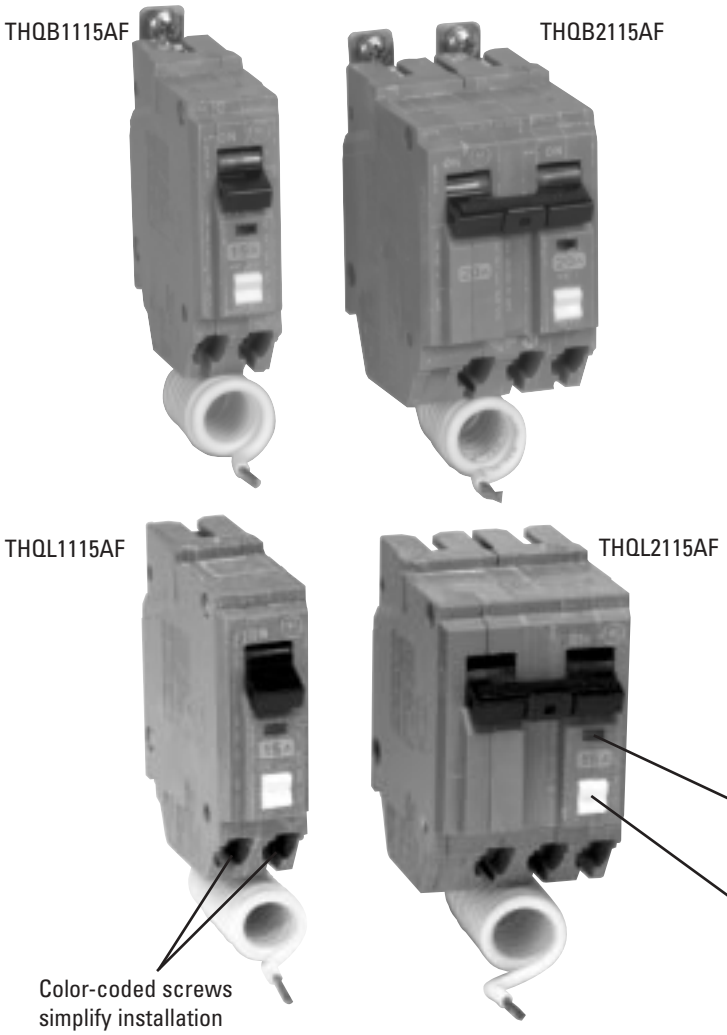
GE Industrial Systems

Bolt-on & Plug-in Arc Fault Circuit Interrupters



- **Industry first:** the only available AFCI breaker with a dual-function test button, providing two safety tests
- **Locate tripped breakers fast** with trip notification flag and distinctive gray housing
- **2-pole breaker solution** for shared neutral wiring
- **Protects the entire circuit** with both plug-in and bolt-on breaker designs
- **Plug-in design** suitable for all PowerMark™ load centers and A-Series® Type AL panelboards
- **Bolt-on design** suitable for both Pro-Stock™ Type AQ panelboards and factory-assembled A Series® Type AQ panelboards
- **Fulfills 2002 National Electrical Code** requirements for dwelling unit bedrooms

The Problem: *Electrical fires in homes break out more than 40,000 times each year in the U.S. alone. A significant portion of these fires result from arc faults, which are unintended electrical arcs – caused by damaged, aged or improperly used electrical wires – that may cause the ignition of combustible materials in the home.*

The GE Solution: *In addition to protecting against short circuits and overloads, an AFCI electronically identifies unique current and voltage characteristics of arcing faults and de-energizes the entire circuit when the fault occurs.*

Arc Fault Circuit Interrupters

Product specifications

- Wire size 14-10 AWG 60/75°C Cu/Al
- 1" module per pole

Poles	Amperage	Voltage	10kAIC		22kAIC	
			Plug-in	Bolt-on	Plug-in	Bolt-on
1	15	120	THQL1115AF	THQB1115AF	THHQL1115AF	THHQB1115AF
	20	120	THQL1120AF	THQB1120AF	THHQL1120AF	THHQB1120AF
2	15	120/240	THQL2115AF	THQB2115AF	THHQL2115AF	THHQB2115AF
	20	120/240	THQL2120AF	THQB2120AF	THHQL2120AF	THHQB2120AF

Standards and Approvals

- Listed (Molded Case Circuit Breakers) UL 489
- Listed (Arc Fault Circuit Interrupters) UL 1699
- Listed (Molded Case Circuit Breakers) CAN/CSA-C22.2 No. 5.1, 1 Pole Only
- Listed (Interim Requirements for Arc Fault Circuit Interrupters) TIL No. M-02, 1 Pole Only

GE AFCI breakers deliver added protection

- Parallel Protection– direct contact of two wires with opposite polarity (example: improperly stapled cable)
- Ground Protection – arc between a single conductor and ground (example: improperly installed wall receptacles)
- Overload Protection
- Short Circuit Protection

Typical causes of arc faults

- Damaged wires
- Neutral leads pinched to grounded metal box
- Worn electrical insulation
- Wet connections or conduit
- Shorted wires
- Wires or cords in contact with vibrating metal
- Overheated or stressed electrical cords and wires
- Misapplied/damaged appliances

Wiring Diagrams

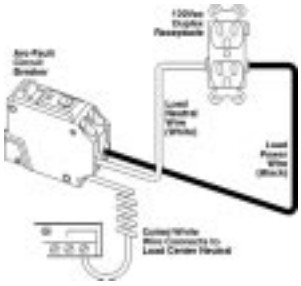


Diagram A. 1-pole 120Vac 2-wire branch circuit

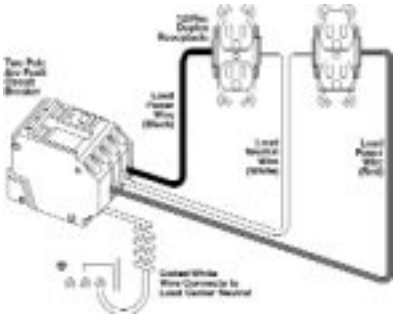


Diagram B. Two 1-pole duplex receptacles with shared neutral application

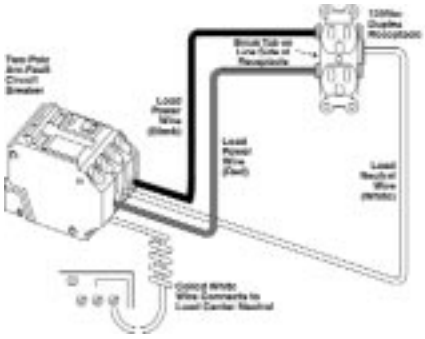


Diagram C. 2-pole shared neutral with duplex receptacle

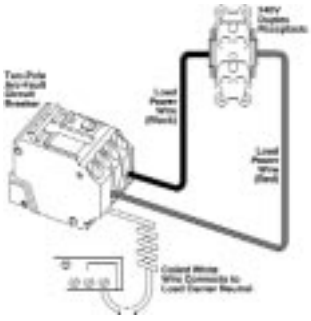


Diagram D. 2-pole 240Vac load application derived from 120/240Vac

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