This guide outlines the installation process for the SE-703 Earth-Leakage Monitor. For further technical information, refer to the product manual found at Littelfuse.com/se-703.

Ensure that the work area is de-energized prior to product and accessory installation. Follow your company’s safety policy and lockout procedures.

INSTRUCTION

1. Install SE-703: The SE-703 can be surface, DIN-rail, or panel mounted. See Fig. 1. Panel mounting requires a PMA-55 or PMA-60 Panel Mount Adapter. Separate installation instructions are included.

2. Connect supply (see Fig. 2):
   - AC Supply Systems: Use terminal 11 (L1) as the line terminal. Use terminal 10 (L2/N) as the neutral terminal. Connect terminal 9 ( ) to earth.
   - DC Supply Systems: Use terminal 11 (L1) as the positive terminal. Use terminal 10 (L2/N) as the negative terminal. Connect terminal 9 ( ) to earth.

3. Install EFCT-series current transformer: Follow installation instructions supplied with the CT.

4. Connect CT and conductors (see Fig. 2):
   - 3-Phase, 3-Wire Connection:
     Pass phase conductors through CT window.
   - 3-Phase, 4-Wire and Single-Phase Connections:
     Pass phase and neutral conductors through CT window.

   DO NOT PASS EARTH CONDUCTORS THROUGH CT WINDOW.

   If application requires shields or drain wires to pass through CT window, return them through CT window before connecting them to earth.
   Connect CT to terminals 4 and 5 (shield to terminal 5, earth terminal 5). CT connections are not polarity sensitive.

5. Connect the SE-703 remote reset (terminals 6 and 7), analog output (terminals 7 and 8), and relay (terminals 13 to 16 and terminals 1 to 3 on some models) as required for indication and control.

6. Remove the connection to terminal 9 for dielectric-strength testing - all inputs and outputs have ANSI/IEEE C37.90 surge-protection circuits that conduct above 300 Vac.

CONFIGURATION

7. Configuration switches, located beneath a cover on the top panel, are shown in their default positions in Fig. 1. Use the LEVEL (mA) selector switch to set the earth-leakage trip level. Use the TIME (ms) selector switch to set the earth-leakage trip time for coordination with upstream and downstream earth-fault devices. Some models allow selection of fail-safe or non-fail-safe operation. Set all switches to the appropriate settings for the application.

PERFORMANCE TEST

8. An earth-fault performance test should be performed. See Section 7 in the SE-703 manual for details.

REFERENCE

Terminal Specifications:
- Wire Clamping, 22 to 12 AWG (0.3 to 3.3 mm2) conductors
- Tightening Torque 0.40 N-m (3.54 lbf-in)
Figure 1A. SE-703-0X and SE-703-0X-00 Models.

Figure 1B. SE-703-0X-02 Models.

Figure 2. SE-703-XX-XX Mounting Details.

Figure 3. Typical Connection Diagrams.

NOTES:
1. DIMENSIONS IN MILLIMETRES (INCHES).
2. MOUNTING SCREWS: M4 OR 8-32.
3. OVERALL DIMENSION WHEN MOUNTED ON DIN EN60364-3-51: 35 mm x 7.5 mm TOP-HAT RAIL.
4. ADJUSTMENT KNOBS ARE REMOVABLE.
5. CONFIGURATION SWITCHES SHOWN IN DEFAULT POSITION.

3-PHASE, 4-WIRE CONNECTION

3-PHASE, 3-WIRE CONNECTION

NOTES:
1. RELAY CONTACTS SHOWN WITH SE-703 DE-ENERGIZED.
2. SE-703 SHOWN CONNECTED WITH A FAIL-SAFE OPERATING MODE.
3. TERMINALS 14/15 ARE INTERNALLY CONNECTED.