

Product Description

- All two- and three-pole circuit breakers are of the common trip type. On all 3-phase Delta (240 V) Grounded B phase applications, refer to Eaton.
- Single-pole circuit breakers, 15 and 20 amperes. Switching duty rated (SWD) for fluorescent lighting applications.
- All G-Frame circuit breakers are suitable for reverse feed use.
- HACR rated.

Technical Data and Specifications

Interrupting Capacity Ratings

Table 12-119. UL 489 Interrupting Capacity Ratings

Circuit Breaker Type	Number of Poles	Interrupting Capacity (kA Symmetrical Amperes)				
		Volts ac (50/60 Hz)				
		120	240	277	480	250 ^{①②}
GD	2	—	65	—	14	10
	3	—	65	—	22	10

① Time constant is 8 milliseconds minimum.

② Two poles of 3-pole circuit breaker.

Table 12-119. UL 489 Interrupting Capacity Ratings (Continued)

Circuit Breaker Type	Number of Poles	Interrupting Capacity (kA Symmetrical Amperes)				
		Volts ac (50/60 Hz)				Volts dc
		120	240	277	480Y/277	125
GHQ	—	65	—	14	—	—
GHB	1	65	—	14	—	14 ^③
	2, 3	—	65	—	14	14
HGHB	1	65	—	25	—	14
GHC	1	65	—	14	—	14 ^③
	2, 3	—	65	—	14	14
HGHC	1	65	—	25	—	14

③ 15 through 70 A breakers only.

Terminal Types

For line and load-side. Terminals are UL listed as suitable for wire type and size given below.

Table 12-120. Terminal Types

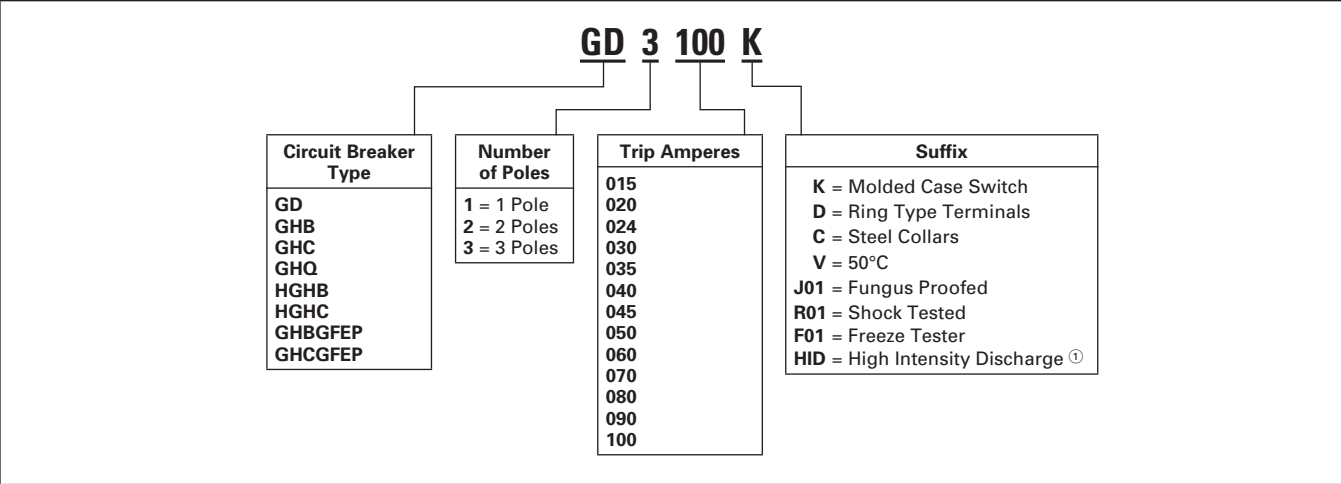
Circuit Breaker Amperes	Terminal Type Material	Screw Head Type	Wire Type	AWG Wire Range	Metric Wire ^④ Range (mm ²)
Standard					
15 – 20	Clamp (Plated Steel)	Slotted	Cu/Al	14 – 10	2.5 – 4
25 – 100	Pressure (Aluminum Body)	Slotted	Cu/Al	10 – 1/0	4 – 50
Optional — GD Only					
15 – 100	Pressure (Steel Body)	Slotted	Cu	14 – 3	—

④ Not UL listed sizes.

