

Arc Fault Circuit Interrupters (AFCIs)



AFCI Breakers

Product Description

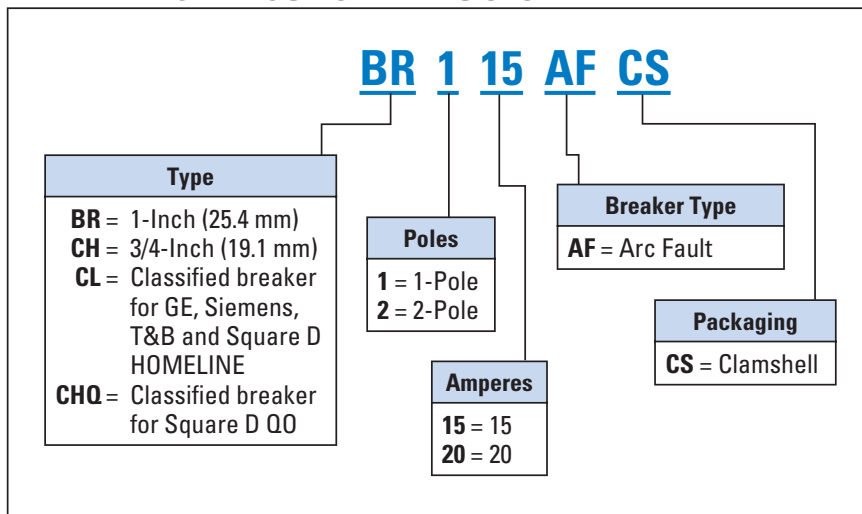
FIRE-GUARD™ Arc Fault Circuit Interrupter (AFCI) is a circuit breaker that provides protection from fires caused by arcing faults. Arcing faults can occur when insulation around cords, wires or cables is damaged or deteriorated. AFCIs are required in bedroom circuits for new construction per the 2005 National Electrical Code.

Features, Functions and Benefits

- ✓ Reduces the risk of electrical fires started by arcing faults.
- ✓ Meets UL 489 (standard for molded case circuit breakers), UL 1699 (standard for arc fault circuit interrupters) and either UL 1053 (standard for ground fault relaying and sensing at 30 mA) or UL 943 (ground fault circuit interrupters at 5 mA).
- ✓ Meets 1999, 2002 and 2005 National Electrical Code requirements for AFCIs.

Catalog Numbering System

TABLE 1-17. CATALOG NUMBERING SYSTEM



HAZARDOUS SITUATION
Arcing to ground can occur in a wall plug or switch that was not properly installed, or where connections become loose.

HAZARDOUS SITUATION
A nail from a picture hanger can break the insulation and cause arcing.

HAZARDOUS SITUATION
Cords that get caught in door jambs. The constant action of opening and closing can deteriorate the cable insulation, allowing arcing to occur.

HAZARDOUS SITUATION
Damaged, abused or worn extension cords can pose an arcing situation.

HAZARDOUS SITUATION
When furniture is pushed up against or rests on a cord - the deterioration of the insulation may be greatly increased. These damaged cords then become a potential condition for arcing.

