



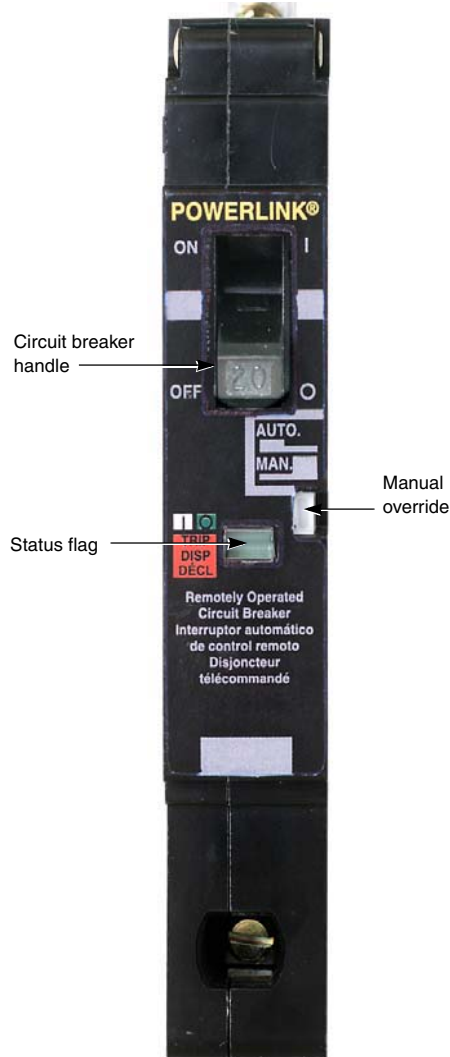
ECB-G3 Series
Bolt-on remotely operated circuit breakers

REMOTELY OPERATED ECB-G3 CIRCUIT BREAKERS

Square D Powerlink G3 remotely operated circuit breakers are designed for installation in Square D NF Lighting Panelboards as part of the Square D Powerlink G3 Lighting Control System. These circuit breakers provide the same overcurrent protection as found in standard circuit breakers.

The Best in Remote Operation

- Robust 24Vdc motor and highly effective trip mechanism provide unequalled remote operation capability in terms of compact size, electrical ratings, and mechanical life.
- Motor and drive train can open and close the contacts when the circuit breaker handle is in the ON position.
- Contacts cannot be closed remotely when the handle is in the OFF position or the circuit breaker is tripped.
- Manual override selector located on the front of the circuit breaker – extremely useful when manual lighting control is critical or when a loss of control features occurs.
- In manual mode, the motor drive train is disconnected from the contact, allowing the circuit breaker handle to operate the contacts like a conventional circuit breaker.
- Contact status indication – provided by a sensing circuit that determines the presence or absence of voltage on the load side terminal of the circuit breaker; this superior capability assures the true status of the branch circuit is reflected back to the remote location.



1-pole ECB-G3

Tripping System with True RMS Sensing

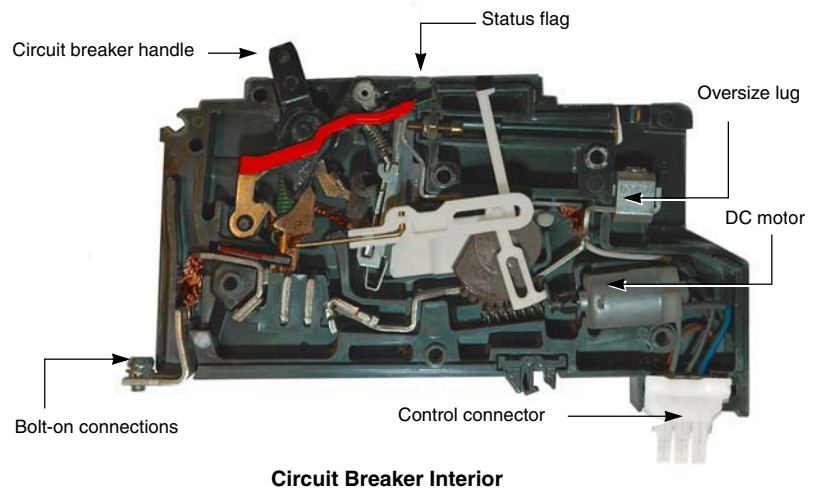
- Square D Powerlink ECB-G3 circuit breakers – have a permanent trip unit that contains a factory preset thermal (overload) trip element and a magnetic (short circuit) trip element in each pole.
- The thermal trip element – true RMS sensing and is calibrated to carry the continuous current rating of the circuit breaker at 40°C (140°F) free air ambient temperature.
- In accordance with the National Electrical Code – Square D Powerlink ECB-G3 circuit breakers are intended to be applied at up to 80 percent of their continuous current rating.

