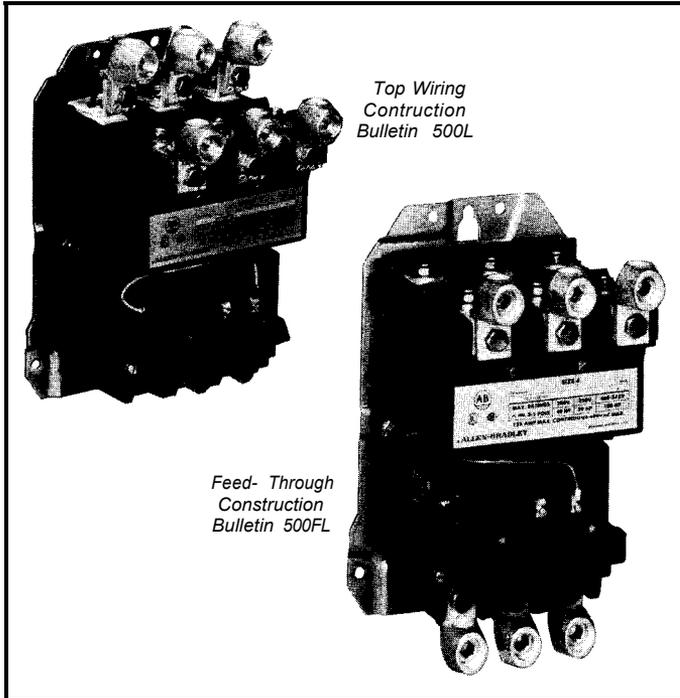


AC CONTACTORS FOR NON-MOTOR LOADS • 200 AMPERE



DESCRIPTION — Bulletin 500L or 500FL lighting contactors are electrically held contactors especially designed to switch the current to incandescent filament, fluorescent, mercury arc lamps, capacitors and other non-motor loads. These contactors are not suitable for use on sign flashers. The contactors can be operated remotely by push buttons, limit switches, thermostats, pressure switches or any suitable form of two or three wire pilot device.

They are available in two constructions; top wiring (Bulletin 500L) and feed-through wiring (Bulletin 500FL). Top wiring construction has both the line and load terminals located at the top of the contactor and is available with two, three and four power poles. The four power pole contactors are basic two power pole contactors with a modular power pole attached to each side of the stationary contact block assembly. Refer to Pages 3-4 for details on the MODULAR POWER POLE. Feed-through construction has the line terminals located at the top and the load terminals located at the bottom of the contactor and is available only with two or three power poles

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 refer to Publication GI-5.0 or the Handy Catalog.

REPAIRS — Contactors can be disassembled as depicted in the "exploded" illustration on Page 2. Additionally the following procedures and techniques are suggested to aid in the sequential disassembly and reassembly of a contactor.

WARNING — Before part replacements are attempted the POWER SOURCE MUST BE DISCONNECTED.

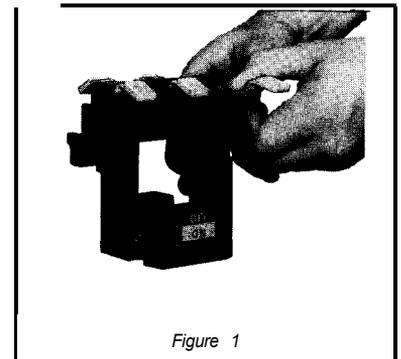
DISASSEMBLY (Partial) — It is not necessary to remove the contactor from the enclosure or to remove the line wiring.

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 in the coil cover (Item 4).
4. With the coil cover screws loosened the auxiliary contact block(s) (Item 6), when used, can be removed and the coil cover lifted off.
5. Lift out the movable contact support and armature assembly (Item 20, the yoke (Item 8) and the operating coil (Item 7) 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. Replacing all contacts will guard against uneven and unequal contact closings. Order the required number of single pole contact sets from the part listings on Page 2. Follow Steps 1 through 5 under DISASSEMBLY.

