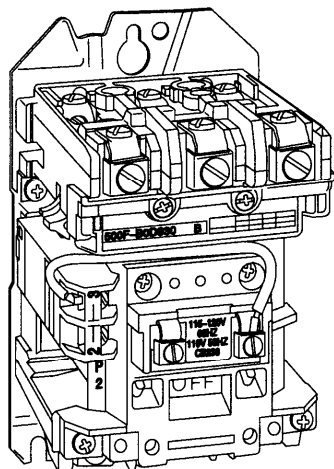




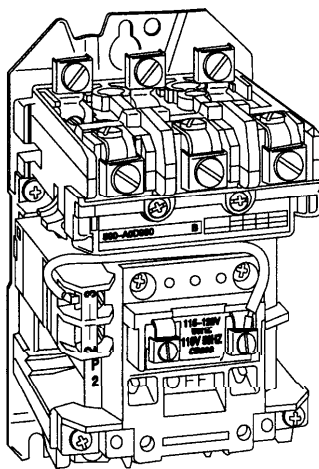
RELIABILITY

NEMA AC Contactors for Motor Loads (Bulletin 500) and Non-motor Loads (Bulletin 500L) Sizes 0 through 4 (all series), Size 5 (series L)

Renewal Parts



Bulletin 500F - Size 1
3-Pole Motor Load
Feed-through Construction
(Bulletin 500FL similar in appearance)



Bulletin 500 -Size 0
3-Pole Motor Load
Top Wiring Construction
(Bulletin 500L similar in appearance)

Important: Save renewal parts list for future reference.

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Your order must include:

- . Part No.
- Description of part
- Cat. No. of contactor
- Series letter of contactor

Renewal Parts

Bulletin 500 Line of NEMA AC Contactors
 Sizes 0–4 (all series), Size 5 (series L)

Description

Bulletin 500 line of contactors (NEMA sizes 0 through 5) offer a wide variety of applications. Contactors are available for control of motors when overload protection is provided separately, or for control of non-motor loads such as lighting and resistance heating.

Operating Environment

Contactors should always be maintained in a clean and dry condition for dependable operation. Choice of the proper NEMA enclosure type for the application is very important.

Preventive Maintenance

For recommended preventive maintenance instructions of Industrial Control equipment, refer to Publication IC-906.

Wiring

For typical wiring diagrams, refer to Publication GI-2.0.

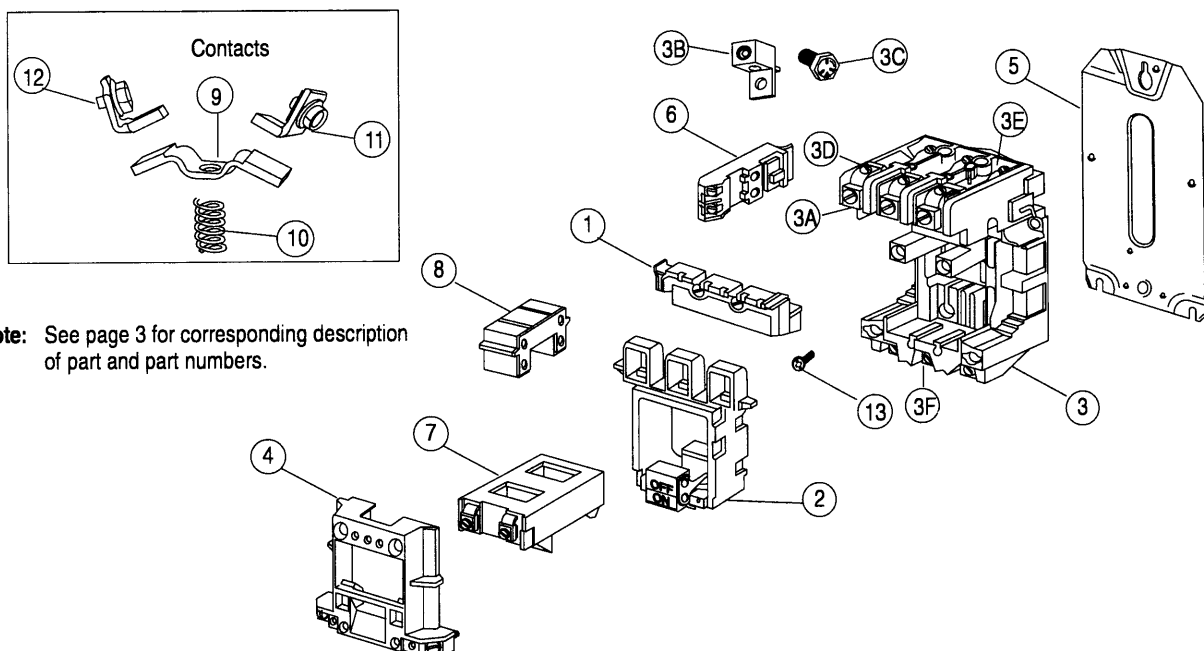


ATTENTION: To prevent electrical shock, disconnect from power source before installing or servicing. Install in suitable enclosure. Keep free from contaminants.

Contactors can be disassembled as depicted in the “exploded” illustration, Figure 1.

Primary parts illustrated are similar in appearance for all sizes. Secondary parts such as mounting plate, lugs, etc. will vary in appearance.

Figure 1



Note: See page 3 for corresponding description of part and part numbers.