Operating Mechanism with VISI-TRIP® Indicator

Square D Powerlink ECB-G3 circuit breakers have an over-center toggle mechanism that provides quick-make, quick-break operation and the unique VISI-TRIP® circuit breaker trip indicator. The operating mechanism is trip-free, which means the circuit breaker will trip even though the operating handle may be restricted to the ON position. Without any restrictions, the operating handle moves to a position between ON and OFF when the circuit breaker is tripped. An internal crossbar provides common tripping of all poles on 2- and 3-pole Square D Powerlink ECB-G3 Circuit Breakers.



Square D® Powerlink® G3 Lighting Control Systems Remotely Operated ECB-G3 Circuit Breakers



Features

- Overcurrent protection—UL Listed 489
- Series connected ratings up to 200,000 RMS symmetrical amperes
- Integral ON/OFF/trip status position indicator, visible without removing trim.
- Manual override
- Rated for a full 200,000 remote On/Off/On sequence of operations
- Bolt-on line connectors
- Oversized load lugs
- Modular control connectors
- UL Listed for high intensity discharge lighting (HID)
- UL Listed switch duty rated (SWD), and heating, air-conditioning, refrigeration rated (HACR)
- Special emergency lighting option for meeting NEC 700.12e



ECB-G3EL Remotely Operated Circuit Breakers for Emergency Lighting Circuits



Square D® Powerlink® ECB-G3EL Circuit
Breaker for Emergency Lighting Circuits

Identifying the proper controls for a lighting system can be a daunting task. Cost, space considerations, energy codes, desired operation, and National Electrical Code® (NEC) code compliance must all be considered when specifying a system. Often, controls for emergency lighting systems are also required which further compounds the complexity of the control system.

Square D® Powerlink® ECB-G3EL circuit breakers relieve much of the burden associated with designing such control systems. These UL listed circuit breakers provide a means to comply with the requirements of the NEC, 700.12(E). The circuit breaker contains both a remotely operated switched circuit for controlling the luminaires, and a manually operated unswitched circuit, which provides power to the unit emergency equipment's charging and detection circuit. Both circuits are electrically tied to the same source via a single common bolt-on connection that receives its supply from the panelboard bus.

Both circuits of the ECB-G3EL breaker contain a thermal-magnetic trip mechanism that protects their associated conductors from overcurrent. The circuit breaker provides a common trip function ensuring that both circuits will open whenever a fault occurs on either of the circuits. It also provides a common handle tie to ensure that both circuits are manually switched together.

Square D Powerlink ECB-G3EL circuit breakers incorporate many of the same robust features as other Square D Powerlink ECB-G3 breakers including:

- Handle Rating: 20A (both switched and unswitched circuits)
- Maximum Voltage Rating: 480Y/277Vac
- Interrupting Ratings: 65kA at 240Vac, 14kA at 480Y/277Vac
- Maximum Series Connected Ratings: 200KA at 240Vac and 100kA at 480Y/277V
- Rated Endurance On/Off/On cycles: 200,000 operations
- Breaker status viewing window for both circuits
- Auto/manual override selector for the remotely operated circuit
- UL listed Switch Duty Rated (SWD) and High Intensity Discharge (HID) ratings
- Lug wire size: (1) #12-8Al, #14-8Cu per circuit, 169°F (75°C) conductors
- No breaker pigtailed or other externally mounted hardware