EATON | Cutler-Hammer

FlashGard® Motor Control Center (MCC)

Product Focus

What is an Arc Flash?

An arc flash is a dangerous condition associated with the explosive release of energy caused by an electrical arc due to either a phase-to-ground or phase-to-phase fault. This fault can result from many factors, including dropped tools, accidental contact with electrical systems, buildup of conductive dust, corrosion and improper work procedures.

FlashGard MCC Features and Functions

FlashGard Motor Control Centers utilize many features not yet available in the electrical industry that have proven to be a reliable and effective means of providing enhanced electrical safety to minimize the dangers of arc flash. FlashGard MCCs are available with Freedom NEMA and A200 contactors.

Prevention: Insulation and Isolation

- Insulated horizontal bus.
- Insulated labyrinth vertical bus.
- Shutters to isolate the vertical bus when a unit is removed.
- Shutters on the unit to isolate the stabs when bucket is removed.

Reduction of Time-Available Fault Current Using ARMS

- Arcflash Reduction Maintenance System™.
- Applied to breaker feeding MCC to reduce trip time during an arc flash.
- Can reduce risk category from CAT3 to CAT0.

Maintaining Unit Door Closed

- Units disconnect from vertical bus with door closed.
- Interlock preventing removal of unit from vertical bus.
- Interlock preventing insertion of unit with stabs extended.
- A more uniform and secure connection to the vertical bus.
- RotoTract™ Stab Assembly[1]:
  - Connected
  - Disconnected
- Visual indication that stabs are disconnected from vertical bus.
- Optional through-the-door voltage present indicator (VoltageVision™).
- Optional automatic motor insulation tester (Motorguard™).

Removing Voltages Dangerous to Life

- In "Disconnected" position, no voltage present.
- Internal unit shutter to isolate from vertical bus while in "Disconnected" position.
- Stab isolation shutters when unit is removed.

Enhanced Features and Functions

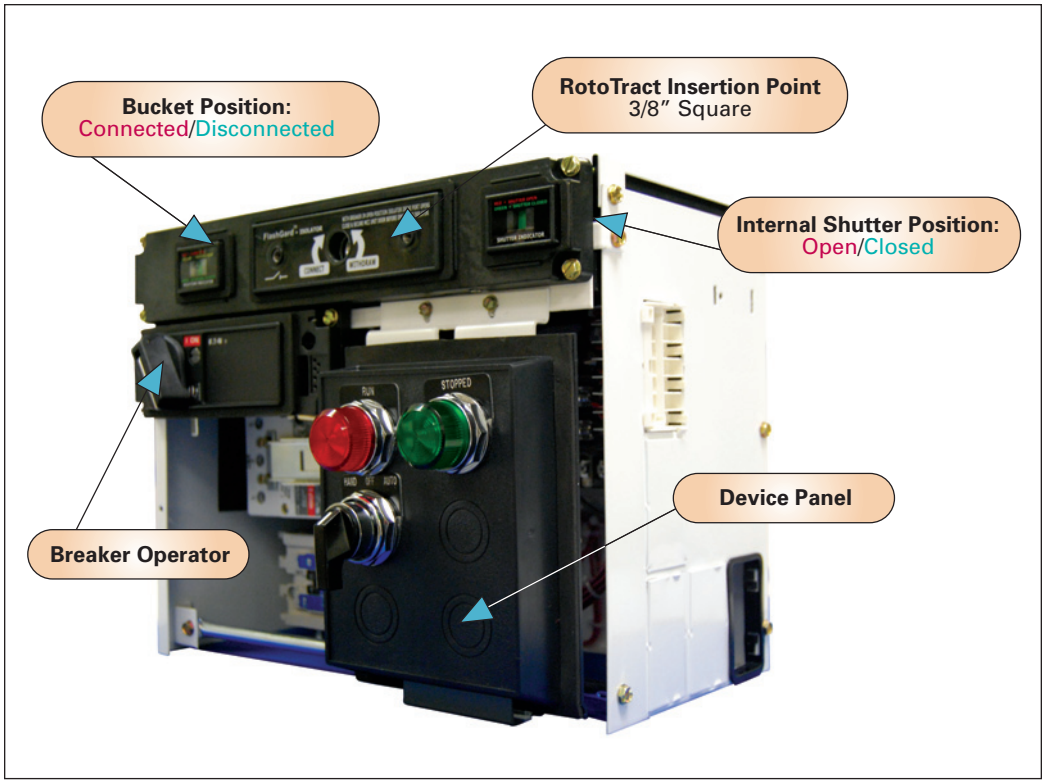
- Arc-free insulated bus and barriered bus system.
- Through-the-door voltage present indicator (VoltageVision).
- Arc-free bucket design.
- Remote connect/disconnect racking motor accessory.
- Automatic insulation tester (Motorguard) to monitor insulation integrity.

[1] The FlashGard MCC provides a state-of-the-art remote racking mechanism that provides bus isolation, stab indications and lockout features. The RotoTract stab assembly has two distinct positions as indicated above. The retractable stab assembly features a 3/8" drive socket that can accept any standard driver or a 24" remote racking tool. The stabs can be remotely operated with an optional drive motor, allowing the operator to be outside the arc-flash boundary. The Drive Socket is interlocked to prevent opening the door while inserting the stab assembly. A Manual Shutter prevents operating the breaker when the stabs are not engaged. In addition, an interlock prevents accessing the 3/8" drive socket when the breaker is in the ON position. The retractable stab assembly has a unit assembly latch to ensure the unit remains in place while in the "Connected" mode.

FlashGard MCC Benefits

- The minimization of impact and exposure to higher PPE levels in industrial environments:
  - Increases uptime of product line operations
  - Decreases direct cost of employee incidences
  - Increases personnel safety
  - Reduces number of injury-related incidences that occur daily in North America
- Lowers the probability of the creation of a short circuit phase-to-phase or phase-to-ground.
- Lowers the probability of electrical shock.
- Proven to reduce incident arc flash energy during maintenance.[2]

[2] As described by the IEEE® testing method described in IEEE 1584.



Remote Racking Accessory

VoltageVision — Voltage Presence Indicator

MegOhm Meter

Motorguard — Automatic Insulation Tester

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PowerChain Management®

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