Renewal Parts

Bulletin 500 Line of NEMA AC Contactors
 Sizes 0–4 (all series), Size 5 (series L)

Renewal Parts

Item	Description of Renewal Parts	Size 0 15/20A	Size 1 30A	Size 2 60A	Size 3 100A	Size 4 200A	Size 5 (Series L) 300A
		Part No.	Part No.	Part No.	Part No.	Part No.	Part No.
1	Contact Block Cover	40410-499-01	40410-499-02	40420-499-01	40430-457-51	40440-456-51	42450-800-01
2	Movable Contact Support and Armature Assembly	40410-498-01		40420-498-01	40430-452-51	40440-453-51	42450-801-01
3	Stationary Contact Block and Base Assembly	See Table Below.					
3A	Saddle Clamp Assembly (for size 0 and 1)	X-225492		—	—	—	—
3B	Lug	—	—	X-316012	40430-461-51	40440-460-51	42450-804-01
3C	Bolt	—	—	M-6289	M-6532	M-6834	—
3D	Front Terminal without Contacts	④	④	④	40430-022-02	40440-030-02	42450-302-52
3E	Rear Terminal without Contacts				40430-024-02	40440-314-51	40440-314-51
3F	Front/Rear Terminal Screw				28168-107-26	28168-502-26	Front: 28168-503-26 Rear: -502-26
4	Coil Cover	40410-496-01		40420-497-01	40430-454-51	40440-454-51	42450-803-01
5	Mounting Plate	40410-031-02		40420-014-02	40430-044-02	40440-027-02	
6	Auxiliary Contact Block (refer to page 16)	⑤ Cat. No. 595-A (used as hold-in contact)					
7	Operating Coil	See page 4					
8	Yoke (50–60 Hz)	40410-497-01		40410-497-02	40430-455-51	40440-458-51	
9	Movable Contact	Order Single Pole Contact Set					
10	Contact Spring						
11	Front Stationary Contact						
12	Rear Stationary Contact						
9–12	Single Pole Contact Set [includes (1) each item 9–12] for Motor Load Contactors	⑥ 40410-331-51	⑥ 40410-331-52	⑥ 40420-322-51	⑥ 40430-300-51	⑥ 40440-300-51	⑥ 42450-805-01
9–12	Single Pole Contact Set [includes (1) each item 9–12] for Non-motor Load and Lighting Contactors	⑥ 40410-331-53	⑥ 40410-331-54	⑥ 40420-322-52	⑥ 40430-300-52 4 Pole: 40430-300-53	⑥ 40440-325-52 4 Pole: 40430-325-53	⑥ 42450-805-02
13	Mtg. Screw w/Washer (3 req'd)	28169-100-26 (#8–32 × 5/8 in.)		28169-101-26 (#10–32 × 23/32 in.)	40430-460-51 (1/4 in. – 28 × 1-1/8 in.)	40440-459-51 (5/16 in. – 24 × 1-1/4 in.)	

Parts indicated with ⑥ are recommended spare parts.

- ① Renewal parts apply to 2–3 Power Poles. 4 Pole contactors consist of basic 2 Pole contactor with Power Pole Kits added. Refer to page 9 for replacement Power Pole Kits.
- ② This renewal parts list does not apply to Size 5 Series A construction. Refer to the nearest sales office for information.
- ③ Less contacts, order Single Pole Contact Sets as required.
- ④ Front and rear terminal assembly not available as a renewal part. Replace stationary contact block and base assembly.
- ⑤ Front Terminal Screw Part No. 28168-503-26 and Rear Terminal Screw Part No. 28168-502-26.
- ⑥ Order necessary Power Pole Kits in addition to noted Contact Sets when replacements are for use on 4 or 5 Power Pole Contactors.
- ⑦ Include Power Pole Adder.

Stationary Contact Block and Base Assembly

Size	Top Wiring Construction		Feed-through Construction	
	2 Power Poles ⑦	3 Power Poles	2 Power Poles ⑦	3 Power Poles
0 (20 A)	40410-493-03	40410-495-03	40410-492-03	40410-494-03
1 (30 A)	40410-493-04	40410-495-04	40410-492-04	40410-494-04
2 (60 A)	40420-494-02	40420-496-02	40420-493-02	40420-495-02
3 (100 A)	40430-462-53	40430-462-54	40430-462-51	40430-462-52
4 (200 A)	40440-462-53	40440-462-54	40440-462-51	40440-462-52
5 (300 A)	40450-802-01	42450-802-03	42450-802-02	42450-802-04

⑦ 4 Power Pole Contactor in top wiring construction consists of the basic 2 Pole Contactor plus two power pole kits added. Refer to page 10 for replacement Power Pole Kits.

Renewal Parts

Bulletin 500 Line of NEMA AC Contactors
 Sizes 0–4 (all series), Size 5 (series L)

⊕ Operating Coils

Coil Voltage	Frequency (Hz)	Size 0–1 Size 15/20A–30A		Size 2 Size 60A		Size 3 Size 100A		Size 4 Size 200A		Size 5 Size 300A
		2–3 Poles ①②	4 Poles① 4–5 Poles②	2 Poles①②	3–4 Poles① 3–5 Poles②	2 Poles① 2–3 Poles②	3–4 Poles① 4–5 Poles②	2 Poles① 2–3 Poles②	3–4 Poles① 4–5 Poles②	Series L③
24V	60	CB013	CB013	CC013	CC013C	CD013	CD013	—	—	—
	50	CB407	CB407C	CC407	CC407C	CD407	CD407C	CE407	—	AF407
110V	50	CB236	CB236	CC236	CC236C	CD236	CD236C	CE236	CE236C	AF236
110–115V	50	CB322	CB322C	CC322	CB322C	CD322	CD322C	CE322	CE322C	AF322
115–120V	60	CB236	CB236	CC236	CC236C	CD236	CD236C	CE236	CE236C	AF236
200–208V	60	CB249	CB249C	CC249	CC249C	CD249	CD249C	CE249	CE249C	AF249
220–230V	50	CB339	CC339	CC339	CC339C	CD339	CD339C	CE339	CE339C	AF339
230–240V	50	CB242	CB342C	CC342	CC342C	CD342	CD342C	CE342	CE342C	AF342
	60	CB254	CB254	CC254	CC254C	CD254	CD254C	CE254	CE254C	AF254
277V	60	CB260	CB260	CC260	CC260C	CD260	CD260C	CE260	CE260C	AF260
380V	50	CB354	CB354C	CC354	CC354C	CD354	CD354C	CE354	CE354C	AF354
380–400V ("KN" Code)	50	CB390	CB390C	CC390	CC390C	CD390	CD390C	CE390	CE390C	AF390
415V	50	CB357	CB357C	CC357	CC357C	CD357	CD357C	CE357	CE357C	AF357
440–460V	50	CB360	CB360C	CC360	CC360C	CD360	CD360C	CE360	CE360C	AF360
460–480V	60	CB273	CB273	CC273	CC273C	CD273	CD273C	CE273	CE273C	AF273
500V	50	CB364	CB364C	CC364	CC364C	CD364	CD364C	CE364	CE364C	AF364
575–600V	60	CB278	CB278	CC278	CC278C	CD278	CD278C	CE278	CE278C	AF278

Parts indicated with ⊕ are recommended spare parts.

