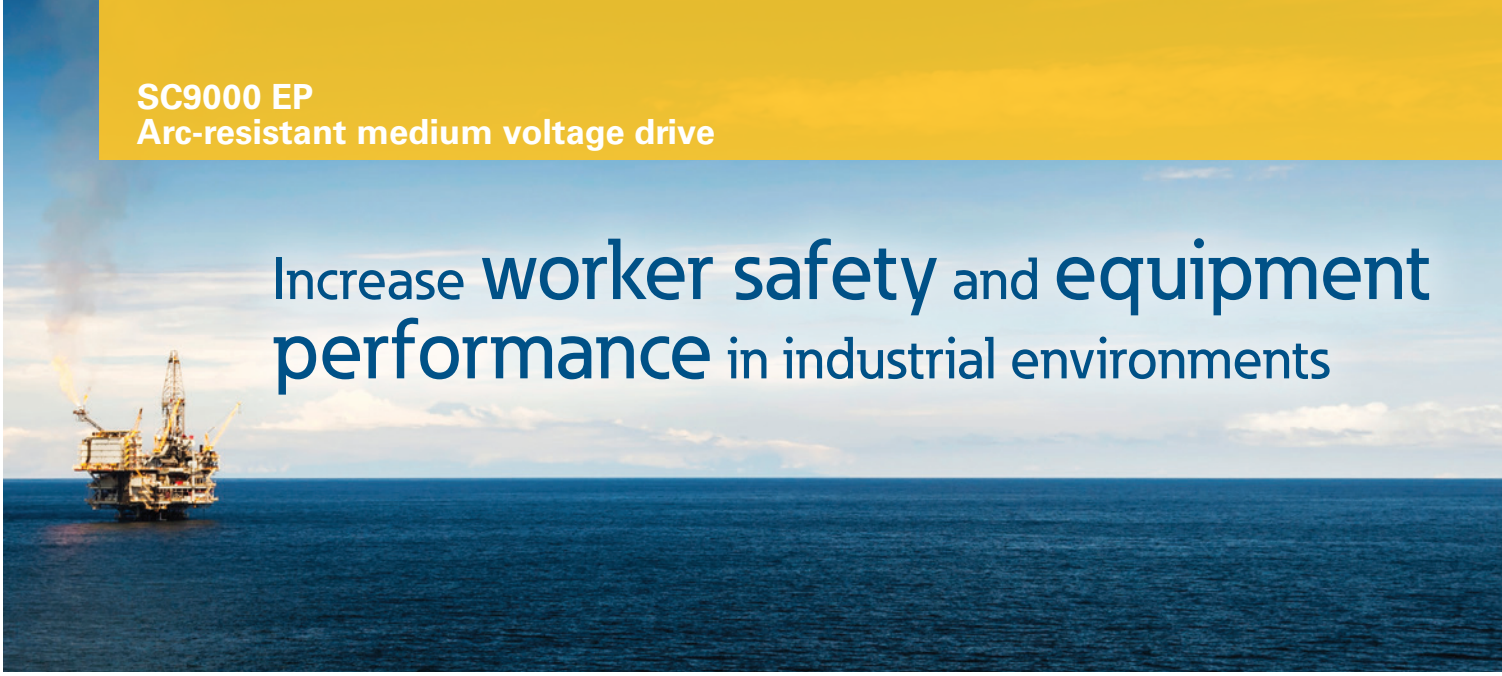
SC9000 EP
Arc-resistant medium voltage drive



Increase worker safety and equipment performance in industrial environments

Engineered to control, minimize and prevent arc faults to protect personnel in global oil and gas, mining, utility, water and wastewater and other critical applications, the new Eaton SC9000™ encapsulated powerpole (EP) arc-resistant medium voltage (MV) drive is the industry's first fully integrated arc-resistant MV drive. The drive builds on Eaton's highly reliable and award-winning SC9000 EP series of drives, which allows customers to achieve energy savings while reducing facility downtime and enhancing personnel safety.

Arc flash event risks

An arc flash is a dangerous condition caused by an electrical arc, due to either a phase-to-ground or a phase-to-phase fault. An arc flash event releases a tremendous amount of energy in the form of thermal heat, toxic fumes, pressure and sound waves, blinding light and explosions that can cause serious—and even fatal—injuries.

