

CMC CB-MATIC 100CB SOLID STATE "CB" RELAY INSTALLATION PROCEDURES

1. GENERAL

1.01 This Section describes the procedures required for the installation of the CMC CB-MATIC 100CB Solid State "CB" Relay in Stromberg-Carlson XY switching equipment.

1.02 The **CMC SOLID-STATE "CB" RELAY** is a replacement for the pulsing contacts on the "CB" relay. It will replace "CB" relays in either selectors or connectors, or the contacts of the line relay. In order to maintain good circuit balance, the relay coil is left in the circuit.

1.03 Once the SOLID-STATE "CB" RELAY is installed, there are NEVER any adjustments required.

2. INSTALLATION PROCEDURES

2.01 The CMC Solid-State "CB" Relay is installed on the switch circuit plate in a vacant relay mounting space. The recommended mounting space is located between the A/B test jacks and the X/Y magnets spark suppression network components (see Figure 1).

2.02 The procedure for installing the CMC Solid-State "CB" Relay is as follows:

- (1) Make busy, in the approved manner, the selector/connector switch to be worked on. Remove and temporarily store the relay cover of the selector/connector.

- (2) Ensure that the power is removed from the relay circuit plate.
- (3) Identify (tag) the wires on the "CB" relay springs (Figure 3). Use the tags included with the Solid-State "CB" Relay for this purpose.
- (4) Unsolder the wires from the "CB" relay springs. These wires will be reused on the solid-state "CB" relay where possible. If the old wires cannot be swung, add new strap wires. **DO NOT REMOVE THE WIRES FROM THE COIL TERMINALS.**

NOTE: There is a resistor connected to spring 5 on some circuits. In this case, spring 5 may be used for a tie point. Leave the wires connected and run a new wire from spring 5 to Terminal 4 on the Solid-State "CB" Relay (Figure 3).

- (5) Install the CMC CB-Matic 100CB Solid-State "CB" Relay as shown in Figure 1. Use the furnished 6-32 \times 7/8" machine screw for mounting the Solid-State "CB" Relay on the L-Bracket and the 8-32 \times 1/4" machine screws and lock washers for mounting the assembly on the switch circuit plate.

NOTE: If the relay coil terminals cannot be identified from the switch circuit drawing, use an ohmmeter to trace the wiring according to the simplified schematic in Figure 3. Check from the switch test jack A-Tip and Ring.

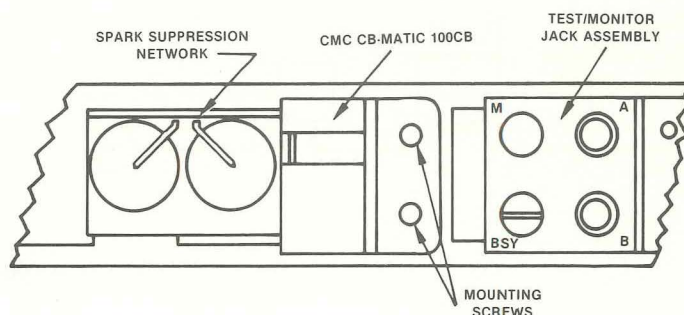
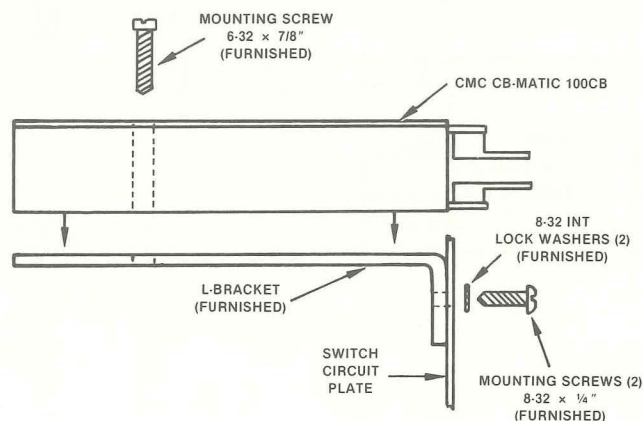


Figure 1 Mounting Solid-State "CB" Relay on the Switch Circuit Plate.

