

# Instruction Bulletin

## CCT640 Connector for VT Voltage Sensor Installation Sheet

Retain for future use.

### Introduction



Sepam™ relays can connect to any standard voltage transformer (VT) with a rated secondary voltage of 100–240 V. Square D offers a wide range of voltage transformers:

- to measure phase-to-neutral voltages: VT with 1 insulated MV terminal
- to measure phase-to-phase voltages: VT with 2 insulated MV terminals
- with or without integrated protection fuses

The CCT640 connects the four additional voltages available in Sepam B83. It provides impedance matching and isolation between the voltage transformers and the input circuits of the Sepam relay. The connection port **(B2)** is not visible in Figure 1, behind the CCT640.

### Identification

Each CCT640 connector is delivered in a separate package containing:

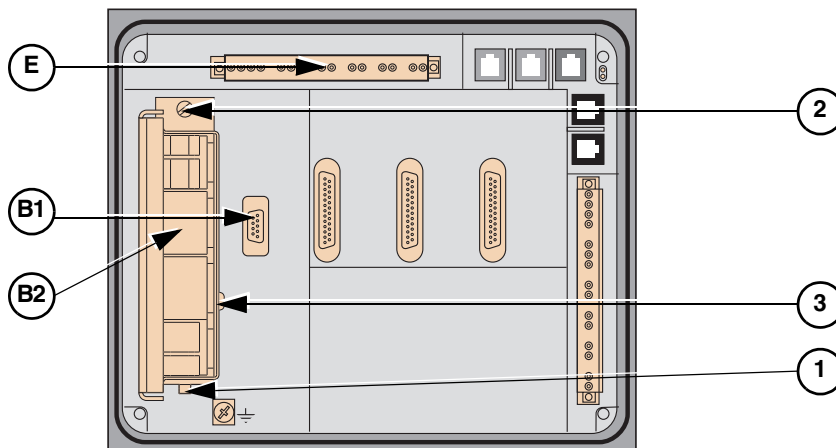
- 1 CCT640 Connector for VT Sensor
- 1 Installation Sheet

For further information, please see the *Sepam Series 80 Installation Manual (63230-216-229)*.

### Assembly

1. Insert the three connector pins into the slots **(1)** on the base unit.
2. Rotate connector to plug it into the 9-pin SUB-D connector.
3. Tighten the mounting screw **(2)**.

Figure 1: Base Unit and CCT640



## **⚠ DANGER**

### **HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH**

- Only qualified electrical workers should install this equipment.
- NEVER work alone.
- Before performing visual inspections, tests, or maintenance on this equipment, disconnect all sources of electric power. Assume that all circuits are live until they have been completely de-energized, tested, and tagged.
- Use a properly rated voltage sensing device to confirm all power is off.
- Start by connecting the device to the protective and functional grounds.
- Tighten all terminal screws, even those not in use.

**Failure to follow these instructions will result in death or serious injury.**

## **Connection**

All Sepam™ Series 80 units have four main voltage inputs to measure four voltages — three phase voltages and a residual voltage (for the steps below refer to Figure 1, on page 1).

- The main voltage measurement VTs are connected to the Sepam connector **(E)**.
- Four transformers integrated in the Sepam base unit provide the required impedance matching and isolation between the VTs and the Sepam input circuits

Sepam B83 units also have four additional voltage inputs to measure the voltages on a second bus set.

- The additional voltage measurement VTs connect to the CCT640, which is mounted on the Sepam port **(B2)**.
- Four transformers in the CCT640 provide impedance matching and isolation between the VTs and the Sepam™ input circuits (port **(B2)**).

## **How To Connect the CCT640**

Make the connections to the screw-type connectors on the rear of the CCT640 (refer to Figure 1, item 3 above).

### **Wiring without Lugs**

- One wire with maximum cross-section  $\leq$  AWG 24-12 (0.2–2.5 mm<sup>2</sup>) or two wires with maximum cross-section  $\geq$  AWG 24-16 (0.2–1 mm<sup>2</sup>)
- Stripped length: 0.31–0.39 in (8–10 mm)

### **Wiring with Lugs**

Recommended wiring with Telemecanique lugs:

- DZ5CE015D for one AWG 16 (1.5 mm<sup>2</sup>) wire
- DZ5CE025D for one AWG 12 (2.5 mm<sup>2</sup>) wire
- AZ5DE010D for two AWG 18 (1 mm<sup>2</sup>) wires
- Wire length: 0.32 in (8.2 mm)
- Stripped length: 0.31 in (8 mm)
- Tightening torque: 6.1–8.8 in-lb (0.7–1 Nm)

### **Grounding**

The CCT640 must be grounded by connection (green/yellow wire and ring lug) to the screw **(3)**.

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