



CH Circuit Breakers

Product Description

Quick-make, quick-break switch mechanism combined with inverse time element tripping operation and trip-free handle design. Type CH circuit breakers trip to the OFF position, eliminating nuisance callbacks. The CHF family also includes a trip flag to differentiate between a trip and the breaker being turned off. The thermal-magnetic trip curve avoids nuisance tripping on mild overloads while reacting almost instantaneously to severe short-circuit conditions. Multipole breakers have internal common trip connection to operate all poles simultaneously. Handles are marked with ON-OFF indication and ampere rating of the breaker.

Special Application Plug-on Circuit Breakers—Type CH 10 kAIC 120 Vac and 120/240 Vac

Branch Feeder Type Arc Fault Circuit Breakers

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 all subsequent editions of the National Electrical Code.

Combination Type Arc Fault Circuit Breakers

A combination type arc fault circuit interrupter is a device that offers 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.

Ground Fault Circuit Breakers—Ground Fault Application Notes

Single-pole Type CHGFIs are designed for use in two-wire, 120 Vac circuits. The diagram on **Page V1-T1-44** shows a typical wiring configuration.

Contents

Description

Description	Page
Overview	V1-T1-2
CH Specialty Products	V1-T1-15
CH Loadcenter Options and Accessories	V1-T1-22
CH Circuit Breakers	
Product Selection	V1-T1-37
Options and Accessories	V1-T1-43
Technical Data and Specifications	V1-T1-44
Wiring Diagrams	V1-T1-44

Two-pole Type CHGFIs 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.

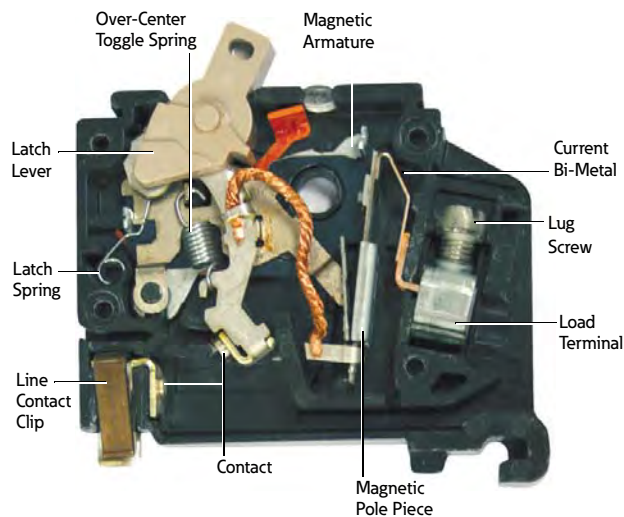
Diagrams on **Page V1-T1-44** illustrate typical wiring configurations for 120/240 Vac multiwire circuits.

The diagram on **Page V1-T1-44** depicts 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 Type CHGFI is not affected by the equipment ground.

Features



1.1

Loadcenters and Circuit Breakers

Type CH Loadcenters and Circuit Breakers

1

Type CH AF/GF Single-Pole Circuit Breaker

Type CH AFCI Single-Pole Circuit Breaker



Dual Function Arc Fault/Ground Fault 3/4-Inch (19.1 mm) Wide Circuit Breakers, Type CH, 120 Vac—10 kAIC ^{①②}

Poles	Ampere Rating	Configuration	Catalog Number
Single-pole 10 kAIC	15	Combination AFCI GFCI	CHFAFGF115 ^③
	20	Combination AFCI GFCI	CHFAFGF120 ^③
Single-pole, plug-on neutral 10 kAIC	15	Combination AFCI GFCI	CHFAFGF115PN
	20	Combination AFCI GFCI	CHFAFGF120PN

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

Type CH AFCI Single-Pole Circuit Breaker



Combination Type CH AFCI 3/4-Inch (19.1 mm) Wide Circuit Breakers

Poles	Ampere Rating	Catalog Number
Standard Pigtail		
Single-pole 10 kAIC	15	CHFCAF115
	20	CHFCAF120
Two-pole 10 kAIC	15	CH215CAF
	20	CH220CAF

Plug-on Neutral Combination Type Arc Fault Circuit Breakers and Ground Fault, Type CH 10 kAIC, 120 Vac and 120/240 Vac ^④

Type CH AFCI Single-Pole PON Combo Circuit Breaker



Combination Type CH AFCI 3/4-Inch (19.1 mm) and CHGFCI Circuit Breakers

Poles	Ampere Rating	Configuration	Catalog Number
Single-pole 10 kAIC	15	AFCI plug-on neutral	CHFCAF115PN
	20	AFCI plug-on neutral	CHFCAF120PN
	15	GFCI plug-on neutral	CHFGFT115PN
	20	GFCI plug-on neutral	CHFGFT120PN
	25		CHFGFT125PN
	30		CHFGFT130PN

Notes

- ① Breaker qualifies as combination arc fault, per UL 1699.
- ② Breaker qualifies as personnel protection ground fault, (5 mA) per UL 943.
- ③ Clamshell packaging available with CS modification code on the end of catalog number.
- ④ Requires plug-on neutral loadcenter.

Common trip refers to two-pole 240 V load application sourced by 120/240 Vac (see diagram on [Page V1-T1-44](#)).
Independent trip refers to two-pole multi-wire, home run or shared neutral circuits (see diagrams on [Page V1-T1-44](#)).