	65	150
		480	200	350		140G-G/H -D10	140MG-G/H -D10	65	100
		600	100	200		140G-H/HC/JJC -D10/15*	140MG-H/J -D10/15*	25	100/150*
500-E*/500F-E*/509-E*	4	240	300	500	100	140G-I/J -D15	140MG-I/J -D15	65	150
		480	200	400		140G-J/JC -D25	140MG-J -D25	65	250
		600	100	400		140G-J/JC -D15	140MG-J -D15	25	150

**Standard Fault Short Circuit Ratings**

CONTACTOR/STARTER (notes a & b)	NEMA SIZE	MAX. VOLTAGE (V)	SCCR (kA)
500-*/500F-*/509-*	0,1,2 & 3	600 3Ø	5
500-E*/500F-E*/509-E*	4	600 3Ø	10

**General Notes for Short Circuit Current Rating (SCCR) Information**

- The ratings shown are in accordance with UL 508 and CSA C22.2 No. 14
- The devices and ratings shown are those most commonly needed; additional ratings may be available
- Additional limitations may apply. Refer to applicable national and local electrical codes
- Suitable for use on a circuit capable of delivering not more than 5,000 RMS for size 0,1,2,3 and not more than 10,000 RMS symmetrical amperes, 600 V max.

**Specific Notes from SCCR Tables**

- \*\* Includes suffixes A\*, B\*, C\* & D\*. Refer to note b.
- \* Includes all contactor variations following the Size letter, and starter variations with eutectic or E1 Plus overload relays (except 2 - 1 FLA range)
- 140G-J and 140MG-J may be substituted for 140G-I and 140MG-I (at the same ratings), respectively. 140G-H and 140MG-H may be substituted for 140G-G and 140MG-G (at the same ratings), respectively. Number after "G" can be 6, Number after "H" can be 6, 0 or 15, Number after "I" can be 2 or 3, Number after "J" can be 6 or 0. \* Rating 100A for 140G-H/HC -D10 or 150A for 140G-J/JC -D15
- d) For Size 0, combinations with 140G-\* circuit breakers include starters with eutectic overloads (not E1 Plus)

## Renewal Parts and Accessory Kits

### Renewal Contact Kit for Power Poles (One Pole Per Part No.)

Size 0 .....	Part No. 40410-331-51
Size 1 .....	Part No. 40410-331-52
Size 2 .....	Part No. 40420-322-51
Size 3 .....	Part No. 40430-300-51
Size 4.....	Part No. 40440-300-51

**Operating Coil**.....(Specify number and rating on coil label)

### Auxiliary Contacts

Single circuit (1 N.O.).....	Catalog No. 595-A
Single circuit (1 N.C.).....	Catalog No. 595-B
Single circuit (1 N.C. Late Break) .....	Catalog No. 595-BL
Double circuit (2 N.O.).....	Catalog No. 595-AA
Double circuit (2 N.C.).....	Catalog No. 595-BB
Double circuit (1 N.O.-1 N.C.).....	Catalog No. 595-AB

### Power Pole Adder Kit

Sizes 0 and 1.....	Catalog No. 599-P01A
Size 2.....	Catalog No. 599-P2A
Size 3.....	Catalog No. 599-P3A
Size 4.....	Catalog No. 599-P4A

**NOTE:** Contactor sizes 0, 1 and 2 with 50 Hz coils and all size 3 and 4 contactors require a special coil (coil number ending with the letter "C") whenever one or two power poles are added.

### Control Circuit Fusing Kit

Single Pole, Rejection Fuse Only.....Catalog No. 599-FR04

**NOTE:** When contactor-mounted, each kit occupies the space of one double circuit auxiliary.

### Surge Suppressor

12-120 Volt AC .....	Catalog No. 599-K04
240 Volt AC .....	Catalog No. 599-KA04

### Tie Point Terminal

Sizes 0, 1 and 2.....	Catalog No. 599-TP02
Sizes 3 and 4.....	Catalog No. 599-TP34

### Control Terminal Kit

Sizes 0, 1 and 2 .....	Catalog No. 599-CT02
Size 3 .....	Catalog No. 599-CT3
Size 4 .....	Catalog No. 599-CT4

### Load Terminal Shield for Top Wired Contactor

Sizes 0, 1 and 2.....	Catalog No. 599-TS02
Sizes 3 and 4.....	Catalog No. 599-TS34

### Top Wiring Terminal Kit (3 terminals)

Sizes 0 and 1 .....	Catalog No. 599-TW01
Size 2.....	Catalog No. 599-TW2
Size 3.....	Catalog No. 599-TW3
Size 4.....	Catalog No. 599-TW4

### Timer Attachment Kit

Left Hand On Delay.....	Catalog No. 596-TL32
Left Hand Off Delay.....	Catalog No. 596-TL33
Right Hand On Delay.....	Catalog No. 596-TR32
Right Hand Off Delay.....	Catalog No. 596-TR33

**NOTE:** For size 2 contactors a special coil (coil number ending with the letter "C") is required with any timer.

**When ordering specify catalog number and series letter on the device.**

Note: additional control circuit overcurrent protection may be required. refer to the National Electrical Code.

The current rating of the control circuit conductors furnished with this device is 15 amperes for sizes 0 through 3 and 20 amperes for size 4.

Maintain this equipment in accordance with guidelines of NFPA-70b, Electrical Equipment Maintenance.