

# Emergency lighting remote-operated circuit breaker



GHQRDEL emergency lighting remote-operated circuit breaker is a two-pole device that contains both solenoid operated remote switching pole and manually operated pole. This device complies with 2017 National Electrical Code®; Section 700.12(F) Paragraph (4): *The branch circuit feeding the unit equipment shall be the same branch circuit as that serving the normal lighting in the area and connected ahead of any local switches. The branch circuit that feeds unit equipment shall be clearly identified at the distribution panel.*

## Features, functions and benefits

- Left pole: integral solenoid controlled contacts in series with thermal-magnetic circuit breaker pole
- Right pole: standard thermal-magnetic circuit breaker pole
- Both poles tied to same phase; single bolt-on line-side terminal
- Cable-connected load-side terminal
- Internal status switch provides remote status of controlled contacts
- 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
- Two-pole handle tie provides local common disconnect
- Visual indication of the remotely operated contact's position (open or closed)
- GREEN override handle permits manual switching when control power is lost
- 15 A and 20 A breakers switch duty (SWD) and high intensity discharge (HID) rated

## Operating data

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

### Solenoid

- Power requirements: 24 Vac/Vdc (20.4 V minimum–30 V maximum)
- Signal duration: 65–200 ms
- Maximum duty: cycle of 6 (ON/OFF/ON) cycles per minute
- Current draw: 2 A per pole
- Blue wire: power input 24 Vac/Vdc
- Black wire: ground for remote opening
- Red wire: ground for remote closing
- Yellow wire: feedback status from power input, 24 Vac/Vdc, maximum 0.50 A draw

### Application

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

### Standards

- UL® 489
- CSA® 22.2
- Both UL and NEC require Class 2 and Class 3 wiring to be secured at least 1/4 inch from Class 1 wiring

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## Product selection

Amperes	Catalog number
15	<b>GHQRDEL2015</b>
20	<b>GHQRDEL2020</b>

## Product specifications

GHQRDEL circuit breakers incorporate many of the same robust features as other GHQRD remote-operated circuit breakers including:

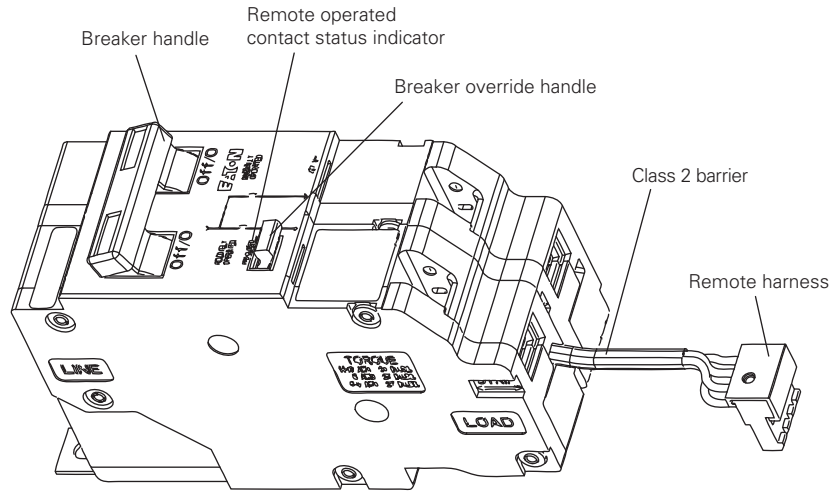
- Handle rating: 15 A and 20 A (both switched and unswitched circuits)

- Maximum voltage rating: 277 Vac
- Interrupting current: 14,000 A rms at 277/480 Vac, 65,000 A rms at 120/240 Vac
- Series ratings type designation GHQ

- Overcurrent protection: UL listed 489
- UL listed SWD and HID ratings
- Lug wire size: (1) #12–8 Al, #14–8 Cu per circuit, 75 °C conductors

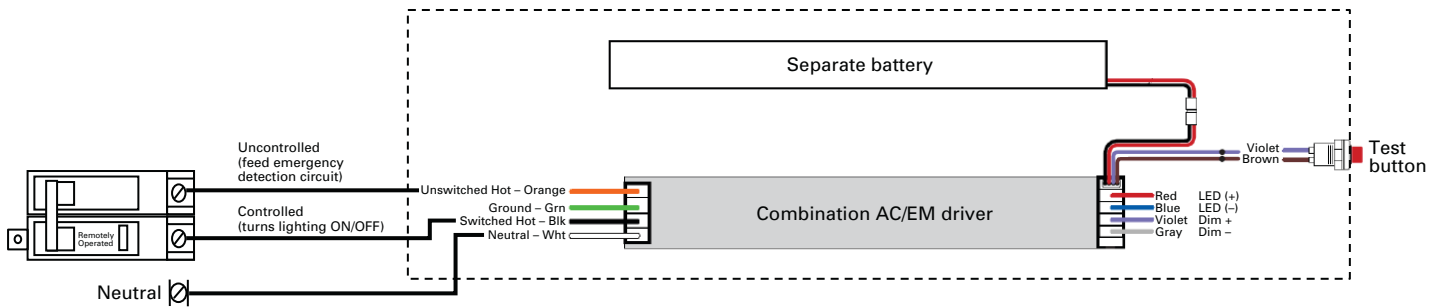
## Diagram 1

GHQRDEL remote operated circuit breaker



## Diagram 2

Typical GHQRDEL field wiring



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