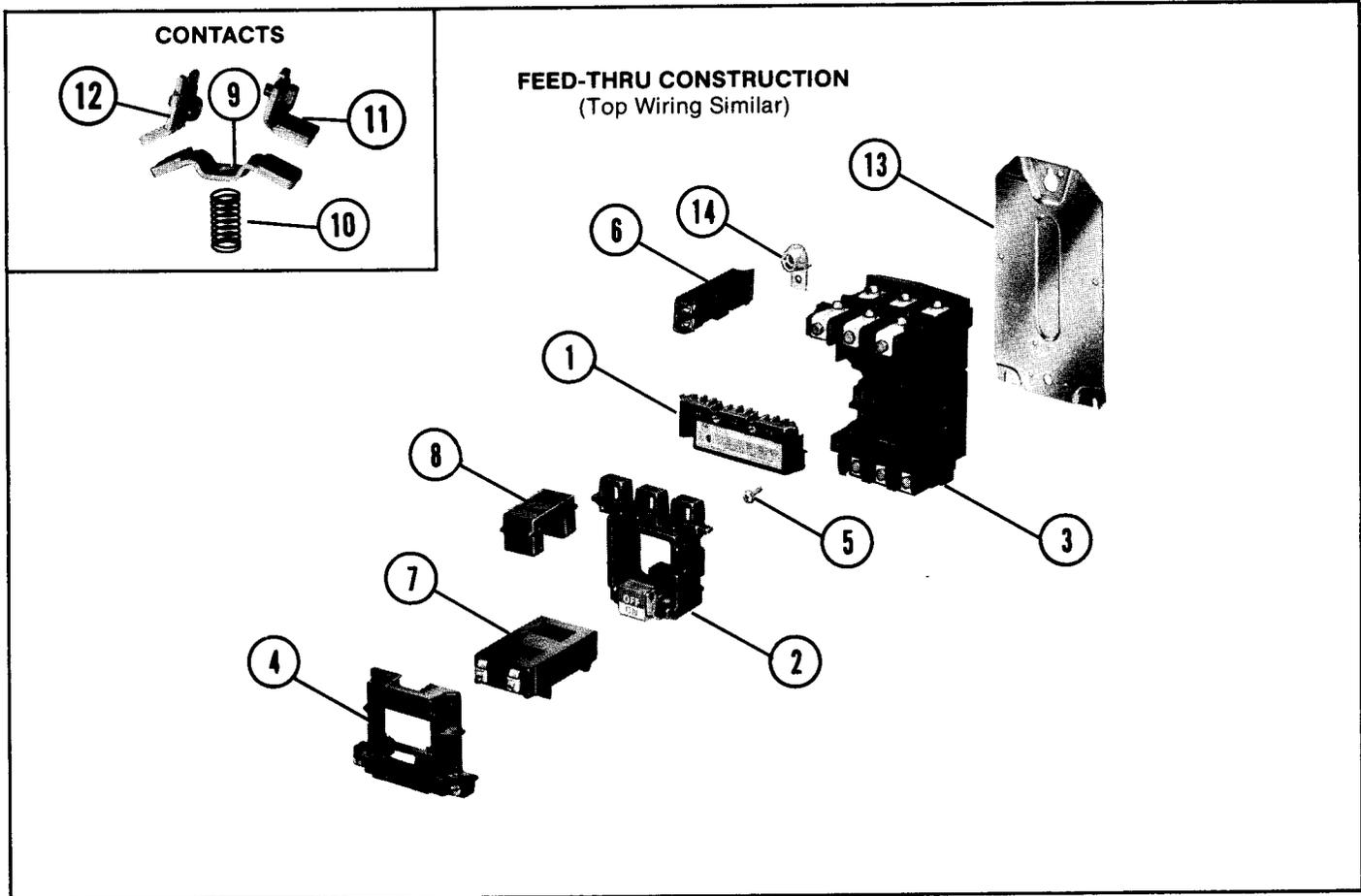
Movable Contacts — The following instructions describe the replacement of movable contacts.

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 1.
3. Butt the contact spring against the side of the "seating projection" on the movable contact support assembly. Slip the movable contact through 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 centered.



