



## Type THQL/THQB Single-pole Circuit Breaker with Equipment Ground Fault Protection

### Installer Instructions

**WARNING:** Failure to follow these instructions could result in death, personal injury, or property damage.

- This circuit breaker is intended for use on single-phase grounded, 120 Vac 2-wire branch circuits.
- This 30mA Ground Fault equipment protection circuit breaker is not intended for Ground Fault protection of personnel coming in contact with electrical parts.
- Use only cable having two conductors plus ground, such as NM-B cable.
- Do NOT use cable having three conductors plus ground.
- Do not use the breaker on a shared-neutral circuit.
- This equipment must be installed and serviced only by a qualified electrician.

**WARNING:** Turn off power to main breaker before beginning installation. Failure to do so will risk electrical shock and possible death, personal injury, or property damage.

Install the breaker using the following procedure:

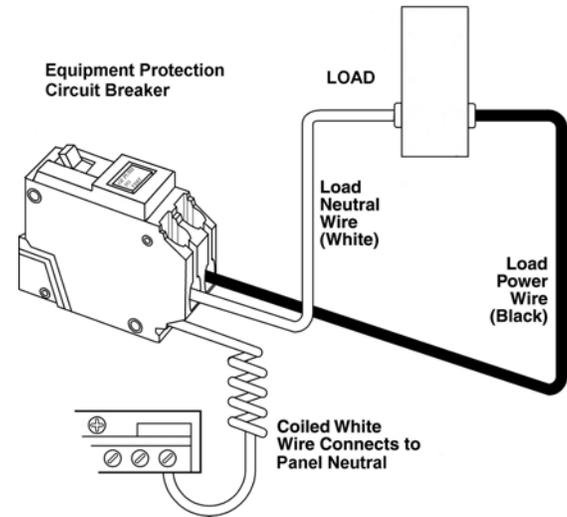
1. Latch the breaker by moving its handle firmly to the OFF position.
2. Wire the breaker to load center or panelboard (see connection diagram).
  - A. Connect the coiled white "pigtail" wire from breaker to the panel or enclosure neutral bus terminal and torque per neutral bus terminal requirements. Uncoil pigtail as necessary.

**CAUTION:** Do not reverse-feed or back-wire. Do not subject to megger, high-voltage, or high-pot tests. Remove the circuit breaker before high-potting occurs on the circuit or the system.

**Test Procedures (Circuit breaker should be tested regularly, at least once per month.)**

#### FUNCTIONAL CHECKS

1. Move breaker handle to the "ON" position. If the breaker trips, go to step 2.
2. If the handle moved to the tripped position in step 1:
  - Move handle to OFF position.
  - TURN OFF POWER TO PANEL.



**30 Milliamp Breaker Connection Diagram**

terminal of the circuit breaker, labeled LOAD NEUTRAL. Torque per data on breaker.

- C. Connect black (hot) wire to circuit breaker terminal labeled LOAD. Torque per data on breaker.
3. Plug in or bolt on the circuit breaker into the desired pole position.
  4. Test the breaker using the yellow test button on the front of the breaker, labeled TEST. Follow Test Procedures as indicated in next section.
  5. See Troubleshooting Guide for the troubleshooting method to be used for a tripped breaker.

- Disconnect "LOAD POWER" and "LOAD NEUTRAL" wires from the breaker.
  - Restore power to panel.
  - Move breaker handle to the "ON" position
- If handle now remains in the "ON" position, and trips when Yellow TEST BUTTON is depressed, the equipment ground fault sensing is working properly

and fault is in the system. Remove fault and repeat functional check.

3. Push TEST BUTTON. If the handle moves to the "TRIP" position and load is disconnected, the breaker is operating properly. To reset the breaker, move handle to "OFF" and then to "ON" for normal operation.

4. After completing installation and assuring proper operation, it is recommended that the TEST REMINDER and RECORD CHART be attached to the installation or be given to the user.

## PROCEDURE FOR ALUMINUM TERMINATIONS

### GENERAL

The following procedure is recommended when connecting aluminum wire.

1. Strip the insulation, being careful not to nick the wire
2. Wire brush the conductor strands.
3. Thoroughly coat the stripped conductor with a suitable anti-oxidant compound such as ALNOX or PENETROX Al3.
4. Insert conductor and torque connector screw per information provided on breaker.

### Troubleshooting Guidelines

Condition	Potential Cause	Solution/Action
Yellow Test button switch will not trip circuit breaker.	<ol style="list-style-type: none"> <li>1. Circuit breaker is OFF.</li> <li>2. Circuit breaker is tripped.</li> <li>3. Load center is not energized.</li> <li>4. Load center neutral (pigtail) is not connected to the neutral bus bar.</li> <li>5. Circuit breaker is damaged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Turn circuit breaker ON.</li> <li>2. Reset the breaker by switching it OFF and then ON.</li> <li>3. Check to be sure equipment is energized.</li> <li>4. Check neutral (pigtail) connection.</li> <li>5. Replace circuit breaker.</li> </ol>
Circuit breaker trips (handle in center position).	<ol style="list-style-type: none"> <li>1. Circuit breaker is not installed correctly.</li> <li>2. Circuit breaker is connected to "shared neutral" circuit.</li> <li>3. A fault or overload condition exists on the branch circuit, or circuit breaker is damaged.</li> </ol>	<ol style="list-style-type: none"> <li>1. See installation instructions on reverse side.</li> <li>2. Remove circuit breaker from "shared neutral" circuit. Wire the circuit with dedicated two wires plus ground. If shared neutral circuit is required, consider utilizing GE a <b>two-pole</b> 30 milliamp circuit breaker.</li> <li>3. Locate and remove fault or remove a portion of the load.</li> </ol>

**NOTICE:** These instructions do not cover all details or variations in equipment nor do they provide for every possible contingency that may be met in connection with installation, operation, or maintenance. Should further information be desired or should particular problems arise that are not covered sufficiently for the purchaser's purposes, the matter should be referred to the GE Company.



**GE Industrial Systems**

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