Molded Case Circuit Breaker Product Family

Contents

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Product Overview

Eaton's molded case circuit breakers are designed to provide circuit protection for low voltage distribution systems. They are described by NEMA as, "... a device for closing and interrupting a circuit between separable contacts under both normal and abnormal conditions," and furthermore as, "... a breaker assembled as an integral unit in a supporting and enclosing housing of insulating material." The National Electrical Code (NEC) describes them as, "A device designed to open and close a circuit by non-automatic means, and to open the circuit automatically on a predetermined overload of current, without injury to itself when properly applied within its rating."

So designed, Eaton circuit breakers protect conductors against overloads and conductors and connected apparatus, such as motors and motor starters, against short circuits.

In low voltage distribution systems, there are many varied applications of molded case circuit breakers.

Eaton offers the most comprehensive family of molded case circuit breakers in the industry.

This section of circuit breakers includes:

- Thermal-magnetic trip breakers
- Electronic rms trip breakers
- Molded case switches
- Motor circuit protectors
- Current limiting breakers
- Special application breakers

Modified Breakers

Eaton breakers can be ordered with internal accessories installed. These modified breakers will be subject to an addition charge.

Special Calibration

Special non-UL-listed calibrations are available for certain ambient temperatures other than 40 °C and for frequencies other than 50/60 Hz or DC. Reduced interrupting ratings will apply for 400 Hz applications.

50 °C Calibration

Add suffix **V** to catalog Number for complete breaker, listed above, when ordering listed ampere ratings for breakers to be used in 50 °C ambients. (No UL label.)

Moisture-Fungus Treatment

All circuit breaker cases are molded from glass-polyester which does not support the growth of fungus. Any parts which are susceptible to the growth of fungus will require special treatment.

Freeze-Tested Circuit Breakers

The circuit breakers may be ordered with freeze testing. This option uses special lubrication and mechanical operation is verified at –40 °C.

Marine Applications

E- to R-Framed circuit breakers can be supplied to meet the following marine specifications:

- U.S. Coast Guard CFR 46; ABS—American Bureau of Shipping; IEEE 45; DNV; Lloyds; and ABS/NVR

These specifications generally require molded case circuit breakers to be supplied with 50 °C ambient, and plug-in adapter kits. When plug-in adapter kits are used, no terminals need be supplied (switchboard applications).

Circuit breakers can also be supplied to meet UL 489 Supplement SA (Marine use) and UL 489 Supplement SB (Naval Use).

UL 489 Supplement SA applies to vessels over 65 feet (19.8 m) in length. Requirements include 40 °C ambient calibration, special labeling, and no use of aluminum conductors or terminals. (No 50 °C.)

- Suffix H08

Or you can choose to add 50 °C ambient but then there is no "UL" mark.

- Suffix VH08

UL 489 Supplement SB requires partial 50 °C ambient calibration, vibration testing, special nameplating and no use of aluminum conductors or terminals. Eaton chooses to always fully calibrate to 50 °C ambient. ("Naval" labeled per UL, and UL now allows 50 °C label here.)

- Suffix VH09

Certified Test Reports

Eaton breakers can be ordered with certified test reports at the time of order entry. Test report documents the thermal and magnetic or electronic tripping characteristics of the individual breaker. Breaker and test report must be ordered together. Add suffix 12 to breaker catalog number and enter separate line item on order for certified test report.

Standards and Certifications

Molded case circuit breakers are designed to conform with the following standards:

- Underwriters Laboratories Inc., Standard UL 489, molded case circuit breakers and circuit breaker enclosures
- National Electrical Manufacturers Association (NEMA) Standards Publication No. AB1-1993, molded case circuit breakers
- Australian Standard AS 2184, molded case circuit breakers
- British Standards Institution Standard BS 4752: Part 1, switchgear and control gear Part 1: circuit breakers
- Canadian Standards Association (CSA) Standard C22.2 No. 5, service entrance and branch circuit breakers
- International Electrotechnical Commission Recommendations IEC 60947-2, circuit breakers
- Japanese T-Mark Standard molded case circuit breakers
- South African Bureau of Standards, Standard SABS 156, Standard Specification for molded case circuit breakers
- Swiss Electro-Technical Association Standard SEV 157-1, safety regulations for circuit breakers
- Union Technique de l'Electricite Standard NF C 63-120, low voltage switchgear and control gear circuit breaker requirements
- Verband Deutscher Elektrotechniker (Association of German Electrical Engineers) Standard VDE 0660, low voltage switchgear and control gear, circuit breakers

Conformance with these standards satisfies most local and international codes, assuming user acceptability and simplified application.