Product Selection

This information is presented only as an aid to understanding Catalog Numbers. It is not to be used to build Catalog Numbers for circuit breakers or trip units.

Table 12-121. Circuit Breaker/Frame Catalog Numbering System



① HID suffix only applies to the GHB and GHC 1 pole, 15 – 20 ampere circuit breakers.

Type GD Thermal-Magnetic Circuit Breakers with Non-Interchangeable Trip Units



Typical G-Frame Circuit Breaker

Standards and Certifications

- UL/CSA.

Product Description

- Cable in, cable out.
- Includes mounting hardware and BMHE.

Product Selection

Table 12-122. Type GD Thermal-Magnetic Circuit Breakers with Non-Interchangeable Trip Units

Maximum Continuous Ampere Rating at 40°C	480 Vac Maximum, 250 Vdc				Includes Binding Head Screws and Clamps 10 – 32 x .312	
	14 kAIC at 480 Vac		22 kAIC at 480 Vac			
	Includes Line and Load Terminals					
	2-Pole		3-Pole		3-Pole	
	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$
15	GD2015		GD3015		GD3015D	
20	GD2020		GD3020		GD3020D	
25	GD2025		GD3025		GD3025D	
30	GD2030		GD3030		GD3030D	
35	GD2035		GD3035		GD3035D	
40	GD2040		GD3040		GD3040D	
45	GD2045		GD3045		GD3045D	
50	GD2050		GD3050		GD3050D	
60	—		GD3060		GD3060D	
70	—		GD3070		GD3070D	
80	—		GD3080		GD3080D	
90	—		GD3090		GD3090D	
100	—		GD3100		GD3100D	

Type GD Molded Case Switches

Product Selection

Table 12-123. Type GD Molded Case Switches

Maximum Continuous Ampere Rating at 40°C	480 Vac Maximum, 250 Vdc	
	Catalog Number (Includes Line and Load Terminals)	Price U.S. \$
3-Pole		
60 100	GD3060K GD3100K	
60 100	GD3060KC ① GD3100K ①	

① Includes line and load steel terminals.

Note: Molded Case Switches may open above 1300 amperes.

Types GHB and HGHB Bolt-On Panelboard Circuit Breakers



Typical GHB

Standards and Certifications

These breakers meet the requirements of Federal Specification W-C-375b as follows:

- Type GHB, 120 and 240 V:
 - 1 Pole: Class 11a
 - 2, 3 Poles: Classes 10b, 11b, 12b, 14b, 15b
 - UL/CSA
- Type GHB, 277 and 480Y/277 V:
 - 1 Pole: Classes 12c, 13a
 - 2, 3 Poles: Class 13b
 - Type HGHB 277 V
 - Type GHQ 277 V

Product Selection

Table 12-124. Type GHB Thermal-Magnetic Circuit Breakers with Non-Interchangeable Trip Units ^①

Continuous Ampere Rating at 40°C	277/480 Vac Maximum, 125 Vdc Maximum ^②		277/480 Vac Maximum, 125/250 Vdc Maximum		277/480 Vac Maximum, 125/250 Vdc Maximum ^③	
	1-Pole		2-Pole		3-Pole	
	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$
15	GHB1015 ^{④⑤}		GHB2015 ^④		GHB3015 ^④	
20	GHB1020 ^{④⑤}		GHB2020 ^④		GHB3020 ^④	
25	GHB1025		GHB2025		GHB3025	
30	GHB1030		GHB2030		GHB3030	
35	GHB1035		GHB2035		GHB3035	
40	GHB1040		GHB2040		GHB3040	
45	GHB1045		GHB2045		GHB3045	
50	GHB1050		GHB2050		GHB3050	
60	GHB1060		GHB2060		GHB3060	
70	GHB1070		GHB2070		GHB3070	
80	GHB1080		GHB2080		GHB3080	
90	GHB1090		GHB2090		GHB3090	
100	GHB1100		GHB2100		GHB3100	

^① 480Y/277 V, circuit breakers (Type GHB) not suitable for 3-phase Delta (480 V).