Section CMC CB-Matic 100CB
Issue A

(6) Connect the wires to the Solid-State "CB" Relay as follows (see Figure 3).

(a) Connect a strap wire (26 gauge) from the relay coil Ring terminal (b) to the Solid-State "CB" Relay Terminal 1.

(b) Connect a strap wire (26 gauge) from the relay coil Tip terminal (c) to the Solid-State "CB" Relay Terminal 2.

(c) Connect a strap wire (26 gauge) from the relay coil battery (–) terminal (d) to the Solid-State "CB" Relay Terminal 3.

(d) Connect the wire removed from relay spring 5 to the Solid-State "CB" Relay Terminal 4 or connect a strap wire (26 gauge) from the relay spring 5 to the Solid-State "CB" Relay Terminal 4 (see step 4, Note).

(e) Connect the wire removed from relay spring 4 to the Solid-State "CB" Relay Terminal 5.

(f) Connect the wire removed from relay spring 3 to the Solid-State "CB" Relay Terminal 6.

(g) Connect the wires removed from relay springs 1 and 2 to the Solid-State "CB" Relay Terminals + and –.

CAUTION: Circuit polarity must be observed when connecting these wires (see Figure 2.)

If, when power is reconnected to the circuit plate (step 7), the monitor lamp is lighted (or the PT relay energized), the polarity is reversed on terminals + and –.

(7) Reconnect the power on the relay circuit plate and replace the relay cover.

(8) Verify the switch pulsing with a hand-test-telephone (CMC Trub-L-shooter or equivalent). If the switch does not pulse, verify that the Tip strap (step 6,b) connects to Terminal 2 and the Ring strap (step 6,a) to Terminal 1 of the Solid-State Relay.

3. REPAIR

3.01 The CMC CB-Matic 100CB cannot be repaired due to the epoxy encapsulation of the circuitry. The unit has a 1 year warranty and should be returned to CMC for replacement in case of failure during this time.

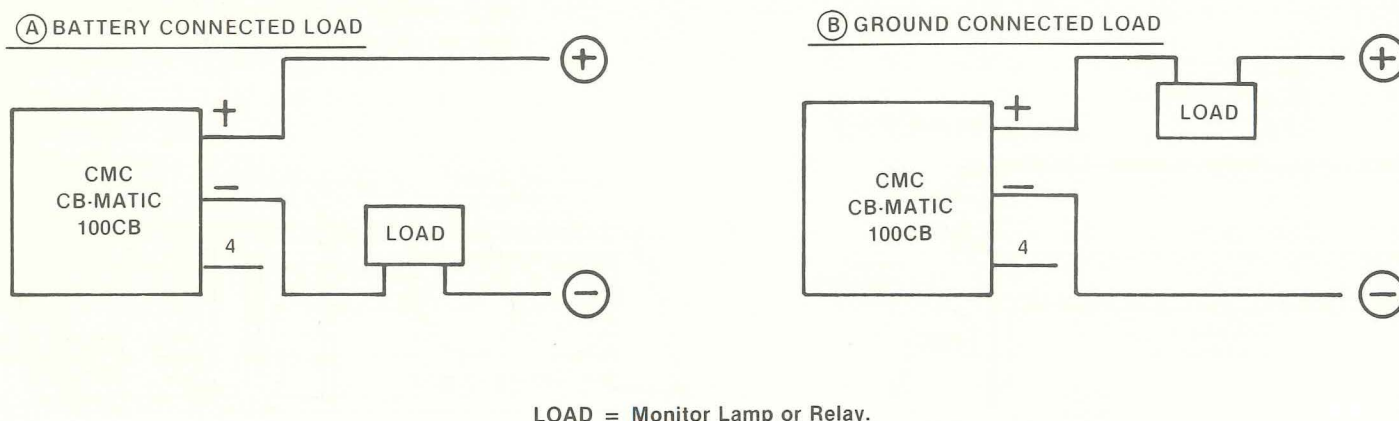


Figure 2 Connecting the CMC CB-Matic 100CB +/- Terminals.