Molded case circuit breakers equal or exceed Federal Specification Classification W-C-375b requirements for the particular class associated with the circuit breaker frame being considered.

Open breakers do not have service entrance ratings. Service entrance rating is part of the enclosure.

Listed

Quick Reference

Industrial Circuit Breakers

G-Frame

Circuit Breaker Type	Continuous Ampere Rating at 40 °C	No. of Poles	Volts AC	Volts DC	Type of Trip ①	Federal Specification W-C-375b	UL Listed Interrupting Ratings (rms Symmetrical Amperes) AC (kA) 120	120/240	240	277	480	600	DC (kA) ② 125 ③	250	Page Number
GHB	15–100	1	120	125	N.I.T.U.	11a	65	—	—	—	—	—	14	—	**V4-T2-264**
GHB	15–100	2, 3	240	125/250	N.I.T.U.	11a10b, 11b	—	—	65	—	—	—	—	14	**V4-T2-264**
GHB	15–100	1	277	125	N.I.T.U.	12b, 14b	—	—	—	14	—	—	14	—	**V4-T2-264**
GHB	15–100	2, 3	480Y/277	125/250	N.I.T.U.	15b	—	—	—	14	14	—	—	14	**V4-T2-264**
HGHB	15–30	1	277	125	N.I.T.U.	12c, 13a, 13b	65	—	—	25	—	—	14	—	**V4-T2-264**
GHBS	15–30	1, 2	480Y/277	—	—	—	65	65	—	14	—	—	—	—	**V4-T1-34**
GBHS	15–20	1, 2	600Y/347	—	N.I.T.U.	—	—	—	—	—	—	10	—	—	**V4-T1-34**
GDB	15–50	2	480	125/250	N.I.T.U.	—	—	—	—	—	14	—	—	10	**V4-T2-262**
GDB	15–100	3	480	250	N.I.T.U.	—	—	—	—	—	14	—	—	10	**V4-T2-262**
GD	15–50	2	480	125/250	N.I.T.U.	13b	—	—	65	—	14	—	—	10	**V4-T2-261**
GD	15–100	3	480	250	N.I.T.U.	13b	—	—	65	—	22	—	—	10	**V4-T2-261**
GHC	15–100	1	120	125	N.I.T.U.	12c, 13a	65	—	—	—	—	—	14	—	**V4-T2-269**
GHC	15–100	2, 3	240	125/250	N.I.T.U.	13b	—	—	65		—	—	—	1	**V4-T2-269**
GHC	15–100	1	277	125	N.I.T.U.	12c, 13a	—	—	—	14	—	—	14	—	**V4-T2-269**
GHC	15–100	2, 3	480Y/277	125/250	N.I.T.U.	13b	—	—	—	14	14	—	—	14	**V4-T2-269**
HGHC	15–30	1	277	125	N.I.T.U.	—	65	—	—	25	—	—	14	—	**V4-T2-269**

Notes

① N.I.T.U. is non-interchangeable trip unit and I.T.U. is interchangeable trip unit.
② Two-pole circuit breaker, or two poles of three-pole circuit breaker at 250 Vdc.
③ Single-pole breakers can be applied in DC systems up to 70 A.