- ① For Non-motor Loads (Bulletin 500L).
- ② For Motor Rated Contactors.
- ③ For Size 5 Series A coils, the nearest sales office for information.

Operating Coil Data

Contactor Size	No. of Poles	Voltamperes Burden for 60 Hz Coils④											
		24 Volts		115–120 Volts		200–208 Volts		230–240 Volts		460–480 Volts		575–600 Volts	
		Inrush	Sealed	Inrush	Sealed	Inrush	Sealed	Inrush	Sealed	Inrush	Sealed	Inrush	Sealed
0	2–5	192	29	192	29	192	29	192	29	192	29	192	29
1	2–5	192	29	192	29	192	29	192	29	192	29	192	29
2	2–3	240	29	240	29	240	29	240	29	240	29	240	29
2	4–5	315	38	315	38	315	38	315	38	315	38	315	38
3	2–3	660	45	660	45	660	45	660	45	660	45	660	45
3	4–5	840	58	840	58	840	58	840	58	840	58	840	88
4	2–3	—	—	1225	69	1225	69	1225	69	1225	69	1225	69
4	4–5	—	—	1490	96	1490	96	1490	96	1490	96	1490	96
5 (Series L)	2–3	—	—	1490	96	1490	96	1490	96	1490	96	1490	96

- ④ For 50 Hz coils, consult your nearest Allen-Bradley Sales Office.

Renewal Parts

Bulletin 500 Line of NEMA AC Contactors
 Sizes 0–4 (all series), Size 5 (series L)

Disassembly



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

The following procedures and techniques are suggested to aid in the disassembly and re-assembly of a typical motor contactor. It is not necessary to remove the contactor from its enclosure or to remove the line wiring. It may be convenient to remove the line wiring on top-wiring contactors for better access to the rear stationary contact mounting screws. Refer to Rear Stationary Contacts, on page 7. Refer to exploded view, Figure 1, for item numbers.

1. Remove all control wires from the operating coil (item 7).
2. Loosen two captive screws and lift off the contact block cover (item 1).
3. Loosen four captive screws from the coil cover (item 4).
4. With the coil cover screws loosened, the auxiliary contact block(s) (item 6) can be removed and the coil cover lifted off.
5. Lift out the movable contact support and armature assembly (item 2), the yoke (item 8), and the operating coil as a unit. The yoke and the operating coil can now be lifted up and out of the movable contact support assembly.

Replacing Contacts

When severe contact wear is evidenced, it is recommended that all contacts be replaced, including the modular power pole kits on 4 and 5 pole devices. Replacing all contacts will guard against uneven contact closings. Be sure to check contact spring flexibility and replace if necessary. Order the required number of single pole contact sets from the part listings on page 3 and refer to page 9 for Cat. No. and details on Power Pole Kit. Follow disassembly steps 1-5.

Torque for Stationary Contact Replacement

Size	Front and Rear Torque (approximately)
0	8 - 10 lbs. - in.
1	14-17 lbs. - in.
2	50 lbs. - in.
3	90 lbs. - in.
4	180 lbs. - in.
5	90-130 lbs. - in.

Note: Coil cover torque for sizes 0 to 2 is approximately 14-17 lbs.-in. For sizes 3 to 5 torque is approximately 25-30 lbs.-in.

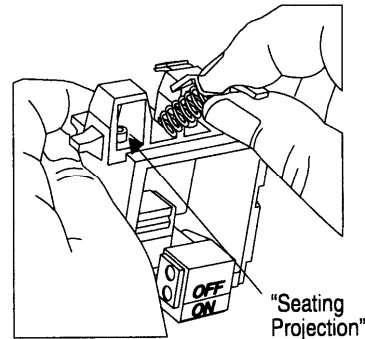
Renewal Parts

Bulletin 500 Line of NEMA AC Contactors
 Sizes 0–4 (all series), Size 5 (series L)

Replacing Contacts (cont.)

Movable Contacts

Figure 2



Refer to exploded view, Figure 1, for item numbers.

1. Remove the movable contact (item 9) by depressing the contact spring (item 10) and pushing the contact out to either side. The contact spring will fall free or can be lifted out.
2. Hold the replacement spring and contact in one hand as shown in Figure 2.
3. Insert the contact spring over the “seating projection” on the movable contact support assembly. Slip the movable contact and spring into position in the opening on the movable contact support assembly. Rock the spring into position over the seating projection on the movable contact support and the movable contact.
4. Check to determine that the spring is holding the contact in a centered position.

Front Stationary Contacts

Refer to exploded view, Figure 1, for item numbers.

The mounting screws or bolts that secure the front stationary contacts (item 11) are accessible from the front and are located directly below and to the back of the front terminal assemblies. A socket wrench should be used to loosen and tighten contact securing bolts.

Note: Front and rear contacts should be removed and replaced in pairs, one at a time.

1. Loosen and remove the screw or bolt and lift out the contact.
2. Install the replacement contact (front and rear stationary contacts are identical) and tighten the contact mounting screw or bolt securely.

Renewal Parts

Bulletin 500 Line of NEMA AC Contactors
Sizes 0–4 (all series), Size 5 (series L)

Rear Stationary Contacts

Refer to exploded view, Figure 1, for item numbers.

The mounting screws or bolts that secure the rear stationary contacts (item 12) are accessible from the top and are located at an angle in the cavities directly behind the front terminal assemblies.

1. Loosen and remove the mounting screw or bolt while holding the contact within the contact block assembly.
2. Push the loose contact up and out or allow it to drop down.
3. Install the replacement contact from the top, catching it from within the contact block assembly.
4. Insert the mounting screw or bolt and tighten securely.

Replacing the Stationary Contact Block and Base Assembly

Refer to exploded view, Figure 1, for item numbers.

The block and base assembly (item 3) can be removed from a partially disassembled starter, if necessary. First follow Disassembly steps 1-5. The block and base assembly is connected to the incoming lines.