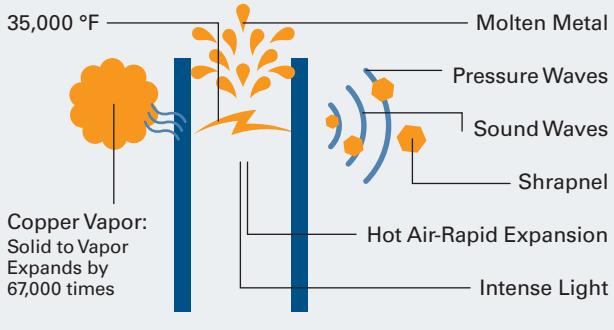
For years, electrical equipment has been designed to withstand a bolted fault, where current spikes to a dangerously high level but is safely interrupted by the protective devices contained in the equipment (breakers, fuses and relays). However, these devices do not typically detect and interrupt dangerous internal arcing faults, which have lower current levels but can generate far more dangerous scenarios.

Temperatures in an arc flash event can reach 35,000°F—three times hotter than the sun—and cause the air and metal in the arc's path to expand and explode, creating an arc blast.

3x HOTTER than the sun

Arc flash events threaten personnel safety, and companies face facility downtime, lawsuits, fines and equipment damage. To protect against these dangerous events, arc-resistant technology is a viable and necessary safety enhancement for MV drives.

Arc flashes



Powering Business Worldwide




Eaton's solution

Continuing with Eaton's legacy of leadership in arc flash safety products, the SC9000 EP arc-resistant MV drive is designed to protect personnel in danger of arcing faults by containing and redirecting the arc energy up and away from the user, regardless of the arc origination location. Further, the drive is the industry's first fully integrated arc-resistant MV drive certified to CSA™ C22.2 No.22-11 and witness-tested to IEEE C37.20.7 at a third party high power laboratory.

Eaton engineered the solution with arc fault detection circuits to prevent the possibility of an arc fault upon powering up the drive. Should an arc event occur, Eaton's patented inverter encapsulation and short-circuit protection technologies help prevent fault propagation and limit arc fault energy.

SC9000 EP arc-resistant MV drives complement Eaton's extensive suite of arc-resistant power management solutions, including Ampgard® and Freedom motor control centers and medium and low voltage switchgear, and enhance the industry's most comprehensive offering of arc flash safety solutions available today.

Key ratings

- Industry's first fully integrated arc-resistant MV drive certified to CSA™ C22.2 No.22-11 and witness-tested to IEEE C37.20.7 at a third party high power laboratory
- ANSI Type 2B enclosure engineered to resist the forces of arc events up to 50 kA and protect workers on the front, sides and rear of the enclosure, even with open control doors
- IEEE 519 guideline for harmonic control and reactive compensation of static power converters
- UL® 347A for MV power conversion equipment and cUL® standards
- RoHS compliant

Features and benefits

- Venting system directs arc gasses out of the top of the enclosure, regardless of the arc origination location
- In the event of an arc blast, enclosure technologies provide strength and direct fault byproducts to the proper exhaust locations
- Arc exhaust cooling technology significantly reduces the temperature of exhaust gas
- Patented short-circuit protection limits available arc fault energy
- Unique arc fault detection circuits eliminate the possibility of an arc fault when powering up the drive
- Patented inverter encapsulation prevents the propagation of a fault
- Encapsulated powerpole inverter with heat pipe technology helps increase power density, reduce overall equipment size and protect sensitive electronic components in harsh environments
- Industry's lowest inverter part count improves uptime
- Modular powerpole design and roll-in/roll-out inverter simplifies maintenance
- Fully compatible with Eaton's Ampgard MV control solutions in an MV lineup under a common bus
- Enhanced data acquisition device (EDAD) for advanced diagnostics and troubleshooting

Communications compatibilities

- Modbus®
- CANbus
- PROFIBUS® DP
- LonWorks™
- CANopen
- DeviceNet™
- Modbus TCP
- EtherNet/IP
- BACnet

For more information,contact your local Eaton sales representative, visit **eaton.com/SC9000**, or call **1-877-ETN-CARE,** option 2, then option 7

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