^② 15 through 70 ampere circuit breakers only.

^③ Use (2) outside poles.

^④ Uses .190 (4.83) -32 screw type clamp terminals.

^⑤ Add suffix HID for High Intensity Discharge (HID) applications. 15 and 20 ampere, 1-pole are SWD rated.

Table 12-125. Type HGHB Thermal-Magnetic Circuit Breakers with Non-Interchangeable Trip Units

Continuous Ampere Rating at 40°C	277 Vac Maximum, 125 Vdc Maximum	
	1-Pole	
	Catalog Number	Price U.S. \$
15	HGHB1015 ^⑥	
20	HGHB1020 ^⑥	
25	HGHB1025	
30	HGHB1030	

^⑥ 15 and 20 ampere, 1-pole are SWD rated.

Table 12-126. Type GHQ Thermal-Magnetic Circuit Breakers with Non-Interchangeable Trip Units

Continuous Ampere Rating at 40°C	277 Vac Maximum 14 kAIC, No dc Rating (HID & SWD)	
	1-Pole	
	Catalog Number	Price U.S. \$
15	GHQ1015 ^⑦	
20	GHQ1020 ^⑦	

^⑦ Includes 4A33462H01 load clip.

**Type GHBGFEP Bolt-On
Panelboard 30 mA
Industrial Ground Fault
Circuit Protectors**



Single-Phase (Requires 2 Poles)

Product Description

- 15 – 60 amperes, 277 V, 50/60 Hz.
- Operational voltage 240 V to 305 V.

Standards and Certifications

These circuit breakers meet the requirements of UL 489 and UL 1053.

Technical Data

Table 12-127. Interrupting Capacity Ratings

Circuit Breaker Type	Number of Poles	Interrupting Capacity (Symmetrical Amperes)
		277 Vac (50/60 Hz)
GHBGFEP	1	14,000

Product Selection

Table 12-128. Type GHBGFEP Bolt-On Panelboard 30 mA Industrial Ground Fault Circuit Protectors with Non-Interchangeable Trip Units

Continuous Ampere Rating at 40°C	Single-Phase (Requires 2 Poles) 277 Vac, 30 mA	
	Catalog Number	Price U.S. \$
15	GHBGFEP1015	
20	GHBGFEP1020	
30	GHBGFEP1030	
40	GHBGFEP1040	
50	GHBGFEP1050	
60	GHBGFEP1060	

Types GHC and HGHC Circuit Breakers



Typical GHC

Product Description

- 15 – 100 amperes.
- 120, 240, 277, 480Y/277 V, 50/60 Hz, 125, 125/250 Vdc.
- 1, 2 and 3 poles.
- Cable in, cable out.
- Does not include mounting hardware.

Standards and Certifications

These breakers meet the requirements of Federal Specification W-C-37b as follows:

- Type GHC, 277 and 480Y/277 V:
 - 1 Pole: Classes 12c, 13a
 - 2, 3 Poles: Class 13b
 - UL/CSA

Product Selection

Table 12-129. Type GHC Thermal-Magnetic Circuit Breakers with Non-Interchangeable Trip Units

Continuous Ampere Rating at 40°C	277 Vac Maximum, 125 Vdc Maximum ^①		480Y/277 Vac Maximum, 125/250 Vdc Maximum		480Y/277 Vac Maximum, 125/250 Vdc Maximum ^②	
	1-Pole		2-Pole		3-Pole	
	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$
15	GHC1015 ^{③④}		GHC2015 ^③		GHC3015 ^③	
20	GHC1020 ^{③④}		GHC2020 ^③		GHC3020 ^③	
25	GHC1025		GHC2025		GHC3025	
30	GHC1030		GHC2030		GHC3030	
35	GHC1035		GHC2035		GHC3035	
40	GHC1040		GHC2040		GHC3040	
45	GHC1045		GHC2045		GHC3045	
50	GHC1050		GHC2050		GHC3050	
60	GHC1060		GHC2060		GHC3060	
70	GHC1070		GHC2070		GHC3070	
80	GHC1080		GHC2080		GHC3080	
90	GHC1090		GHC2090		GHC3090	
100	GHC1100		GHC2100		GHC3100	

^① 15 through 70 ampere circuit breakers only.