1. Remove the line wiring and label or mark all wires.
2. The block and base assembly is connected to the mounting plate (item 5) by three mounting screws with washers (item 13). Remove these screws, and the stationary contact block and base assembly (item 3) can be lifted up and out.
3. If new contacts **are not** being installed, remove stationary contacts **one at a time** from the old block and base assembly and install them in the **same positions** in the new assembly. See instructions under Replacing Contacts on page 5. Follow those instructions also if installing new contact sets.
4. If the contactor is of the 4 or 5 pole power pole construction, and new contacts are not being installed, remove the power pole kit(s) and/or load balancer, and install them in the same position on the new assembly. Refer to page 10 for instruction on removal and installation of Power Pole Kit.
5. Install the replacement block and base assembly and secure the three screws with washers and tighten securely.
6. Reconnect line wiring.

Renewal Parts

Bulletin 500 Line of NEMA AC Contactors
Sizes 0–4 (all series), Size 5 (series L)

Reassembly

Refer to exploded view, Figure 1, for item numbers.

1. Place the movable contact support and armature assembly (item 2) in the contactor base. Attach the contact block cover(s) and tighten screws securely (approximately 25-30 lbs.-in.).
2. Insert the yoke (item 8) into the operating coil (item 7). Place the yoke-coil assembly into the contactor base. The parts are keyed to fit only one way.
3. Replace the coil cover (item 4). If used, check the tie point terminal for proper position. Tighten the coil cover screws securely (approximately 25-30 lbs.-in.).
4. With the movable contact support and armature assembly in the “OFF” position, install the auxiliary contact block(s) (item 6), if used, using instructions provided on the auxiliary contact block label.
5. Reconnect all control wirings.

Replacing Coil

Refer to exploded view, Figure 1, for item numbers.

1. Remove all wires from coil.
2. Remove coil cover (item 4).
Note: Auxiliary contact will come off with coil cover.
3. Slide out coil (item 7) and yoke (item 8) from movable contact support and armature assembly (item 2).
4. Replace coil and reassemble with yoke.
5. Slide yoke and coil back into movable contact and armature assembly.
6. Reattach coil cover.
7. Reattach wire to coil.
8. Reattach auxiliary contact (see p. 19).

Replacing Magnet (Yoke and Armature)

Refer to exploded view, Figure 1, for item numbers.

1. **Always replace yoke and armature at the same time.**
2. Remove contact block cover (item 1), coil cover (item 4), coil (item 7), yoke (item 8), and movable contact support and armature assembly (item 2).
3. Replace yoke and movable support armature assembly.
4. Reassemble as previously noted.

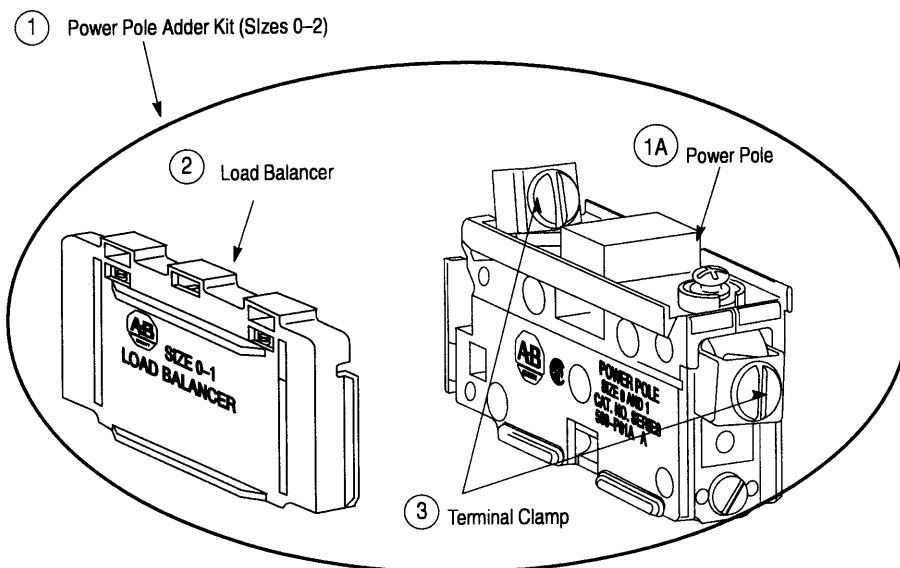
Renewal Parts

Bulletin 500 Line of NEMA AC Contactors
 Sizes 0–4 (all series), Size 5 (series L)

Accessories

Power Pole Adder

Figure 3



The N.O. and N.C. power poles may be field-added to all Size 0–4 Bulletin 500 line contactors and starters except the Bulletin 500L and 500FL. Both 2 and 3 pole contactors will accept a maximum of two adder poles and 4 pole devices will accept one adder pole. Each adder pole kit includes a mechanical load balancer to be used when only one power pole is added.

Important: When power poles are added to Size 2, 3, or 4 (2 or 3 pole devices), the operating coil must be changed. See page 4 and refer to the listing for the size of your contactor and order the operating coil listed for a 4–5 pole device.

Power Pole Adder Kits for Bulletin 500 and 500F Devices, Sizes 0–2

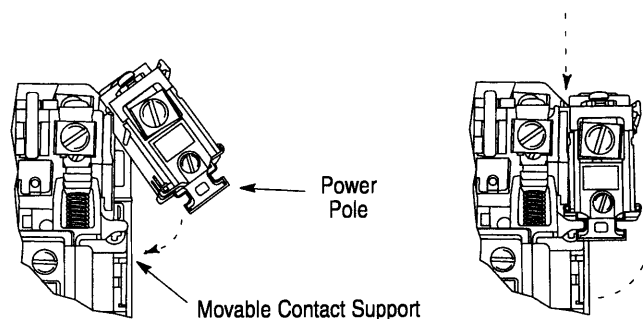
Item ❶	1	2	3
Description	Power Pole Adder Kit ❷	Load Balancer	Lug/Terminal Clamp
Part No.	599-P01A (1 N.O.)	599-P01B (1 N.C.)	40410-342-51
	599-P01B (1 N.C.)	599-P01BL (1 N.C. Late Break)	40410-342-51
	599-P01BL (1 N.C. L.B.)	599-P2A (1 N.O.)	40420-330-51
	599-P2A (1 N.O.)	599-P2B (1 N.C.)	40420-330-51
	599-P2B (1 N.C.)	599-P2BL (1 N.C. Late Break)	40420-330-51
	599-P2BL (1 N.C. L.B.)	599-P3A (1 N.O.)	40430-458-51

❶ See Figure 3

❷ Power Pole Adder Kit contains power pole and items 2 and 3

Renewal Parts

Bulletin 500 Line of NEMA AC Contactors
 Sizes 0–4 (all series), Size 5 (series L)

Accessories (cont'd)**Figure 4****Removal of Power Pole for Sizes 0, 1, and 2**

The movable contact support and armature assembly must be completely open (the word “OFF” totally visible).

