

GHBS and GHQRSP



Contents

<i>Description</i>	<i>Page</i>
Quick Reference	V4-T1-2
QUICKLAG Plug-On Types HQP, QPHW, QHPX, QHPW	V4-T1-5
QUICKLAG Plug-On Ground Fault and Equipment Protectors, Types QPGFT, QPHGFT, QPGFEP, QPHGFEP	V4-T1-8
Bolt-On Types BAB, QBHW, HBAX, HBAW	V4-T1-11
Bolt-On Arc Fault Circuit Interrupter Types QBAF, QBCAF	V4-T1-14
Bolt-On Ground Fault and Equipment Protectors, Types QBGFT, QBHGFT, QBGFEP, QBHGFEP	V4-T1-17
Cable-In/Cable-Out Types QC, QCD, QCHW, QHCX, QHCW	V4-T1-20
Cable-In/Cable-Out, 1/2-Inch Wide, Types QCR, QCF, QCRH, QCFH	V4-T1-24
Cable-In/Cable-Out Ground Fault and Equipment Protectors, Types QCGFT, QCHGFT, QCGFEP, QCHGFEP	V4-T1-28
Solenoid-Operated, Remote-Controlled Latching Types BABRP, BABRSP, BRRP and CLRP.	V4-T1-31
Solenoid Operator—Remote Controlled Latching for Type GHBS, GBHS and GHQRSP Breakers	
Product Selection	V4-T1-35
Technical Data and Specifications	V4-T1-36
Wiring Diagrams	V4-T1-36
International Rated Types HQP, BA, QC, GFMB, GFXBC	V4-T1-37
Special Application Breakers, Types HQP, BA, QC . . .	V4-T1-40

Solenoid Operator—Remote-Controlled Latching for Type GHBS, GBHS and GHQRSP Breakers

Product Description

Eaton's GHBS, GBHS and GHQRSP circuit breakers are bolt-on branch circuit breakers designed for use in 277/480 Vac panelboards. In addition to providing conventional branch circuit protection, they include a unique solenoid-operated mechanism that provides for efficient breaker pulse-on and pulse-off operation when used with a suitable controller like Eaton's Pow-R-Command lighting control system.

Features, Benefits and Functions

- Bolt-on line-side terminal
- Cable-connected load-side terminal
- Status switch—remote status and breaker status available from internal auxiliary switches
- Bi-metal assembly for thermal overload protection
- Fast-acting short-circuit protection
- Arc-runner and arc-chute assembly for fast-acting arc extinction
- Three-position breaker handle: OFF, TRIP (Center), ON
- Visual indication of the remotely operated contact's position (open, closed or trip)
- Remote override handle permits manual switching when control power is lost
- 15 and 20A breakers SWD (switching duty) rated.
- 15 and 20A breakers HID rated for HID (High intensity discharge) lighting
- All models HACR rated
- Series rated with various Eaton main circuit breakers

Product Selection

1

GHBS—Single-Pole



GHBS UL 489 Interrupting Ratings

Number of Poles	Ampere Rating ^①	Interrupting Capacity (Symmetrical Amperes)			Catalog Number
		Vac (50/60 Hz) 120	240	277/480	
1	15	65,000	—	14,000	GHBS1015D
	20	65,000	—	14,000	GHBS1020D
	30	65,000	—	14,000	GHBS1030D
2	15	—	65,000	14,000	GHBS2015D
	20	—	65,000	14,000	GHBS2020D
	30	—	65,000	14,000	GHBS2030D

GBHS CSA 22.2 Interrupting Ratings (Not UL Listed)

Number of Poles	Ampere Rating ^①	Interrupting Capacity (Symmetrical Amperes)		Catalog Number
		Vac (50/60 Hz) 347/600		
1	15	10,000		GBHS1015D
	20	10,000		GBHS1020D
2	15	10,000		GBHS2015D
	20	10,000		GBHS2020D

GHQRSP UL 489 and CSA 22.2 Interrupting Ratings

Number of Poles	Ampere Rating ^①	Interrupting Capacity (Symmetrical Amperes)				Catalog Number ^②
		Vac (50/60 Hz) 120	120/240	277	480Y/277	
1	15	65,000	65,000	14,000	14,000	GHQRSP1015
	20	65,000	65,000	14,000	14,000	GHQRSP1020
	30	65,000	65,000	14,000	14,000	GHQRSP1030
2	15	65,000	65,000	14,000	14,000	GHQRSP2015
	20	65,000	65,000	14,000	14,000	GHQRSP2020
	30	65,000	65,000	14,000	14,000	GHQRSP2030

Notes

^① Continuous current rating at 40°C.

^② All UL listed circuit breakers are HID (high intensity discharge) rated.

Technical Data and Specifications

Solenoid Operating Data

- Power requirements: 24 Vac/dc (20.4V minimum–30V maximum)
 - Controlled signal: +AC/DC 8 ms minimum with zero cross, 300 ms maximum
 - AC: 1.3 cycles minimum, 18 cycles or 300 ms maximum
 - DC: 8 ms minimum, 300 ms maximum
 - Maximum duty cycle of 6 OPEN/CLOSE cycles per minute
- Current draw: open 1A, close 3/4A
- Blue wire: power input (see power requirements)
- Black wire: remote opening

- Red wire: remote closing
- Yellow wire: feedback status from power input, maximum 0.50A draw

Operation

Mechanism manually operated by external handle allowing ON, OFF and RESET operation. Handle assumes a center TRIP position after performing protective response.

Operating/Application Data

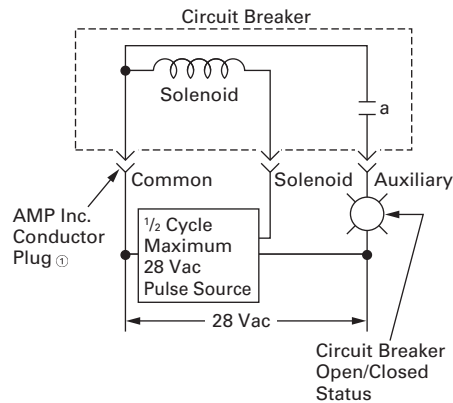
- Ambient temperature: 0–40°C
- Frequency: 48–62 Hz
- Humidity: 0–95% noncondensing

Terminal Type

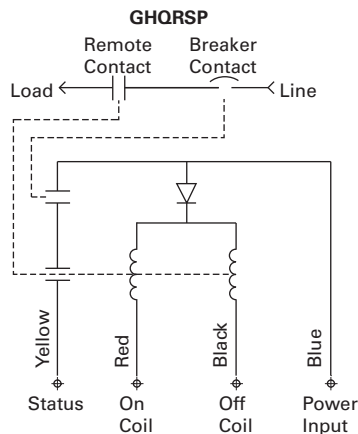
Circuit Breaker Type	Circuit Breaker Amperes	Screw Head Type	Terminal Type	Range
GHQRSP	15–20	Slotted	Clamp	#14–#4 AWG

Wiring Diagrams

Typical Single-Pole Circuit Breaker Schematic Diagram for GBHS and GBHS Breakers



Typical Single-Pole Circuit Breaker Schematic Diagram for GHQRSP Breakers



Dimensions

Approximate Dimensions in Inches (mm)

Dimensions per Pole

Circuit Breaker Type	Width	Height ^②	Length ^①
GHQRSP	1.00 (25.4)	4.63 (117.6)	2.81 (71.4)

Notes

- ① Purchase separate AMP Inc. conductor plug #640426-3.
- ② Excluding line terminal.
- ③ Excluding handle.