FIGURE 1-2. APPLICATION DIAGRAM

APPLICATION DIAGRAMS

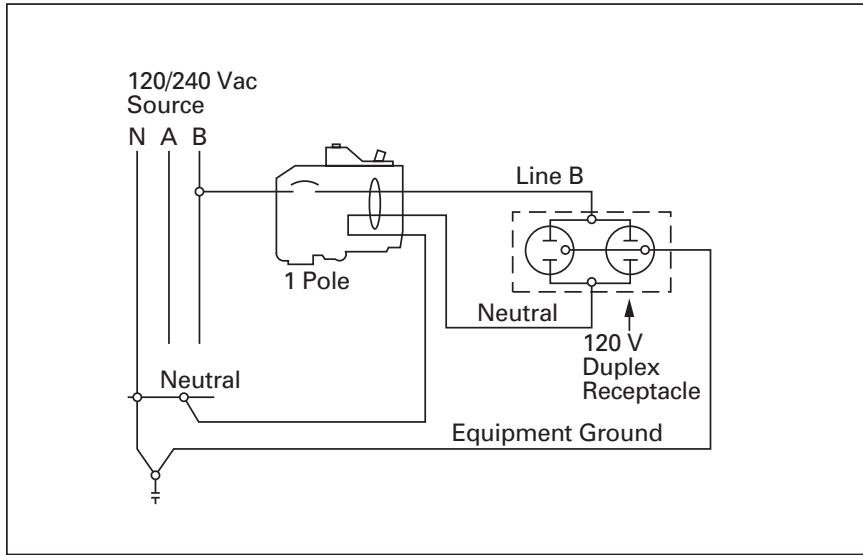


FIGURE 1-3. 1-POLE SINGLE 120 VOLT LOAD APPLICATION SOURCED BY 120/240 VAC

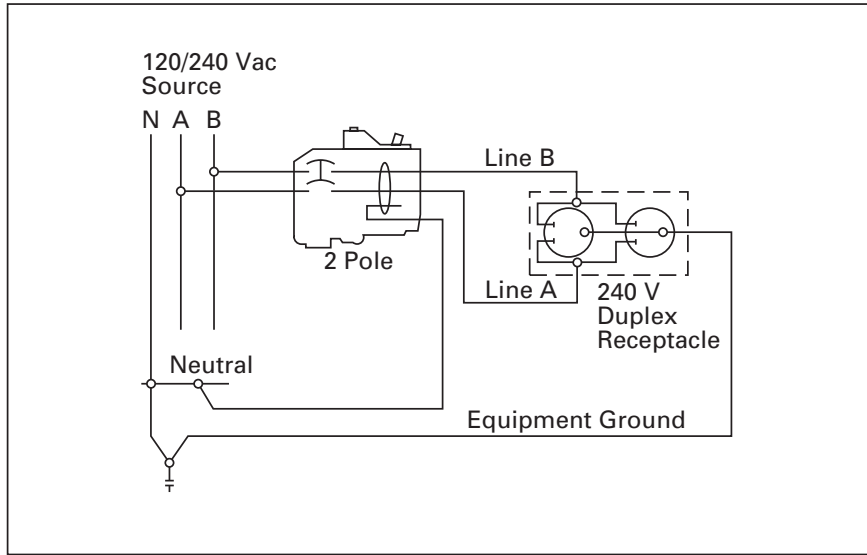


FIGURE 1-5. 2-POLE 240 VOLT LOAD APPLICATION SOURCED BY 120/240 VAC

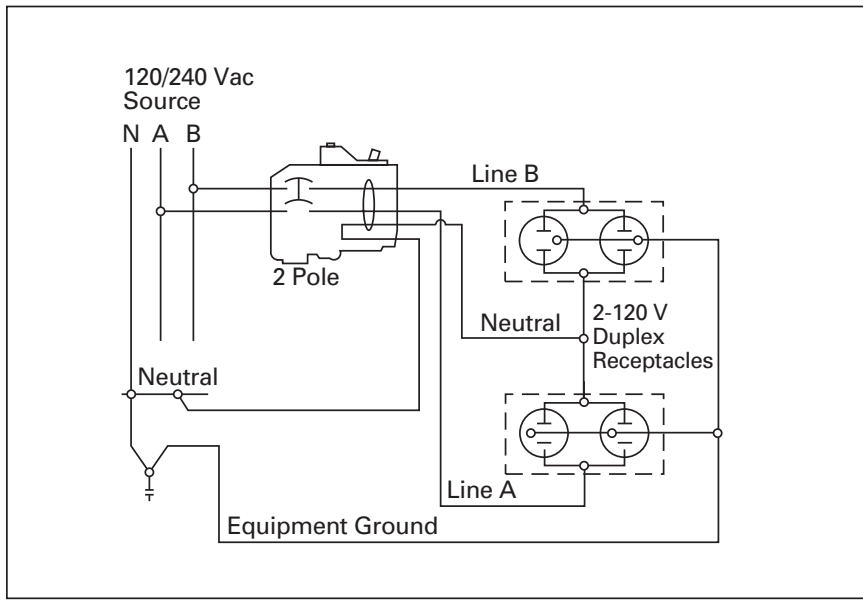


FIGURE 1-4. 1-POLE SHARED NEUTRAL WITH MULTI-DUPLEX RECEPTACLE APPLICATION

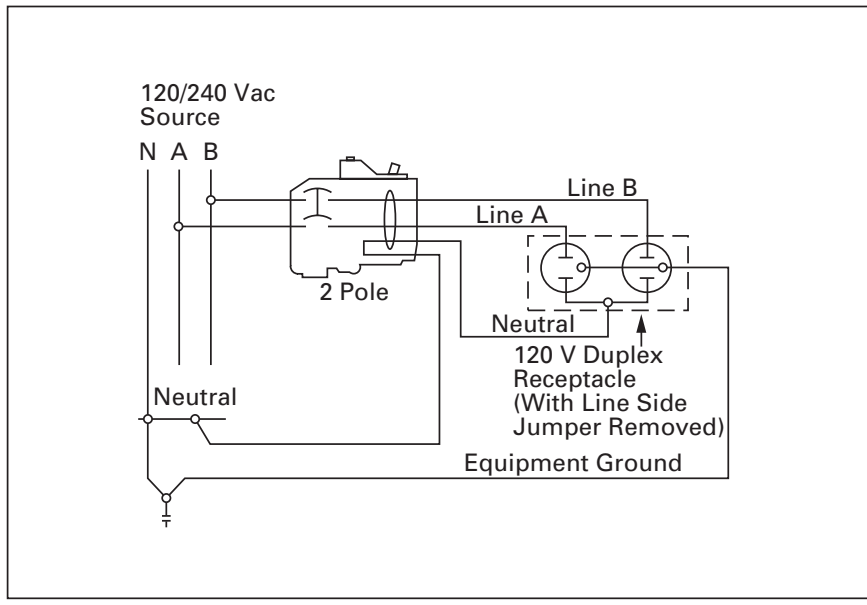


FIGURE 1-6. 2-POLE SHARED NEUTRAL WITH DUPLEX RECEPTACLE APPLICATION

Data Tables

TYPE BR LOADCENTER BREAKERS

TABLE 1-18. TYPE BR 1-INCH (25.4 MM), 10 kAIC

Ampere Rating	Wire Size Range Cu/Al 60°C or 75°C	1-Pole Requires One 1-Inch (25.4 mm) Space		2-Pole Requires One 1-Inch (25.4 mm) Space	
		1 per Shelf Carton		1 per Shelf Carton	
		Catalog Number	UPC Code	Catalog Number	UPC Code
15	#14-4	BR115AF	782114231494	BR215AF	782114409695
15	#14-4	BR115AFGF	782114409671	BR215AFIT	782114415566
15	#14-4	—	—	BR215AFGF	782114409725
15	#14-4	—	—	BR220AF	782114409701
15	#14-4	—	—	BR220AFIT	782114415573
15	#14-4	—	—	BR220AFGF	782114409732
20	#14-4	BR120AF	782114231500	—	—
20	#14-4	BR120AFGF	782114409688	—	—

TABLE 1-19. TYPE BR 1-INCH (25.4 MM) — CLAMSHELLS

Ampere Rating	Wire Size Range Cu/Al 60°C or 75°C	1-Pole Requires One 1-Inch (25.4 mm) Space		2-Pole Requires One 1-Inch (25.4 mm) Space	
		1 per Shelf Carton		1 per Shelf Carton	
		Catalog Number	UPC Code	Catalog Number	UPC Code