1. Loosen two captive screws and lift off the contact block cover.
2. Exert a downward force across the top of the modular housing while simultaneously pivoting the bottom portion of the housing away from the contactor (Figure 4).
3. Lift the modular power pole kit up and out.

Installing or Replacing Power Pole for Sizes 0, 1, and 2

The movable contact support and armature assembly must be completely open (the word “OFF” totally visible). The contact block cover must be removed.

1. Hold the power pole adder with the side from which the power terminals are serviceable facing forward.
2. At an angle, hook the top side edge of the adder into the groove provided on the top edge of the stationary contact block. See Figure 4.
3. Push the power pole adder toward the contactor mounting plate as far as possible.
4. Exert a pivotal force near the bottom of the power pole adder housing “snapping” it in place.
5. Make sure that the projection on the movable contact support gages the slot on the operator of the power pole adder. See Figure 4.
6. If the mechanical load balancer is to be used, it can be installed similarly to a power pole adder; hook the three tabs located along the top side edge into the groove.

Renewal Parts

Bulletin 500 Line of NEMA AC Contactors
 Sizes 0–4 (all series), Size 5 (series L)

Power Pole Adder Kits for Bulletin 500 and 500F Devices, Sizes 3–5

Item ❶	1	1A	1B	1C	2	2A	2B
Description	Power Pole Adder Kit ❷	Hardware for Power Pole Adder	Adder Pole Contact Carrier ❸	Hardware for Adder Pole Contact Carrier	Load Balancer Less Hardware	Hardware for Load Balancer	Special Nut
Part No.	599-P3A (1 N.O.)	40430-801-51	40430-456-51	40430-800-51	40430-458-51	40430-802-52	40430-017-02
	599-P3B (1 N.C.)	40430-801-51	40430-456-51	40430-800-51	40430-458-51	40430-802-52	40430-017-02
	599-P4A (1 N.O.)	40440-801-52	40440-457-51	40440-800-51	40440-455-51	40440-802-52	40430-017-02
	599-P4B (1 N.C.)	40440-801-52	40440-457-51	40440-800-51	40440-455-51	40440-802-52	40430-017-02
	42450-600-01 (1 N.O.)	40440-801-52	40440-457-51	40440-800-51	40440-455-51	40440-802-52	40430-017-02

- ❶ See figures 5 and 6
- ❷ Power Pole Adder Kit contains power pole and items 2, 2A, 1A, and 1B
- ❸ Item 1B offered less contacts and mounting hardware, which are available separately (see pg. 3, items 9–10)



ATTENTION: Disconnect power source before proceeding with assembly.

Power Pole Adder Assembly Procedure for Sizes 3, 4, and 5

Important: 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.

Note: Normally closed contacts are not replaceable in the field. Factory adjustment is required.

1. Remove all control wires from the coil and tie point terminals.
2. Loosen completely the two contact block cover screws and the four coil cover screws. Remove contact block cover, coil cover, auxiliary contact block(s) (if present), coil, magnet yoke, and movable contact carrier from the contactor.
3. Attach the adder pole contact carrier to the movable contact carrier as shown in Figure 5. Position the square nut in the nut pocket and tighten the #10-32 × 1” (Size 3) or #10-32 × 1-1/8” (Size 4 and 5) screw securely (approximately 30 lb.-in. torque).
4. Refer to Figure 6. Using a screwdriver, push the two special nuts into the nut pockets in the stationary contact block, making sure that the extruded rims on the threaded holes are to the inside of the contactor.
5. Position the power pole adder base against the contactor base. The projections on the power pole adder base fit into the rectangular slot in the contactor base when positioned correctly. Using the screw length specified for each position, install the three mounting screws, lock