F-Frame

Circuit Breaker Type	Continuous Ampere Rating at 40 °C	No. of Poles	Volts AC	Volts DC	Type of Trip ①	Federal Specification W-C-375b	UL Listed Interrupting Ratings (rms Symmetrical Amperes) AC (kA) 120	120/240	240	277	480	600	DC (kA) ② 125	250	Page Number
EDB	100–225	2, 3	240	125	N.I.T.U.	—	—	—	22	—	—	—	10	—	**V4-T2-273**
EDS	100–225	2, 3	240	125	N.I.T.U.	—	—	—	42	—	—	—	10	—	**V4-T2-273**
ED	15–225	2, 3	240	125	N.I.T.U.	12b	—	—	65	—	—	—	10	—	**V4-T2-273**
EDH	100–225	2, 3	240	125	N.I.T.U.	14b	—	—	100	—	—	—	10	—	**V4-T2-273**
EDC	100–225	2, 3	240	125	N.I.T.U.	1	—	—	200	—	—	—	10	—	**V4-T2-273**
EHD	15–100	1	277	125	N.I.T.U.	13a	—	—	—	14	—	—	10	—	**V4-T2-273**
EHD	15–100	2, 3	480	250	N.I.T.U.	13b	—	—	18	—	14	—	—	10	**V4-T2-273**
FDB	15–150	2, 3	600	250	N.I.T.U.	18a	—	—	18	—	14	14	—	10	**V4-T2-273**
FDB	15–150	4	600	250	N.I.T.U.	③	—	—	18	—	14	14	—	10	**V4-T2-273**
FD	15–150	1	277	125	N.I.T.U.	13a	—	—	—	35	—	—	10	—	**V4-T2-273**
FD	15–225	2, 3	600	250	N.I.T.U.	22a	—	—	65	—	35	18	—	10	**V4-T2-273**
FD	15–225	4	600	250	N.I.T.U.	③	—	—	65	—	35	18	—	10	**V4-T2-273**
FDE	15–225	3	600	—	N.I.T.U.	—	—	—	65	—	35	18	—	—	**V4-T2-273**
HFD	15–150	1	277	125	N.I.T.U.	13a	—	—	—	65	—	—	10	—	**V4-T2-273**
HFD	15–225	2,3	600	250	N.I.T.U.	22a	—	—	100	—	65	25	—	22	**V4-T2-273**
HFD	15–225	4	600	250	N.I.T.U.	③	—	—	100	—	65	25	—	22	**V4-T2-273**
HFDE	15–225	3	600	—	N.I.T.U.	—	—	—	100	—	65	25	—	—	**V4-T2-273**
FDC ④	15–225	2, 3	600	250	N.I.T.U.	24a	—	—	200	—	100	35	—	22	**V4-T2-273**
FDC ④	15–225	4	600	250	N.I.T.U.	③	—	—	200	—	100	35	—	22	**V4-T2-273**
FDCE ④⑤	15–225	3	600	—	N.I.T.U.	—	—	—	200	—	100	25	—	—	**V4-T2-273**

Notes

① N.I.T.U. is non-interchangeable trip unit and I.T.U. is interchangeable trip unit.
② Two-pole circuit breaker, or two poles of three-pole circuit breaker at 250 Vdc.
③ Not defined in W-C-375b.
④ Current limiting.
⑤ Check with Eaton for availability.

J-Frame

Circuit Breaker Type	Continuous Ampere Rating at 40 °C	No. of Poles	Volts AC	Volts DC	Type of Trip ①	Federal Specification W-C-375b	UL Listed Interrupting Ratings (rms Symmetrical Amperes) AC (kA) 120	120/240	240	277	480	600	DC (kA) ② 125	250	Page Number
JDB	70–250	2, 3	600	250	N.I.T.U.	22a	—	—	65	—	35	18	—	10	**V4-T2-294**
JD	70–250	2, 3, 4	600	250	I.T.U.	22a	—	—	65	—	35	18	—	10	**V4-T2-293**
HJD	70–250	2, 3, 4	600	250	I.T.U.	22a	—	—	100	—	65	25	—	22	**V4-T2-293**
JDC ③	70–250	2, 3, 4	600	250	I.T.U.	22a	—	—	200	—	100	35	—	22	**V4-T2-293**