15	#14-4	BR115AFCS	782114351123	—	—
20	#14-4	BR120AFCS	782114351130	—	—

TYPE CH LOADCENTER BREAKERS

TABLE 1-20. TYPE CH 3/4-INCH (19.1 MM)

Ampere Rating	Wire Size Range Cu/Al 60°C or 75°C	1-Pole Requires One 3/4-Inch (19.1 mm) Space		2-Pole Requires One 3/4-Inch (19.1 mm) Space	
		1 per Shelf Carton		1 per Shelf Carton	
		Catalog Number	UPC Code	Catalog Number	UPC Code
15	#14-4	CH115AF	782114231470	CH215AF	782114409763
15	#14-4	CH115AFGF	782114409749	CH215AFIT	782114415580
15	#14-4	—	—	CH215AFGF	782114409787
15	#14-4	—	—	CH220AF	782114409770
15	#14-4	—	—	CH220AFIT	782114415597
15	#14-4	—	—	CH220AFGF	782114409794
20	#14-4	CH120AF	782114231487	—	—
20	#14-4	CH120AFGF	782114409756	—	—

TABLE 1-21. TYPE CH 3/4-INCH (19.1 MM) — CLAMSHELLS

Ampere Rating	Wire Size Range Cu/Al 60°C or 75°C	1-Pole Requires One 3/4-Inch (19.1 mm) Space		2-Pole Requires One 3/4-Inch (19.1 mm) Space	
		1 per Shelf Carton		3 per Shelf Carton	
		Catalog Number	UPC Code	Catalog Number	UPC Code
15	#14-4	CH115AFCS	782114351109	—	—
20	#14-4	CH120AFCS	782114351116	—	—

Related Products

AFCI TESTER AND CIRCUIT ANALYZER

- ✓ Catalog Number AFGFTESTER.
- ✓ UL listed tester for use with AFCI, GFCI (5 mA) and GFI (30 mA) devices.
- ✓ Verifies proper wiring in a circuit.
- ✓ Only tester with GFI function and Line-Neutral test feature.
- ✓ Comes with carrying case, lighting adapter, 2-prong adapter and alligator clips for hardwired circuits.