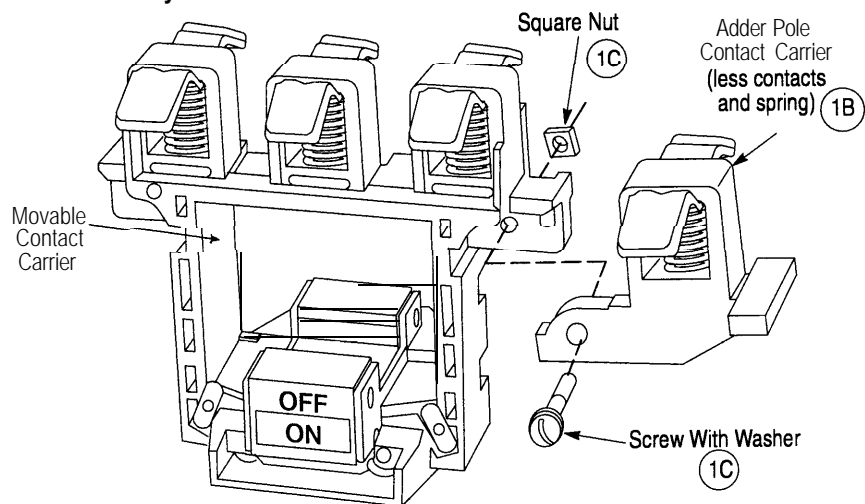
Renewal Parts

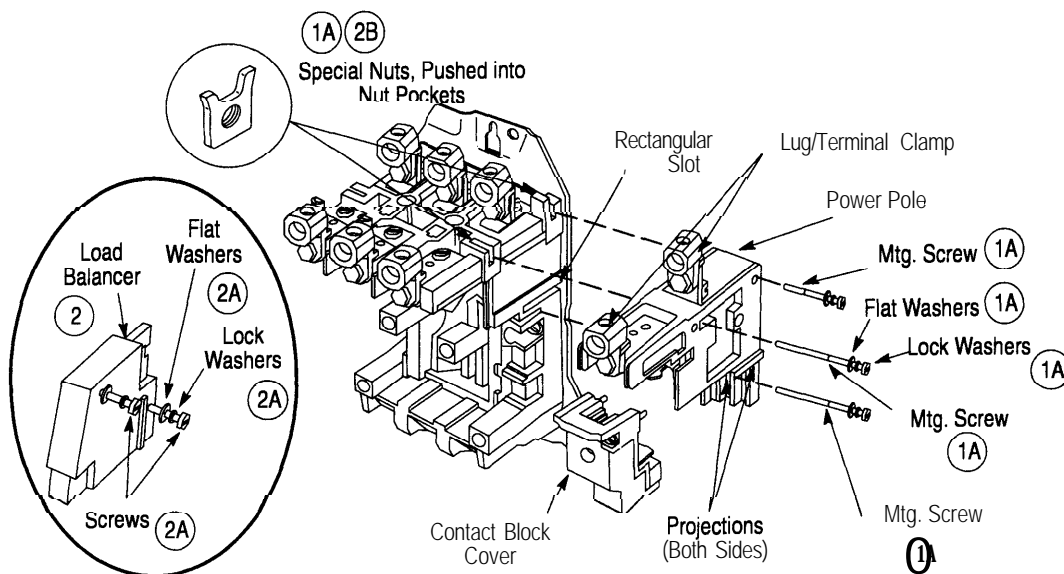
Bulletin 500 Line of NEMA AC Contactors
 Sizes 0–4 (all series), Size 5 (series L)

Accessories (cont'd)

- washers, and flat washers according to Figure 6. Tighten screws securely (approximately 16-20 lb.-in. torque).
6. Place the movable contact carrier in the contactor base. Attach the contact block covers on both the controller and the power pole adder. Tighten screws securely (approximately 25-30 lb.-in. torque).
 7. Insert the magnet yoke in the coil (see page 4). Place the yoke-coil assembly in the contactor base. The parts are keyed to fit only one way.
 8. Replace the coil cover. Check the tie point terminal for proper position. Tighten coil cover screws securely (approximately 25-30 lb.-in.)
 9. With the movable contact support in the “OFF” position, install the auxiliary contact block(s) according to the instructions on the auxiliary contact block label.
 10. Properly reconnect all control wiring.

Figure 5
Right Side Assembly



Renewal PartsBulletin 500 Line of NEMA AC Contactors
Sizes 0-4 (all series), Size 5 (series L)**Figure 6**
Right Side Installation**Installation for Normally Open and Normally Closed Sizes 3, 4, and 5 Power Pole Adders and Load Balancers**

Note: When a single power pole adder (Figure 6) is added to a contactor, a load balancer (Figure 7 and Figure 8) must be added to the opposite side of the contactor. Each kit contains one power pole adder, one load balancer, one adder pole contact carrier, and mounting hardware. When installing two power pole adders to a single contactor, install a power pole adder on each side and discard load balancers.

Load Balancer Assembly Procedure for Size 3 (See Figure 7)

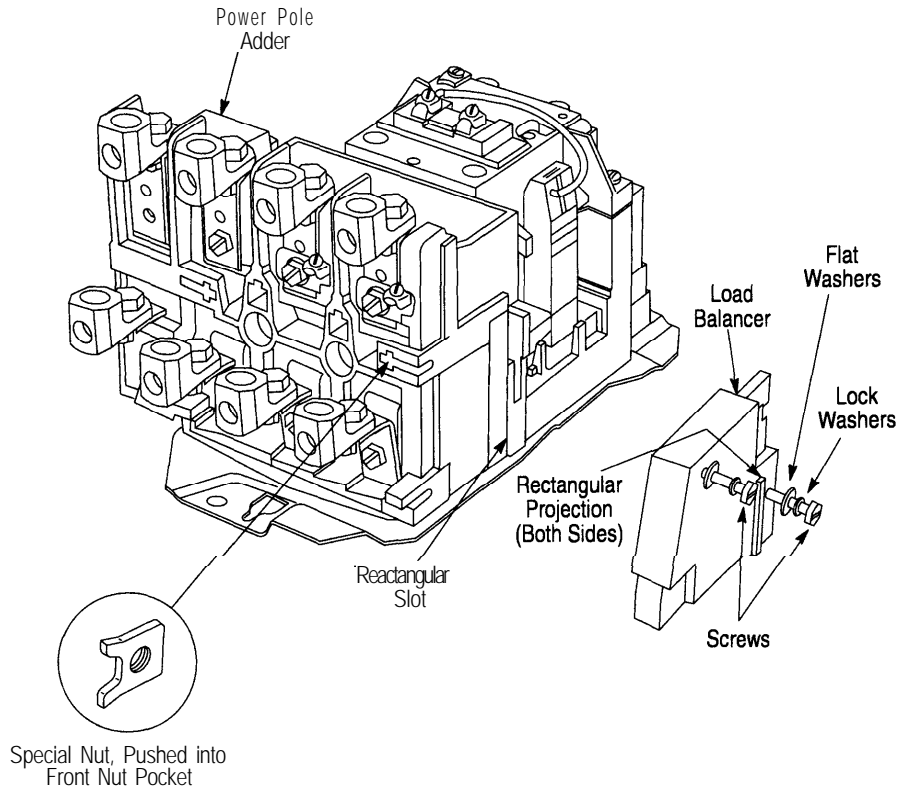
1. Using a screwdriver, push a special nut into the front nut pocket, making sure that the extruded rim on the threaded hole is to the inside of the contactor.
2. Position the load balancer against the contactor base. The rectangular projection on the load balancer fits into the rectangular slot in the contactor base when positioned correctly. Install the two #8 - 32 X 1-9/16" screws, lock washers, and flat washers as shown in Figure 7. Tighten screws securely (approximately 16-20 lb.-in. torque).

Renewal Parts

Bulletin 500 Line of NEMA AC Contactors
 Sizes 0–4 (all series), Size 5 (series L)

Accessories (cont.)