K-Frame

Circuit Breaker Type	Continuous Ampere Rating at 40 °C	No. of Poles	Volts AC	Volts DC	Type of Trip ①	Federal Specification W-C-375b	UL Listed Interrupting Ratings (rms Symmetrical Amperes) AC (kA) 120	120/240	240	277	480	600	DC (kA) ② 125	250	Page Number
DK	250–400	2, 3	240	250	N.I.T.U.	14b	—	—	65	—	—	—	—	10	**V4-T2-305**
KDB	100–400	2, 3	600	250	N.I.T.U.	23a	—	—	65	—	35	25	—	10	**V4-T2-305**
KD	100–400	2, 3, 4	600	250	I.T.U.	23a	—	—	65	—	35	25	—	10	**V4-T2-302, V4-T2-303, V4-T2-307, V4-T2-310**
CKD	100–400	2, 3, 4	600	250	I.T.U.	23a	—	—	65	—	35	25	—	—	**V4-T2-304, V4-T2-313, V4-T2-315**
HKD	100–400	2, 3, 4	600	250	I.T.U.	23a	—	—	100	—	65	35	—	22	**V4-T2-302, V4-T2-303, V4-T2-307, V4-T2-310**
CHKD	100–400	2, 3, 4	600	250	I.T.U.	23a	—	—	100	—	65	35	—	—	**V4-T2-304, V4-T2-313, V4-T2-315**
KDC ③	100–400	2, 3, 4	600	250	I.T.U.	23a	—	—	200	—	100	65	—	22	**V4-T2-302, V4-T2-303, V4-T2-307, V4-T2-310**

L-Frame

Circuit Breaker Type	Continuous Ampere Rating at 40 °C	No. of Poles	Volts AC	Volts DC	Type of Trip ①	Federal Specification W-C-375b	UL Listed Interrupting Ratings (rms Symmetrical Amperes) AC (kA) 120	120/240	240	277	480	600	DC (kA) ② 125	250	Page Number
LDB	300–600	2, 3	600	250	N.I.T.U.	23a	—	—	65	—	35	25	—	22	**V4-T2-328**
LD	300–600	2, 3, 4	600	250	I.T.U.	23a	—	—	65	—	35	25	—	22	**V4-T2-326, V4-T2-327, V4-T2-332**
CLD	300–600	2, 3, 4	600	250	I.T.U.	23a	—	—	65	—	35	25	—	—	**V4-T2-328, V4-T2-338**
HLD	300–600	2, 3, 4	600	250	I.T.U.	23a	—	—	100	—	65	35	—	25	**V4-T2-326, V4-T2-327, V4-T2-332**
CHLD	300–600	2, 3, 4	600	250	I.T.U.	23a	—	—	100	—	65	35	—	—	**V4-T2-328, V4-T2-338**
LDC ③	300–600	2, 3, 4	600	250	I.T.U.	23a	—	—	200	—	100	50	—	30	**V4-T2-326, V4-T2-327, V4-T2-334**
CLDC ③	300–600	2, 3, 4	600	250	I.T.U.	23a	—	—	200	—	100	50	—	30	**V4-T2-328, V4-T2-340**

M-Frame

Circuit Breaker Type	Continuous Ampere Rating at 40 °C	No. of Poles	Volts AC	Volts DC	Type of Trip ①	Federal Specification W-C-375b	UL Listed Interrupting Ratings (rms Symmetrical Amperes) AC (kA) 120	120/240	240	277	480	600	DC (kA) ② 125	250	Page Number
MDL	300–800	2, 3	600	250	I.T.U.	23a	—	—	65	—	50	25	—	22	**V4-T2-351, V4-T2-353**
CMDL	300–800	2, 3	600	250	I.T.U.	23a	—	—	65	—	50	25	—	—	**V4-T2-353**
HMDL	300–800	2, 3	600	250	I.T.U.	23a	—	—	100	—	65	35	—	25	**V4-T2-351, V4-T2-353**
CHMDL	300–800	2, 3	600	250	I.T.U.	23a	—	—	100	—	65	35	—	—	**V4-T2-353**

Notes

① N.I.T.U. is non-interchangeable trip unit and I.T.U. is interchangeable trip unit.