^② Use (2) outside poles.

^③ Uses .190-32 screw type clamp terminals.

^④ Add suffix HID for High Intensity Discharge (HID) applications. 15 and 20 ampere, 1-pole are SWD rated.

Table 12-130. Type HGHC Thermal-Magnetic Circuit Breakers with Non-Interchangeable Trip Units

Continuous Ampere Rating at 40°C	277 Vac Maximum, 125 Vdc Maximum	
	1-Pole	
	Catalog Number	Price U.S. \$
15	HGHC1015 ^⑤	
20	HGHC1020 ^⑤	
25	HGHC1025	
30	HGHC1030	

^⑤ 15 and 20 ampere, 1-pole are SWD rated.

**Type GHCGFEP Cable-In/
Cable-Out 30 mA
Industrial Ground Fault
Circuit Protectors**



*Single-Phase
(Requires 2 Pole Spaces)*

Product Description

- 15 – 60 amperes, 277 V, 50/60 Hz.
- Operational voltage 240 V to 305 V.

Standards and Certifications

These circuit breakers meet the requirements of UL 489 and UL 1053.

Technical Data and Specifications

Table 12-131. Interrupting Capacity Ratings

Circuit Breaker Type	Number of Poles	Interrupting Capacity (Symmetrical Amperes)
		277 Vac (50/60 Hz)
GHCGFEP	1	14,000

Product Selection

Table 12-132. Type GHCGFEP 30 mA Industrial Ground Fault Circuit Protectors with Non-Interchangeable Trip Units

Continuous Ampere Rating at 40°C	Single-Phase (Requires 2 Poles) 277 V, 30 mA	
	Catalog Number	Price U.S. \$
15	GHCGFEP1015	
20	GHCGFEP1020	
30	GHCGFEP1030	
40	GHCGFEP1040	
50	GHCGFEP1050	
60	GHCGFEP1060	

Special Purpose GHC Circuit Breakers

Product Description

Eaton's Cutler-Hammer Type GHC circuit breakers have binding head screw-type terminals on line and load side. These circuit breakers with screw-type terminals (.190-32) will be marked "Special purpose breaker not for general use." To order this special breaker, use the Catalog Number from **Tables 12-133 and 12-134**.

Product Selection

Table 12-133. Type GHC Thermal-Magnetic Circuit Breakers with Non-Interchangeable Trip Units

Continuous Ampere Rating at 40°C	277 Vac Maximum, 125 Vdc Maximum		480Y/277 Vac Maximum, 125/250 Vdc Maximum		480Y/277 Vac Maximum, 125/250 Vdc Maximum ^①	
	1-Pole		2-Pole		3-Pole	
	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$
25	GHC1025D		GHC2025D		GHC3025D	
30	GHC1030D		GHC2030D		GHC3030D	
35	GHC1035D		GHC2035D		GHC3035D	
40	GHC1040D		GHC2040D		GHC3040D	
45	GHC1045D		GHC2045D		GHC3045D	
50	GHC1050D		GHC2050D		GHC3050D	
60	GHC1060D		GHC2060D		GHC3060D	
70	GHC1070D		GHC2070D		GHC3070D	
80	GHC1080D		GHC2080D		GHC3080D	
90	GHC1090D		GHC2090D		GHC3090D	
100	GHC1100D		GHC2100D		GHC3100D	

^① Use (2) outside poles.

Table 12-134. Type GHB and GHC Thermal-Magnetic Circuit Breakers with Non-Interchangeable Trip Units for HID Lighting Applications

Type	Continuous Ampere Rating at 40°C	277 Vac Maximum	
		1-Pole	
		Catalog Number	Price U.S. \$
Cable-in	15 20	GHC1015HID GHC1020HID	
Bolt-on	15 20	GHB1015HID GHB1020HID	