# FIELD INSTALLATION OF HIGH DC VOLTAGE CHARGER SHUTDOWN OPTION (EJ0592-XX)

**Materials Required**

HVDC Shutdown option kit (see table 1)

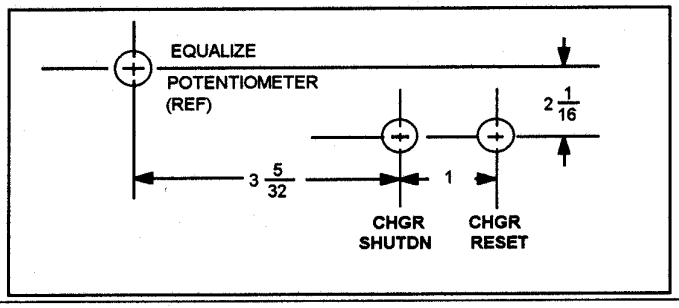
**Tools Required**

Standard hand tools
Wire crimpers, cutters and stripper
DC Voltmeter (DVM preferred)

WARNING: DISCONNECT ALL AC AND DC POWER SOURCES FROM THE CHARGER BEFORE PROCEEDING. ONLY QUALIFIED SERVICE TECHNICIANS SHOULD PERFORM THE FOLLOWING PROCEDURES. FOLLOW YOUR EMPLOYER'S STANDARD SAFETY PROCEDURES.

**Installation**

1. Disconnect both ac and dc power to the charger.
2. Check the HVDC Shutdown kit part number against the nameplate rating of your charger, according to Table 1 below. Check the circuit board assembly, GK0045-01; the board should be stamped with the dc voltage rating of your charger. Verify that R81 is the correct value.
3. Locate a suitable position on the mounting base assembly to install the PC board brackets and guides, the socket for relay K21, resistor R81, and the terminal board TB3. Most mounting bases already have suitable mounting holes, or one hole and one slot for each component.
4. Mount the brackets for the circuit board using the 6-32 hardware supplied. Slide the circuit board into the guides; adjust the spacing of the guides as required to ensure a secure fit. Be sure to install the circuit board so that the connector, SO13, has sufficient clearance. Also, be certain that relay K21 is easily accessible and that TB3 is in a convenient location for conecting remote alarm wiring as required for your application.
5. For the indicator light, DS20, and reset switch, SW14, punch or drill two 1/2 inch holes in the instrument panel (most panels have existing holes that you can use) as shown in the figure below. Mount the indicator lamp and reset switch, and label the front panel as shown in the figure.



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6. Find the schematic diagram, EJ0592, in the Operating and Service Instruction Manual. Use sheet 1 if your charger has a single phase ac input, or sheet 2 if it has a 3 phase ac input.

   Disconnect the wiring from T1-Y1 and T1-Y2 to the Control Module A1. Now wire SO13, K21, SW14, R81, TB3 and SO1 according to the schematic diagram.

   **NOTE:** If the charger is unfiltered, wire SO13 pin 6 to TB5(+) in the charger, not to CR2 anode. The charger must be connected to a battery for the HVDC shutdown option to operate reliably. If two unfiltered chargers are connected in parallel, the HVDC Shutdown circuits may not operate in the proper sequence.
7. Check all wiring for accuracy. Restart the charger according to Section II-4 of the Operating and Service Instruction Manual.
8. The High Voltage Detector PC Board (A13) has been adjusted at the factory to the value specified in the Operating and Service Instructions for the charger. If field adjustment of the HVDC Shutdown operating voltage is required, follow the procedure below.

## Adjusting the Shutdown Voltage Setting

1. Disconnect the load from the output terminals of the charger to prevent high dc voltage from being applied to the load during adjustment. If your charger is filtered, also disconnect the battery. If possible, connect a resistive load to the charger rated at about 5% of the output current rating of the charger.
2. Refer to the schematic diagram, EJ0592, in the Operating and Service Instructions. On the circuit board, A13, adjust R4 (labeled "HI") fully clockwise (15 full turns).
3. Put the charger in the equalize mode, and adjust the EQUALIZE potentiometer until the charger output voltage (measured at TB2) is at the point where you want a high votage shutdown. Adjust R4 counterclockwise until the charger shuts down. Make the adjustment slowly to obtain the best accuracy.
4. Decrease the EQUALIZE potentiometer setting, and reset the charger by pressing the RESET switch on the front panel.
5. After the charger restarts, slowly increase the EQUALIZE potentiometer to verify that the charger shuts down at the desired output voltage. Repeat steps 3 through 5 as required until the charger shuts down at the desired voltage.

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**TABLE 1 : HVDC SHUTDOWN ALARMS**

| CHARGER VOLTAGE | OPTION PART NUMBER | R81 | R26 (LOCATED ON PCBD) |
|---|---|---|---|
| **12 Vdc** | **EJ0592-01** | **N/R*** | **N/R*** |
| **24 Vdc** | **EJ0592-02** | **3W, 150** W | **1/2W, 3.3 k**W |
| **48 Vdc** | **EJ0592-05** | **5W, 500** W | **1/2W, 12 k**W |
| **130 Vdc** | **EJ0592-06** | **25W, 1.5 k**W | **1W, 36 k**W |
| **260 Vdc** | **EJ0592-07** | **25W, 3.0 k**W | **2W, 75 k**W |

**RESISTOR VALUES OF +/- 10% ARE ACCEPTABLE**
* REPLACE WITH SHORT CIRCUIT JUMPER