Figure 7
(Size 3) Left Side Installation

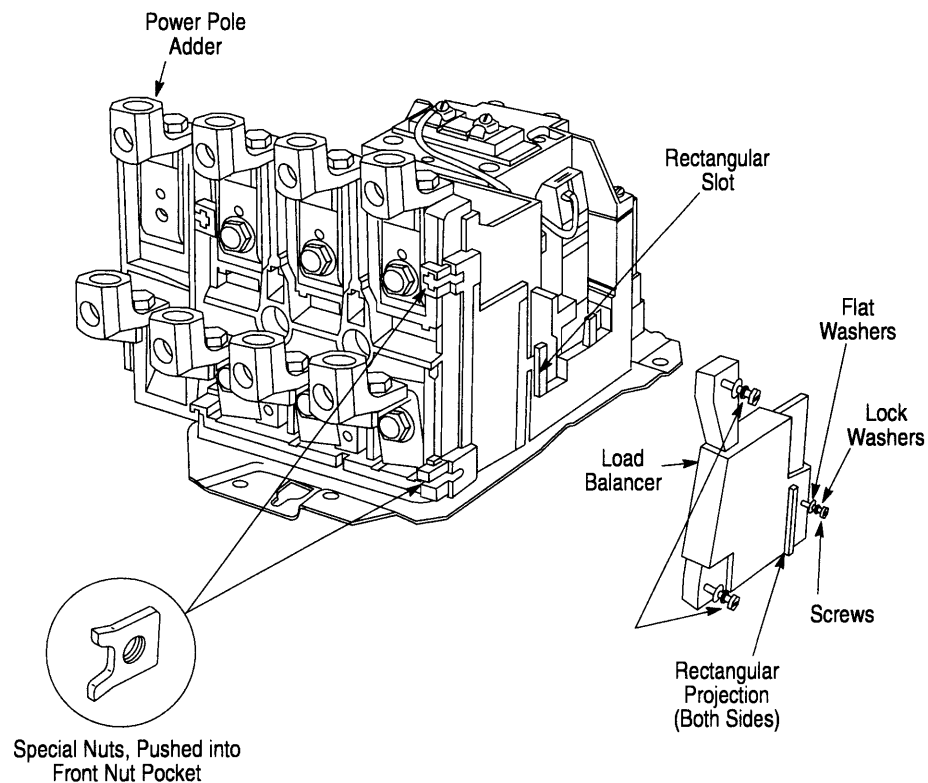
**Load Balancer Assembly Procedure for Size 4 and (See Figure 8)**

1. Using a screwdriver, push the special nuts into the nut pocket, making sure that the extruded rims on the threaded holes are to the inside of the contactor.
2. Position the load balancer against the contactor base. The rectangular projection on the load balancer fits into the rectangular slot in the contactor base when positioned correctly. Install the three mounting screws, lock washers, and flat washers according to Figure 8, using the screw lengths specified for each position. Tighten screws securely (approximately 16-20 lb. -in. torque).

Renewal Parts

Bulletin 500 Line of NEMA AC Contactors
 Sizes 0-4 (all series), Size 5 (series L)

Figure 8
(Sizes 4 and 5) Left Side Installation



Power Pole Replacement Parts for Bulletin 500L and 500 FL 4 Pole Devices
Sizes 0-2

Item ❶		1A	3
Description	Rating (A)	Power Pole Adder ❷	Lug/Terminal Clamp ❸
Part No.	15/20	40410-452-04 (1 N.O.)	X-225492
	30	40410-452-08 (1 N.O.)	X-225492
	60	40420-452-04 (1 N.O.)	X-316012

- ❶ See Figure 3. (Load balancer not required for 500L and 500FL.)
- ❷ Includes contacts and terminal clamp assembly or lug. Contacts are not replaceable in these part numbers.
- ❸ 15/20 amp and 30 amp devices use a terminal clamp assembly; 60 amp devices use a lug.

Renewal Parts

Bulletin 500 Line of NEMA AC Contactors
 Sizes 0–4 (all series), Size 5 (series L)

Accessories (cont.)

**Power Pole Replacement Parts for Bulletin 500L and 500 FL 4 Pole Devices
 Sizes 3–5**

Item ❶		1	1A	1B	1C	2B
Description	Rating (A)	Power Pole Adder ❷	Hardware for Power Pole Adder	Adder Pole Contact Carrier	Hardware for Adder Pole Contact Carrier	Special Nut
Part No.	100	40430-453-51 (1 N.O.)	40430-801-51	40430-456-51	40430-800-51	40430-017-02
	200	40440-452-51 (1 N.O.)	40440-801-52	40440-457-51	40440-800-51	40430-017-02
	300	42450-600-01 (1 N.O.)	40440-801-52	40440-457-51	40440-800-51	40430-017-02

❶ See figures 5 and 6 (Load balancer not required for 500L and 500FL.)

❷ Offered less contacts and lugs (available separately – see pg 3) Includes items 1A and 1B

Tie Point Terminal

Figure 9

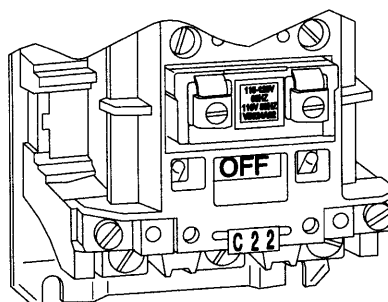


The tie point terminal provides a convenient terminal point for control circuit wiring. One tie point may be added to the left side of the coil cover. Bulletin 500 contactors are not shipped with tie points, but provision is made to add one or two.

NEMA Size	Cat. No.
0, 1, and 2	599-TP02
3, 4, and 5	599-TP34

Device Markers

Figure 10



Renewal Parts

Bulletin 500 Line of NEMA AC Contactors
 Sizes 0–4 (all series), Size 5 (series L)

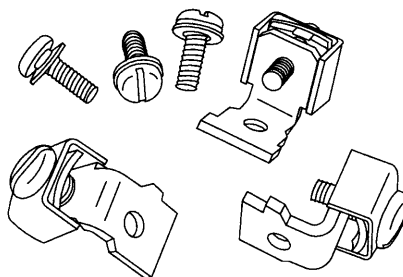
Device markers snap easily into the coil cover of contactors for component identification. A maximum of five markers will fit on each contactor

NEMA Size	Cat. No.
0–5	599-DM [®] 5

- ❶ To complete Cat. No. insert in the third position the desired numeric symbol (0–9) or one of the following letters: A, B, C, D, E, F, H, L, M, P, R, S, T, U, or W.