② Two-pole circuit breaker, or two poles of three-pole circuit breaker at 250 Vdc.

③ Current limiting.

Molded Case Circuit Breaker Product Family

Contents

G-Frame (15–100 Amperes)

Product Description

- All two- and three-pole circuit breakers are of the common trip type. On all three-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

Catalog Number 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.

Circuit Breaker/Frame

GD 3 100 K

Circuit Breaker Type	
GD	**HGHB**
GDB	**HGHC**
GHB	**GHBGFEP**
GHC	**GHCGFEP**
GHQ	

Number of Poles
1 = 1 pole
2 = 2 poles
3 = 3 poles

Trip Amperes		
015	**035**	**070**
020	**040**	**080**
024	**045**	**090**
030	**050**	**100**
	060	

Suffix	
K = Molded case switch	**J01**= Fungus proofed
D = Ring type terminals	**R01**= Shock tested
C = Steel collars	**F01**= Freeze tester
V = 122 °F (50 °C)	**HID**= High intensity discharge ①

Technical Data and Specifications

UL 489 Interrupting Capacity Ratings

		Interrupting Capacity (kA Symmetrical Amperes)						
		Volts AC (50/60 Hz)					Volts DC	
Circuit Breaker Type	Number of Poles	120	240	277	480	480Y/277	125 ②	250 ③④
GDB	2, 3	—	—	—	14	—	—	10
GD	2	—	65	—	14	—	—	10
GD	3	—	65	—	22	—	—	10
GHQ	—	65	—	14	—	—	—	—
GHB	1	65	—	14	—	—	14	—
GHB	2, 3	—	65	—	—	14	14	—
HGHB	1	65	—	25	—	—	14	—
GHC	1	65	—	14	—	—	14	—
GHC	2, 3	—	65	—	—	14	14	—
HGHC	1	65	—	25	—	—	14	—

Terminal Types

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

Terminal Types

Circuit Breaker Amperes	Terminal Type Material	Screw Head Type	Wire Type	AWG Wire Range	Metric Wire Range (mm^2) ⑤
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, GHB, GHC					
15–100	Pressure (steel body)	Slotted	Cu	14–3	—

Notes

① HID suffix only applies to the GHB and GHC single-pole, 15–20 A circuit breakers.
② Single-pole breakers can be applied in DC systems up to 70 A.
③ Time constant is 8 milliseconds minimum.
④ Two poles of three-pole circuit breaker.
⑤ Not UL listed sizes.

Typical G-Frame Circuit Breaker

Contents

Type GD Thermal-Magnetic Circuit Breakers with Non-Interchangeable Trip Units (15–100 Amperes)

Product Description

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

Standards and Certifications

- UL/CSA

Listed

Product Selection

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

Maximum Continuous Ampere Rating at 40 °C	480 Vac Maximum, 250 Vdc 14 kAIC at 480 Vac Includes Line and Load Terminals Two-Pole Catalog Number	22 kAIC at 480 Vac Three-Pole Catalog Number	Includes Binding Head Screws and Clamps 10–32 x 0.312 Three-Pole Catalog Number
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 GDB Thermal-Magnetic Circuit Breakers with Non-Interchangeable Trip Units

Maximum Continuous Ampere Rating at 40 °C	480 Vac Maximum, 250 Vdc 14 kAIC at 480 Vac Includes Line and Load Terminals Two-Pole Catalog Number	Three-Pole Catalog Number
15	**GDB2015**	**GDB3015**
20	**GDB2020**	**GDB3020**
25	**GDB2025**	**GDB3025**
30	**GDB2030**	**GDB3030**
35	**GDB2035**	**GDB3035**
40	**GDB2040**	**GDB3040**
45	**GDB2045**	**GDB3045**
50	**GDB2050**	**GDB3050**
60	—	**GDB3060**
70	—	**GDB3070**
80	—	**GDB3080**
90	—	**GDB3090**
100	—	**GDB3100**

Type GD Molded Case Switches

Type GD Molded Case Switches—Three-Pole

Maximum Continuous Ampere Rating at 40 °C	480 Vac Maximum, 250 Vdc Catalog Number (Includes Line and Load Terminals)
60	**GD3060K**
60	**GD3060KC** ①
100	**GD3100K**
100	**GD3100KD** ②

Notes

① Includes line and load steel terminals.