Stationary Contacts — The screws which secure the front and rear stationary terminals are accessible from the front. A socket wrench should be used to loosen and tighten contact securing screws. **Note:** Front and rear contacts should be removed and replaced in pairs one at a time.

1. Loosen the screw securing the front contact. Remove the contact and screw.
2. Loosen the screw securing the rear contact. Remove the contact and screw.
3. Install the new rear contact (refer to other phases for proper position). Tighten contact mounting screw securely (approximately 180 inch-pounds). Note: Front and rear contacts are different and keyed to fit in proper position.
4. Install the new front contact (refer to other phases for proper position). Tighten contact mounting screw securely (approximately 180 inch-pounds).
5. Repeat Steps 1 through 4 for the remaining phases.



Item	Description of Part	2-3 Power Poles 1
		Part No.
1	Contact Block Cover	40440-456-51
2	Movable Contact Support and Armature Assembly 2	40440-453-51
3	Stationary Contact Block and Base Assembly 2	See Table Below 1
4	Coil Cover	40440-454-51
5	1/4-28 x 1 1/8" Screw w/Washers (3 Req'd.)	40440-459-51
6	Auxiliary Contact Block (refer to Page 4)	595-A (When hold-in contact is used) 3
7	Operating Coil	See Separate Table
8	Yoke (60-50 Hz)	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 items 9-12)	2-3 Pole 40440-325-52 3 4 Pole 40440-325-53 3 4
13	Mounting Plate	Refer to Factory
14	Lug	40440-460-51

STATIONARY CONTACT BLOCK AND BASE ASSEMBLY 1	
2 Power Poles 1	3 Power Poles
Part No.	Part No.
Top Wiring Construction	
40440-462-53	40440-462-54
Feed-Through Construction	
40440-462-51	40440-462-52

OPERATING COILS 4 3			
Coil AC Voltage Range	Frequency Hz	2 Poles	3-4 Poles
		Coil No.	Coil No.
115-120	60	CE236	CE236C
110	50		CE322
200-208	60	CE249	CE249C
220-230	50	CE339	CE339C
230-240	60	CE254	CE254C
	50	CE342	CE342C
380	50	CE354	CE354C
415	50	CE357	CE357C
440-460	50	CE360	CE360C
460-480	60	CE273	CE273C
500	50	CE364	CE364C
575-600	60	CE278	CE278C

- 1** 4 Power Pole contactors consist of a basic 2 pole contactor with two power pole kits added. Select replacement parts from the column headed 2-3 power poles. Refer to Page 3 for replacement Power Pole Kits.
- 2** Less contacts, order Single Pole Contact Sets as required.
- 3** Order Contact Sets for power pole kits in addition to noted contact sets when replacements are for use on 4 Power Pole contactors.
- 4** For coils other than those listed specify coil number and complete rating found on coil's identification label.

— NOTE —
Parts indicated with **3** are recommended spare parts.

REPLACING THE STATIONARY CONTACT BLOCK AND BASE ASSEMBLY —

1. Remove line and load wiring.
2. Follow Steps 1 through 5 under **DISASSEMBLY**.
3. The block and base assembly is secured to the mounting plate (Item 13) by three 5/16-24 x 11/4" screws with washers (Item 5). Remove these screws to lift out the contact block and base assembly (Item 3).
4. If the contactor is of the four power pole construction, and new contacts are not being installed, remove the modular power poles and install them in the same positions on the new assembly. Refer to the instruments on removal and installation of power poles listed below and on Page 4.
5. Install the replacement block and base assembly and secure with the three screws and washers. Tighten securely (approximately 150 inch-pounds).
6. Follow Steps 1 through 5 under **REASSEMBLY**.

REASSEMBLY — The reassembly process is basically the disassembly procedure in reverse order.

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 inch-pounds).
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 inch-pounds).
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 wiring.

ORDERING INFORMATION — Your order cannot be entered unless the following information is given: Part Number, description of part, catalog number and series letter of contactor. This renewal parts list applies also to these contactors when used on control apparatus listed under other Bulletin numbers.