Top Wiring Kit

Figure 11



The top wiring kit consists of three power lugs for the purpose of making extra connections to the load side of the contactor. A second set of overload relays can be wired to these lugs if two motors are being controlled by a single contactor.

NEMA Size	Cat. No.
0–1	599-TW01
2	599-TW2
3	599-TW3
4	599-TW4
5	599-TW5P

Modifications

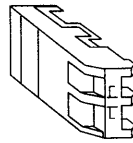
The following modifications are common. For information on any modification or accessory not listed, refer to any Allen-Bradley sales office.

Auxiliary Contacts

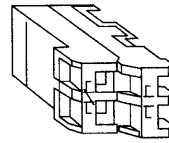
Figure 12

Renewal Parts

Bulletin 500 Line of NEMA AC Contactors
 Sizes 0–4 (all series), Size 5 (series L)



Cat. No. 595-A
(1 N.O.)



Cat. No. 595-AB
(1 N.O.- 1 N.C.)

Bulletin 500 contactors are designed to accept up to four Bulletin 595 Auxiliary Contact Blocks, which can provide up to six auxiliary contacts of the user's choice. Auxiliary contact blocks mount beneath the coil cover at positions marked P1, P2, P3, or P4 on the coil cover. They can be mounted without the use of tools or additional hardware.

Auxiliary Contact Description	Cat. No. Ⓢ
One Normally Open (1 N.O.)	595-A
One Normally Closed (1 N.C.)	595-B
One Normally Closed (1 N.C. Late Break)	595-BL
One Normally Open – One Normally Closed (1 N.O. – 1 N.C.)	595-AB
Two Normally Open (2 N.O.)	595-AA
Two Normally Closed (2 N.C.)	595-BB

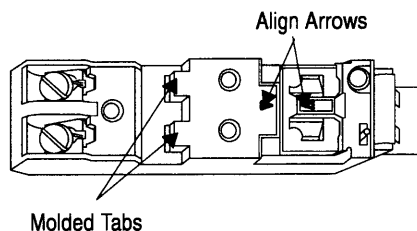
Parts indicated with Ⓢ are recommended spare parts.

Removal of Auxiliary Contact Block

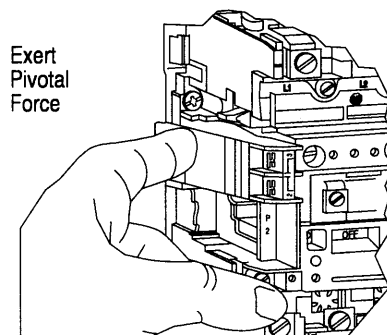
Loosen coil cover screws and lift out the auxiliary contact block by pivoting its back end away from contactor.

Installing or Replacing an Auxiliary Contact Block

The movable contact support and armature assembly must be completely open (the word "OFF" totally visible). The coil cover must be in place and properly secured.

Renewal PartsBulletin 500 Line of NEMA AC Contactors
Sizes 0-4 (all series), Size 5 (series L)**Figure 13**

1. Align arrows molded on auxiliary contact block (see Figure 13).
2. Locate molded tabs on side with arrows (see Figure 13).
3. Hook tabs under coil cover at any pocket location marked P1, P2, P3, or P4.

Figure 14

4. Exert a pivotal force at the lower end of the block until it snaps into place (Figure 14).

Knowledgebase technotes can be found at <http://support.rockwellautomation.com/>



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Rockwell Automation Headquarters, 1201 South Second Street, Milwaukee, WI 53204 USA, Tel: (1) 414 382-2000 Fax: (1) 414 382-4444

Rockwell Automation European Headquarters SA/NV, avenue Herrmann Debroudaan, 46, 1160 Brussels, Belgium, Tel: (32) 2 663 06 00, Fax: (32) 2 883 06 40

Rockwell Automation Asia Pacific Headquarters, 27/F Citicorp Centre, 18 Whitfield Road, Causeway Bay, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1848

Important User Information

Because of the variety of uses for the products described in this publication, those responsible for the application and use of this control equipment must satisfy themselves that all necessary steps have been taken to assure that each application and use meets all performance and safety requirements, including any applicable laws, regulations, codes and standards.

The illustrations, charts, sample programs and layout examples shown in this guide are intended solely for purposes of example. Since there are many variables and requirements associated with any particular installation, Rockwell Automation does not assume responsibility or liability (to include intellectual property liability) for actual use based upon the examples shown in this publication.

Allen-Bradley publication SGI-1.1, *Safety Guidelines for the Application, Installation and Maintenance of Solid-State Control* (available from your local Allen-Bradley office), describes some important differences between solid-state equipment and electromechanical devices that should be taken into consideration when applying products such as those described in this publication.

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Throughout this document we use notes to make you aware of safety considerations:

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Identifies information about practices or circumstances that can lead to personal injury or death, property damage or economic loss



IMPORTANT

Identifies information that is critical for successful application and understanding of the product.

Use only replacement parts and devices recommended by Rockwell Automation to maintain the integrity of the equipment. It is the user's responsibility to ensure that the renewal part number selected is properly matched to the model, series and revision level of the equipment being serviced.

ATTENTION

Servicing energized Industrial Control Equipment can be hazardous. Severe injury or death can result from electrical shock, burn, or unintended actuation of controlled equipment. Recommended practice is to disconnect and lockout control equipment from power sources, and release stored energy, if present.



Refer to **National Fire Protection Association Standard No. NFPA70E, Part 2 and (as applicable) OSHA rules for Control of Hazardous Energy Sources (Lockout/Tagout) and OSHA Electrical Safety Related Work Practices** for safety related work practices, including procedural requirements for lockout/tagout, and appropriate work practices, personnel qualifications and training requirements where it is not feasible to de-energize and lockout or tagout electric circuits and equipment before working on or near exposed circuit parts.

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