

Amgard



15 kV standard MVC



7.2 kV standard MVC

Eaton has been an industry leader for more than 40 years, providing ULT 347 certified medium-voltage control. When it comes to controlling and protecting medium-voltage motors, the AmpgardE family is the premier high-performance choice.

Starters

All major starter components are manufactured by Eaton, providing increased reliability and equipment support.

- Vacuum contactors
- Isolation switches
- Power fuses
- Control power transformers
- Potential transformers

With a wide selection of starter types at voltages from 2.3 kV to 13.8 kV and ratings up to 8000 hp, Eaton is equipped to provide an Ampgard starter specifically designed for your critical appli-

- Full voltage
- Reduced voltage — reactor
- Reduced voltage — autotransformer
- Reduced voltage—solid-state
- Two-speed, two-winding
- Two-speed, one-winding



Full-voltage starter

Contactors



400 A vacuum contactor

Isolation switches



400 A vacuum contactor

Fuses



Bolted and clip-in main fuse

- Ampgard vacuum contactors provide the highest interrupting ratings in the industry, with field-selectable control voltage and dropout time
- Long life—300,000 electrical operations
- Available with bolted or finger - and-stab connection to 400 A, finger-and-stab only at 800 A

- Long life isolation switch rated for 10,000 operations, simplifies lock-out/tag-out while minimizing maintenance
- Mechanical interlocks to prevent operation of isolation switch with main contactor closed
- Mechanical interlocks to prevent access to medium - voltage compartment until isolation switch is open
- Visible verification of isolation switch operation through viewing window
- Optional remote operator for connection/disconnection from power bus while personnel is outside the arc flash zone

- Current limiting to minimize the effects of high fault currents
- Sized to ensure repeated motor starts without fatigue
- Available as bolted or clip-in up to 400 A, bolted only at 800 A
- Blown fuse indicator standard



Reduced-voltage solid-state starter



Arc flash solutions

Arc-resistant Ampgard AR

Arc-resistant Ampgard ARE is available for applications requiring increased operator protection. Extensively tested to IEEE C37.20.7 requirements for Type 2B accessibility, Ampgard AR incorporates the key features of traditional models, plus:

- Rear arc chamber, roof flaps and plenum to allow arc gasses to flow away from the operator
- Strengthened front doors and latches to ensure doors remain closed
- Insulated main bus minimizes risk of bus fault
- Low-voltage control compartment verified to meet arc-resistant requirements (Type 2B)

Ampgard AR arc-resistant can be close-coupled with the following, for a coordinated, tested, arc-resistant customer solution:

- ArcGardE arc-resistant metal-clad switchgear
- Arc-resistant metal-enclosed medium-voltage switches
- SC9000E EP arc-resistant medium-voltage drive

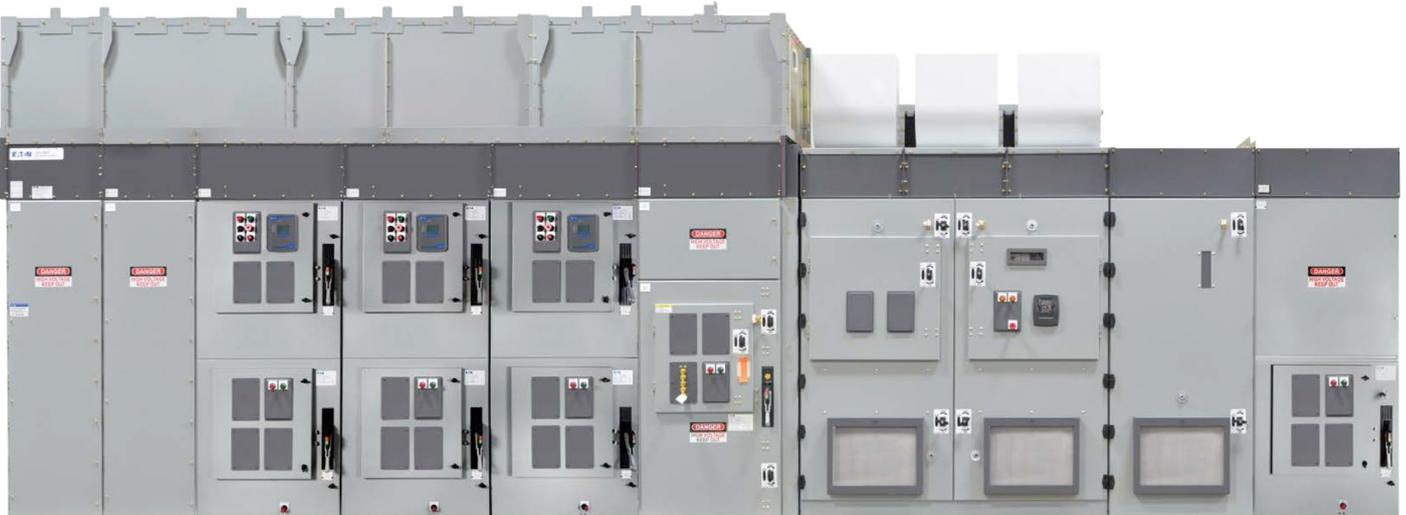
Arc-resistant Ampgard AR

The Ampgard remote operator enables users to open or close the starter's isolation switch through the use of a pushbutton station operated up to 30 feet from the starter, allowing the user to remain out of the starter arc flash zone.

- The remote operator is easily attached to the front of an Ampgard starter when the isolation switch needs to be opened or closed
- 120 Vac is required for operation
- All starter mechanical interlocks remain operational during use



Ampgard remote operator



Ampgard AR arc-resistant close-coupled with SC9000 EP arc-resistant drive

Enclosures



Ampgard motor control solutions are all seismic certified and available in an enclosure type for nearly every operating environment:

- NEMAT 1—general purpose
- NEMA 1G—general purpose with gasketed doors
- NEMA 12—dust-tight
- NEMA 3R—outdoor (non-walk-in)

Protective relays

E-series relays for traditional applications



Protection Relay can be provide as client request , as follow:

- Eaton
- Multilin,
- SEL
- PNC
- As request by client