MODULAR POWER POLES (Part No. 40440-452-50) — Four pole Bulletin 500L contactors consist of a basic 2 pole contactor with two modular power poles added. These adders are offered less lugs and contacts which are available separately (refer to Page 2).

Installing Power Pole — The movable contact support and armature assembly must be completely open (the word "OFF" totally visible).

1. Remove all control wires from the coil.
2. Loosen completely the four coil cover screws. Remove the coil cover, auxiliary contact block(s) (if present), coil and yoke.
3. Refer to Figure 2. With a screwdriver, push the two special nuts into the nut pockets in the stationary contact block making sure that the embossed projection points are to the inside of the contactor.
4. Position the power pole adder against the stationary contact block. The projections on the power pole adder fit into the rectangular slot in the stationary contact block. Install the three mounting screws, lock washers and flat washers as shown in Figure 2, using screw lengths

specified for each position. Tighten screws securely (approximately 16-20 inch-pounds torque).

5. Attach the adder pole contact carrier to the movable contact support and armature assembly as shown in Figure 3. Position the square nut in the nut pocket and tighten the 10-32 x 11/8" screw securely (approximately 30 inch-pounds torque). If replacement of the adder pole contact carrier becomes necessary order Part No. 40430-456-51.
6. Attach the contact block cover onto the power pole adder. Tighten screws securely (approximately 25-30 inch-pounds torque).
7. Insert the yoke in the new coil (coil number ending with the letter C). Place the yoke-coil assembly in the stationary contact block. The parts are keyed to fit only one way.
8. Replace the coil cover. If used, check the tie point terminals for proper position. Tighten coil cover screws securely (approximately 25-30 inch-pounds torque).
9. Install the auxiliary contact block(s), if used, using instructions on their label.
10. Reconnect all control wiring.

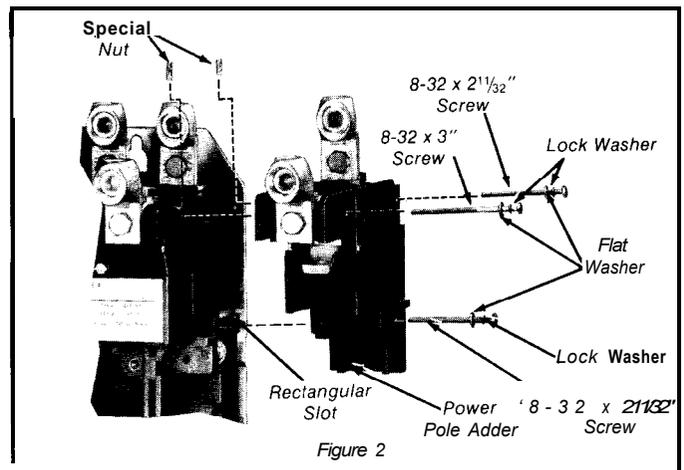


Figure 2

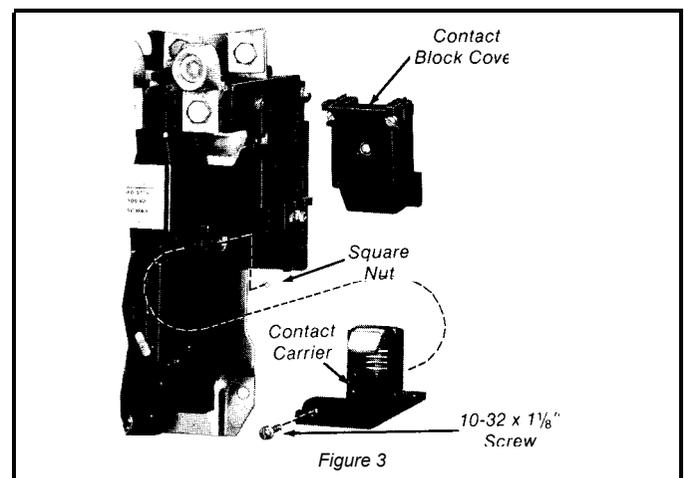


Figure 3

Removal of Power Pole — The movable contact support and armature assembly must be completely open (the word "OFF" totally visible).