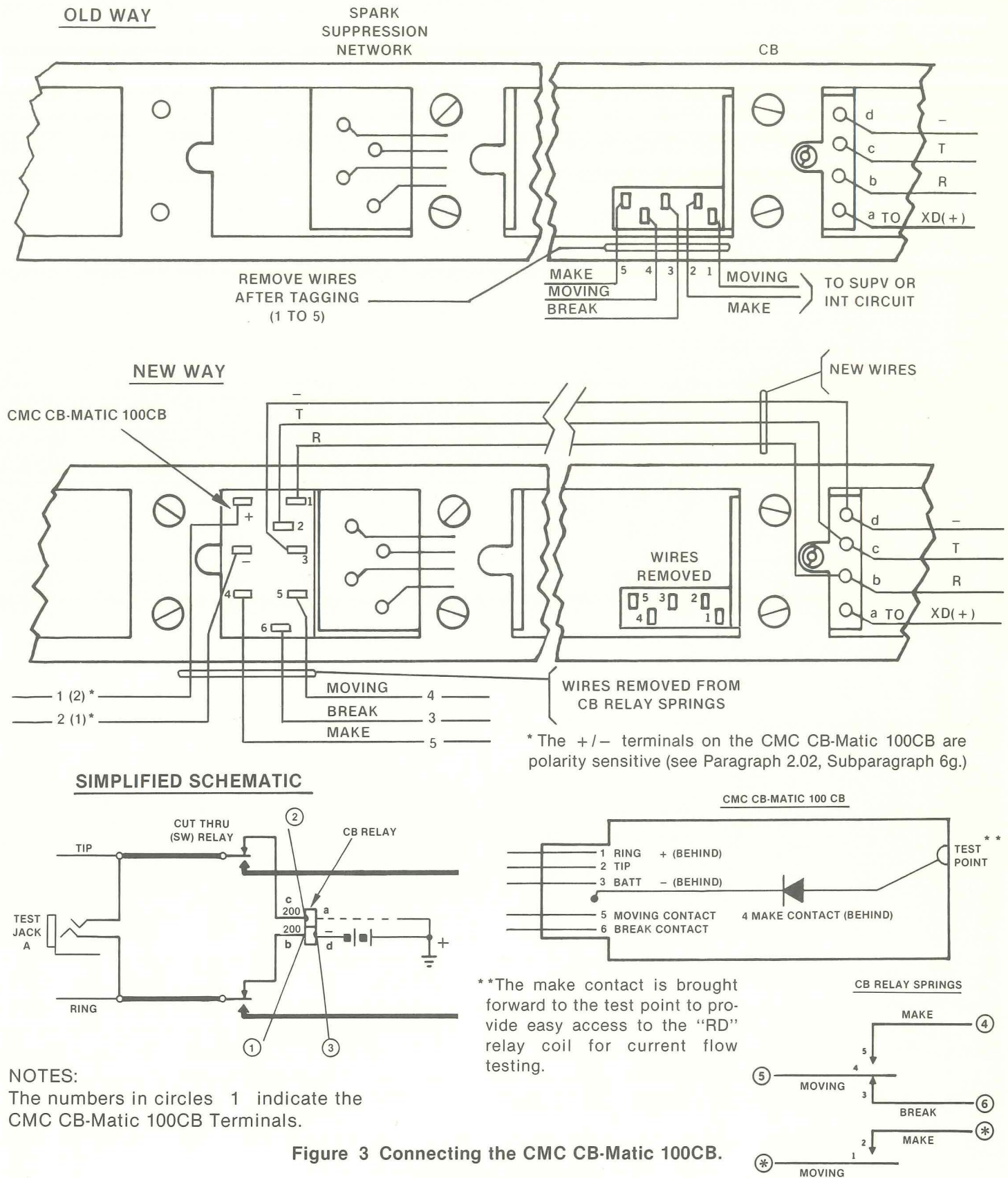


Figure 3 Connecting the CMC CB-Matic 100CB.

CMC
COMMUNICATION MFG. CO.
POST OFFICE BOX 2708 . 3300 EAST SPRING STREET
LONG BEACH, CALIFORNIA 90801 213 426-8345