② Includes binding head screws and clamps 10–32 x 0.312.

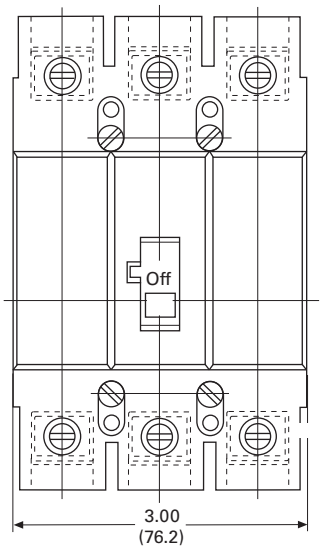
Molded case switches may open above 1300 amperes.

Dimensions

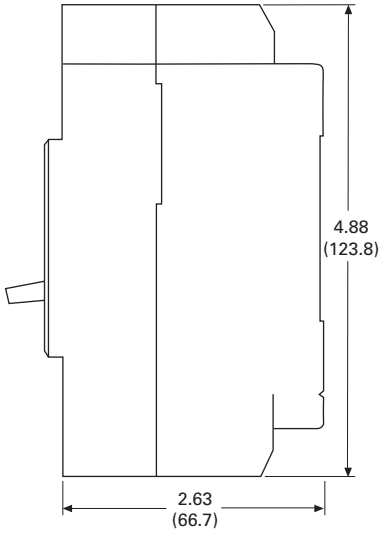
Approximate Dimensions in Inches (mm)

GD-Frame, Three-Pole

Front View



Side View



Typical GHB

Contents

Types GHB and HGHB Bolt-On Panelboard Circuit Breakers (15–100 Amperes)

Standards and Certifications

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

- Type GHB, 120 and 240 V:
  - Single-pole: Class 11a
  - Two-, three-pole: Classes 10b, 11b, 12b, 14b, 15b
  - UL/CSA
- Type GHB, 277 and 480Y/277 V:
  - Single-pole: Classes 12c, 13a
  - Two-, three-pole: Class 13b
  - Type HGHB 277 V
  - Type GHQ 277 V

Listed

Product Selection

Typical GHB

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 Single-Pole Catalog Number	277/480 Vac Maximum, 125/250 Vdc Maximum Two-Pole Catalog Number	277/480 Vac Maximum, 125/250 Vdc Maximum ③ Three-Pole Catalog Number
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**

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

Continuous Ampere Rating at 40 °C	277 Vac Maximum, 125 Vdc Maximum Single-Pole Catalog Number
15	**HGHB1015** ⑥
20	**HGHB1020** ⑥
25	**HGHB1025**
30	**HGHB1030**

Notes

① 480Y/277 V, circuit breakers (Type GHB) not suitable for three-phase delta (480 V).
② Single-pole breakers can be applied in DC systems from 15 through 70 amperes; 80 through 100 amperes devices are not suitable for DC application.
③ Use two outside poles.
④ Uses 0.190 (4.83) –32 screw type clamp terminals.
⑤ Add suffix HID for High Intensity Discharge (HID) applications. 15 and 20 ampere, single-pole are SWD rated.
⑥ 15 and 20 ampere, single-pole are SWD rated.