1. Remove all control wires from the coil terminals.
2. Loosen completely the four coil cover screws. Remove the coil cover, auxiliary contact block(s) (if present), coil and yoke.
3. Remove the three mounting screws located on the side of the power pole adder (refer Figure 2) plus the mounting screw and nut which fastens the adder pole contact carrier to the movable contact support and armature assembly (refer Figure 3). Free the adder pole contact carrier by lifting it slightly forward; then, the entire adder pole assembly can be removed with a sideways motion.

Replacing Stationary Contacts on Power Pole Adder — The following instructions describe the replacement of power pole adder stationary contacts.

1. Follow Steps 1 through 4 under DISASSEMBLY.
2. Loosen two captive screws and lift off the power pole adder contact block cover.
3. Lift out the movable contact support and armature assembly (including the power pole adder contact carrier), the yoke and the operating coil as a unit.
4. Follow steps described under STATIONARY CONTACTS.

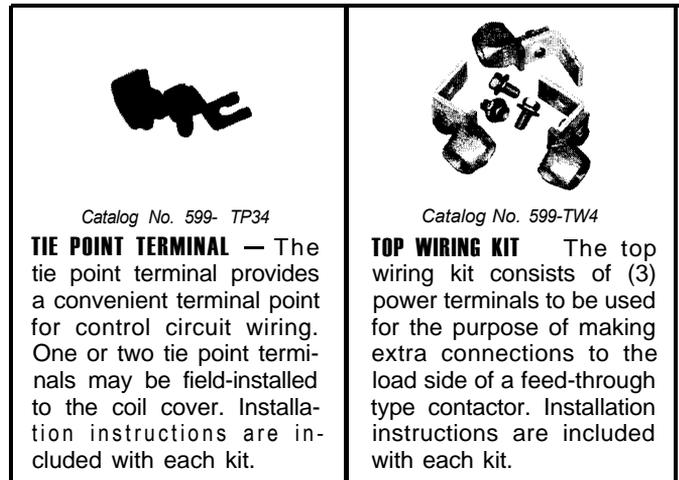
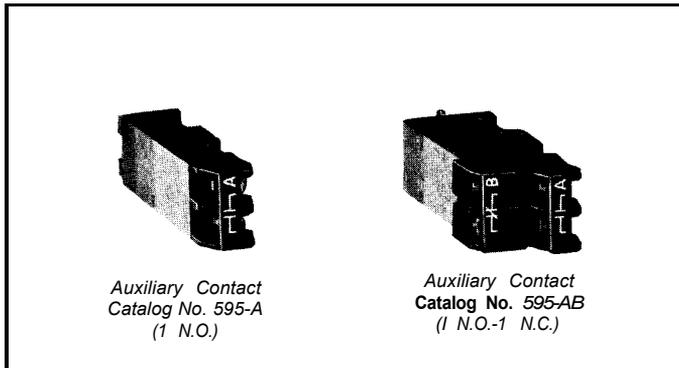
Replacing Movable Contact on Power Pole Adder — The following instructions describe the replacement of the power pole adder movable contact.

1. Follow Steps 1 through 4 under DISASSEMBLY.
2. Loosen two captive screws and lift off the power pole adder contact block cover.
3. Lift out the movable contact support and armature assembly (including the power pole adder contact carrier), the yoke and the operating coil as a unit.
4. Follow the steps described under MOVABLE CONTACTS.

MODIFICATIONS

AUXILIARY CONTACTS — Bulletin 500L and 500FL Contactors are designed to accept one to four Bulletin 595 Auxiliary Contact Blocks which can provide up to eight auxiliary contacts of the user's choice. Auxiliary contact blocks mount at positions marked P1, P2, P3 or P4 on the coil cover. They can be mounted without the use of tools or additional hardware. To install an auxiliary contact block, follow the simple instructions given on the auxiliary contact block label. To remove an auxiliary contact block, loosen the coil cover and lift out the auxiliary contact block by pivoting its back end away from the contactor.

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



NOTE — Parts indicated with ⚙ are recommended spare parts.