

## BR Circuit Breakers



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## BR Circuit Breakers

## Product Description

**Plug-on Branch Feeder Type Arc Fault Circuit Breakers, Type BR—10 kAIC, 120 Vac and 120/240 Vac**

A branch feeder type arc fault circuit interrupter is a device intended to mitigate high current arcing faults in the complete circuit, including connected cords. High current arcing faults can occur from line to neutral or line to ground. These arcing faults are in parallel with the load and produce the most energy of all arcing faults.

The branch feeder type AFCI is required in the 1999 and 2002 National Electrical Code.

The Combination Type AFCI is required in the 2005, 2008, and 2011 National Electrical Code.

**Plug-on Combination Type Arc Fault Circuit Breakers, Type BR—10 kAIC, 120 Vac and 120/240 Vac**

A combination type arc fault circuit interrupter is a device that includes all of the protection offered by the branch feeder AFCI (mitigation of high current arcing faults in the complete circuit, including connected cords). In addition it provides direct detection of persistent low current arcing faults down to 5 amps with associated mitigation of fire hazards in the cords connected to the outlets. High current arcing faults can occur from line to neutral or line to ground. These arcing faults are in parallel with the load and produce the most energy of all arcing faults. The current level of low current arcing faults is limited by the load.

**Plug-on Ground Fault Circuit Breakers, Type GFTCB and GFEP—10/22 kAIC, 120 Vac and 120/240 Vac**

**Ground Fault Application Notes**

Single-pole GFTCBs are designed for use in two-wire, 120 Vac circuits. See **Page V1-T1-93** for a typical wiring configuration.

Two-pole GFTCBs are designed for use in three-wire, 120/240 Vac circuits, 120 Vac multiwire circuits employing common, neutral and two-wire, 240 Vac circuits obtained from a 120/240 Vac source.

**Page V1-T1-93** shows typical wiring configurations for a 120/240 Vac multiwire circuits, and a 240 Vac, two-wire circuit. Note the “panel neutral” conductor connects to the neutral bar, even though the neutral is not included in the load circuit. This connection is necessary to supply a 120 Vac power source to the ground fault sensing circuit.

The figures are shown with a 120/240 Vac, single-phase, three-wire power source, but are also applicable to a 120/208 Vac, three-phase, four-wire power supply. For all figures, the electrical operation of the GFTCB is not affected by the equipment ground.

**Non-CTL Plug-on Replacement—Circuit Breakers, Type BRD—10 kAIC, 120/240 Vac**

**Non-CTL 10 kAIC for Replacement Purposes Only**

For replacement in enclosures manufactured prior to 1968 with unnotched stabs. Circuit breakers do not have rejection tab.

## Product Selection

**Plug-on Circuit Breakers, Types BR—10/22/42 kAIC, 120 Vac, 120/240 Vac and 240 Vac**

## BR120



## BR215



## BR320



## BRH2100



## BRX2125



## Type BR Breakers, 1-Inch (25.4 mm) per Pole 120/240, 10, 22 and 42 kAIC

Ampere Rating	Wire Size Range Cu/Al 60 °C or 75 °C	Single-Pole 120/240 Vac Requires One 1-Inch (25.4 mm) Space		Two-Pole 120/240 Vac Common Trip Requires Two 1-Inch (25.4 mm) Spaces					
		10 per Shelf Carton		5 per Shelf Carton					
		10 kAIC Catalog Number	22 kAIC Catalog Number	10 kAIC Catalog Number	22 kAIC Catalog Number	22 kAIC Catalog Number <sup>⑤</sup>	42 kAIC Catalog Number	65 kAIC Catalog Number	
10	#14–4	BR110	—	BR210	—	—	—	—	
15	#14–4	BR115 <sup>①②</sup>	BRH115	BR215 <sup>③</sup>	BRH215	—	—	—	
20	#14–4	BR120 <sup>①②</sup>	BRH120	BR220 <sup>③</sup>	BRH220	—	—	—	
25	#14–4	BR125	BRH125	BR225 <sup>③</sup>	BRH225	—	—	—	
30	#14–4	BR130	BRH130	BR230 <sup>③</sup>	BRH230	—	—	—	
35	#14–4	BR135	BRH135	BR235 <sup>③</sup>	BRH235	—	—	—	
40	#14–4	BR140	BRH140	BR240 <sup>③</sup>	BRH240 <sup>③</sup>	—	—	—	
45	#14–4	—	BRH145	BR245 <sup>③</sup>	BRH245	—	—	—	
50	#14–4	BR150	BRH150	BR250 <sup>③</sup>	BRH250 <sup>③</sup>	—	—	—	
55	#14–3	BR150	BRH155	BR255	BRH255	—	—	—	
60	#8–1/0	BR160	BRH160	BR260	BRH260	BRHX260	BRHH260	BRX260	
70	#8–1/0	BR170	BRH170	BR270	BRH270	BRHX270	BRHH270	BRX270	
80	#8–1/0	—	—	BR280	BRH280	BRHX280	BRHH280	BRX280	
90	#8–1/0	—	—	BR290	BRH290	BRHX290	BRHH290	BRX290	
100	#8–1/0	—	—	BR2100	BRH2100	BRHX2100	BRHH2100	BRX2100	
110	#8–1/0	—	—	BR2110	BRH2110	BRHX2110	BRHH2110	BRX2110	
125	#4–2/0	—	—	BR2125	BRH2125	BRHX2125	BRHH2125	BRX2125	
150	#4–2/0	—	—	BR2150 <sup>④</sup>	—	—	—	—	

## Notes

- ① One pole, 1-inch (25.4 mm) per pole circuit breakers are available with high magnetic setting for switching large tungsten lamp loads. Add suffix H to catalog number.
- ② Switching duty rated.
- ③ On the black handle breaker, add suffix “B” to the catalog number to obtain a tapped molded opening for proper use with hold-down kits.
- ④ For use as a branch circuit breaker in 400 and 600 ampere panels only.
- ⑤ System series rating of 65 kAIC upstream when used in series with 22 kAIC BRHX breakers.

All Type BR single-, two- and three-pole circuit breakers carry listing for HACR application. For circuit breakers with a shunt trip, add ST suffix.