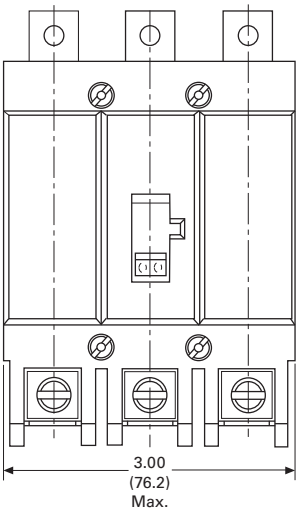
Dimensions

Approximate Dimensions in Inches (mm)

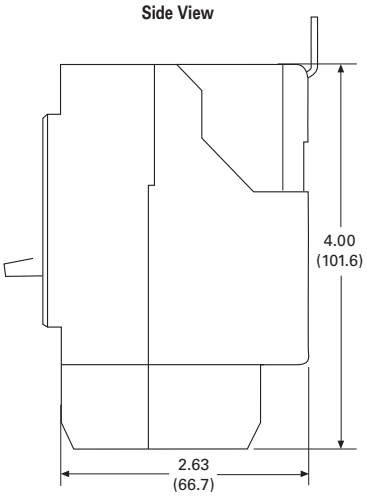
2

GDB-Frame, Three-Pole

Front View



Side View



Single-Phase (requires two poles)

Contents

Type GHBGFEP Bolt-On Panelboard 30 mA Industrial Ground Fault Circuit Protectors (15–100 Amperes)

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.

UL Listed

Product Selection

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 Two Poles) 277 Vac, 30 mA Catalog Number
15	**GHBGFEP1015**
20	**GHBGFEP1020**
30	**GHBGFEP1030**
40	**GHBGFEP1040**
50	**GHBGFEP1050**
60	**GHBGFEP1060**

Technical Data and Specifications

Interrupting Capacity Ratings

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

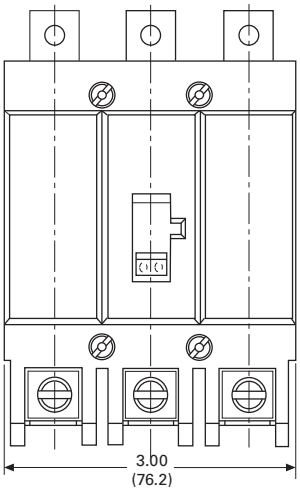
Dimensions

Approximate Dimensions in Inches (mm)

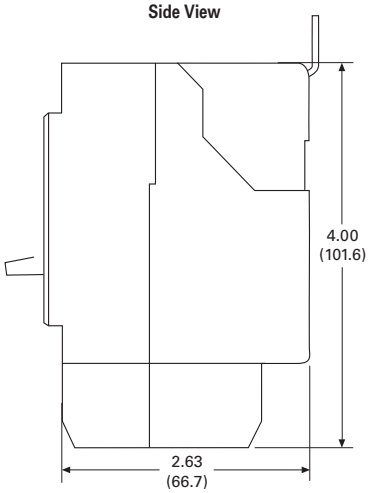
2

GHB-Frame, Three-Pole

Front View



Side View



Typical GHC

Contents

Types GHC and HGHC Circuit Breakers (15–100 Amperes)

Product Description

- 15–100 amperes
- 120, 240, 277, 480Y/277 V, 50/60 Hz, 125, 125/250 Vdc
- Single-, two- and three-pole
- 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:
  - Single-pole: Classes 12c, 13a
  - Two-, three-pole: Class 13b
  - UL/CSA

Listed

Product Selection

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

Continuous Ampere Rating at 40 °C	277 Vac Maximum, 125 Vdc Maximum ① Single-Pole Catalog Number	480Y/277 Vac Maximum, 125/250 Vdc Maximum Two-Pole Catalog Number	480Y/277 Vac Maximum, 125/250 Vdc Maximum ② Three-Pole Catalog Number
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**

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

Continuous Ampere Rating at 40 °C	277 Vac Maximum, 125 Vdc Maximum Single-Pole Catalog Number
15	**HGHC1015** ⑤
20	**HGHC1020** ⑤
25	**HGHC1025**
30	**HGHC1030**

Notes

① 15 through 70 ampere circuit breakers only.
② Single-pole breakers can be applied in DC systems from 15 through 70 ampere; 80 through 100 ampere devices are not suitable for DC application.
③ Uses 0.190–32 screw type clamp terminals.
④ Add suffix HID for High Intensity Discharge (HID) applications. 15 and 20 ampere, single-pole are SWD rated.
⑤ 15 and 20 ampere, single-pole are SWD rated.