



Combination Arc-Fault Circuit Breaker

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.
- Can be used with a shared neutral circuit. Refer to DET-719, “Applying 1-pole Combination AFCIs to Shared Neutral Circuits”.
- 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 Arc-Fault Circuit Breaker using the following procedure:

1. Open the Arc-Fault Circuit Breaker by moving its handle firmly to the OFF position.
2. Install the Arc-Fault Circuit Breaker into the load center (see connection diagram).
 - A. Connect the coiled white “pigtail” wire from the Arc-Fault Circuit Breaker to the panel or enclosure neutral bus terminal and secure it tightly. Uncoil pigtail as necessary.

Warning: 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 (AFCI circuit breakers should be tested regularly, at least once per month.)

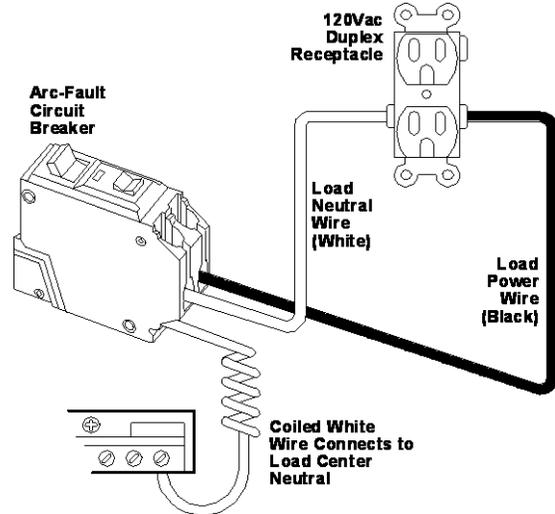
Note: refer to DEH41133 for AFCI Circuit Breakers (AFCI breakers will have an “AF” in the suffix of the catalog number)

The test feature allows the homeowner to test the arc detection capability by depressing a rocker switch in two directions. The breaker has passed the test if the TRIP flag appears in the window.

Parallel Arc Test: Rotate the test switch in the direction labeled “PAR ARC TEST” to check the ability of the Arc-Fault Circuit Breaker to detect high current arcing line-to-neutral or line-to-ground.

Series Arc Test: Rotate the test switch in the direction labeled “SER ARC TEST” to check the ability of the Arc-Fault Circuit Breaker to detect low current arcing in series with the load.

CAUTION: The Arc-Fault Circuit Breaker must be supplied with power from the load center in order for the tests to function properly. If the power is on and either of these tests fails to trip, the Arc-Fault Circuit Breaker may be unable to detect arcs. The circuit breaker is defective and should be replaced.



Arc-Fault Circuit Breaker Connection Diagram

- A. Connect the white (neutral) load wire to the terminal side of the circuit breaker, identified by a silver-colored terminal screw, labeled LOAD NEUTRAL.
 - B. Connect black (hot) wire to circuit breaker terminals labeled LOAD, identified by a gold-colored terminal screw.
3. Plug in or bolt on the circuit breaker into the desired pole position.
 4. Test the Arc-Fault Circuit Breaker using the test rocker switch on the front of the breaker. Follow Test Procedures as indicated in next section.
 5. See Troubleshooting Guide for the troubleshooting method to be used for a tripped Arc-Fault Circuit Breaker.

Troubleshooting Guidelines

Condition	Potential Cause	Solution/Action
Push-to-test switch will not trip circuit breaker.	<ol style="list-style-type: none"> 1. Circuit breaker is OFF. 2. Circuit breaker is tripped. 3. Load center is not energized. 4. Load center neutral (pigtail) is not connected to the neutral bus bar. 5. Circuit breaker is damaged. 	<ol style="list-style-type: none"> 1. Turn circuit breaker ON. 2. Reset the breaker by switching it OFF and then ON. 3. Check to be sure load center is energized. 4. Check neutral (pigtail) connection. 5. Replace circuit breaker.
Circuit breaker trips (handle in center position and trip flag appears).	<ol style="list-style-type: none"> 1. Circuit breaker is not installed correctly. 2. An overload condition exists on the branch circuit (total current drawn exceeds rating of breaker). 3. An arc-fault condition exists on the branch circuit, or circuit breaker is damaged. 4. A load or combination of loads on the branch circuit emits a current signature that looks like a valid arc-fault. 	<ol style="list-style-type: none"> 1. See installation instructions on reverse side. 2. Assess the current on the circuit drawn by all the loads by summing all branch amperages (divide the rated wattage of each load by 120). If this total is greater than the circuit breaker rating, the circuit is overloaded and some of the load should be removed. 3. Test for arc-fault by completing instructions below. 4. Contact GE (see contact information below) for troubleshooting information.

To test for arc-fault:

Unplug all items from the receptacles in branch circuit. Reset circuit breaker by pushing its handle to the OFF position and then to the ON position:

1. If breaker trips with all loads OFF: Check permanent electrical circuit wiring, arcing, poor insulation, shorted wires, wet connections, wet conduit, a neutral lead pinched to a grounded metal box, receptacle leakage, loose connections, or other faults that could cause safety features in the breaker to open the circuit.
2. Switch ON one of the original loads. Reset the breaker. If breaker does not trip with this load ON, switch on an additional load. Repeat until breaker trips. Examine last additional load for possible faults.

Loads and/or wiring suspected of having faults should not be restored to service.

INSTALLING ELECTRICIAN'S INFORMATION

Installing electrician should add the following information:

Installer's Name

Installer's Address

Installer's Phone #

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. See contact information below.

For troubleshooting or service related questions, contact GE at 800-782-8061 or at gebreaker@ge.com



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