# SC9000 encapsulated powerpole (EP) arc-resistant drive

## An industry exclusive

Eaton's SC9000 EP arc-resistant medium voltage drive

Eaton's medium voltage drives product line is pleased to release the industry's first fully integrated arc-resistant medium voltage drive certified to CSA® C22.2 No. 22-11 and witness-tested to IEEE® C37.20.7. The arc-resistant version of Eaton's MV drive is built on the proven and reliable SC9000™ EP platform. The SC9000 EP arc-resistant underwent extensive arc fault testing on all sections of the drive at a certified third-party power laboratory. Design experience gained from Eaton's industry-leading arc-resistant product offering led to unique and patented design features of the SC9000 EP arc-resistant drive that control, minimize and prevent arc faults for increased personnel protection, including the following:

- Enclosure technologies provide strength and direct fault byproducts to the proper exhaust locations in the event of an arc blast
- Arc exhaust cooling technology significantly reduces 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 upon powering up the drive
- Patented inverter encapsulation prevents propagation of a fault

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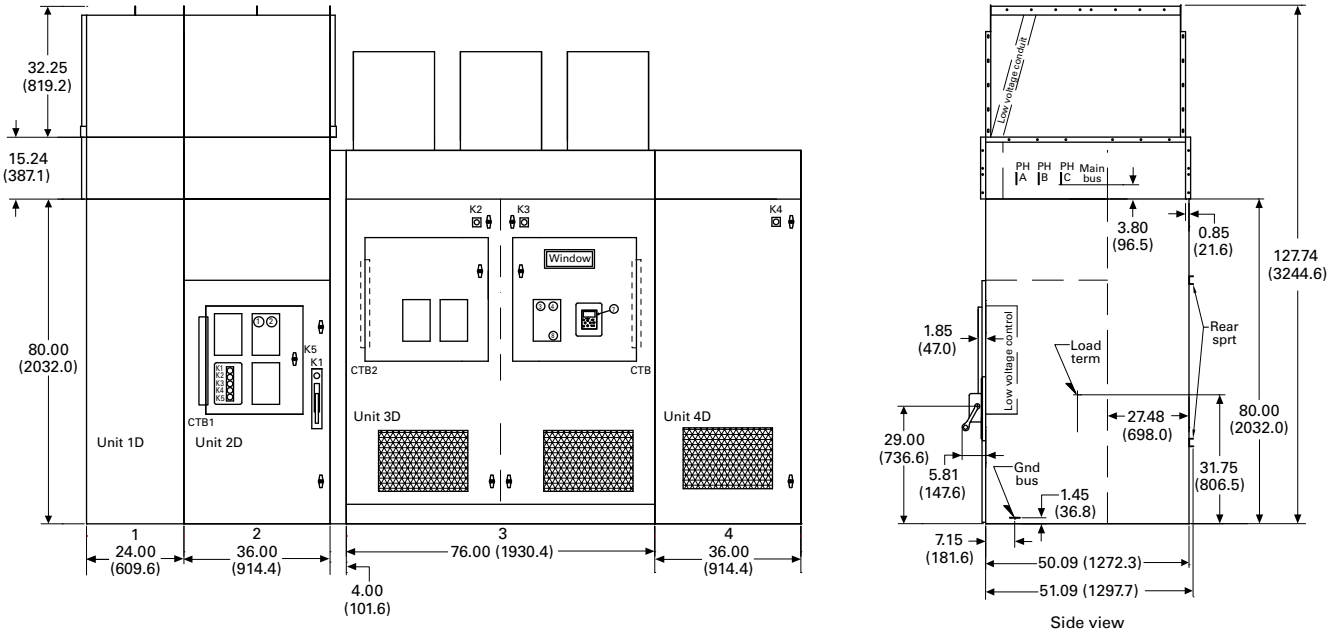
## SC9000 EP arc-resistant dimensions in inches (mm)




**Typical dimensions of 2000–2500 hp at 2400 V and 2750–3500 hp at 4160 V**

## Eaton's SC9000 EP arc-resistant drive horsepower and dimensions ❶

| Voltage | Horsepower | Width (inches) |
|---|---|---|
| 2400 | 300–1750 | 165.00 |
| 2400 | 2000–2500 | 176.00 |
| 4160 | 300–2500 | 165.00 |
| 4160 | 2750–3500 | 176.00 |
| 4160 | 3750–4500 | 226.00 |
| 4160 | 4750–6000 ❷ | 226.00 |

❶ All units are 50.00 D x 128.00 H inches except 4750 hp and above height (includes Plenum—allow 16.00 inches clearance to ceiling/cable tray).

❷ 4750–6000 hp units are 60.00 D x 128.00 H.

## Eaton's SC9000 EP arc-resistant drive specifications

| Description | | Specification |
|---|---|---|
| Line-side converter | | 24-pulse diode rectifier |
| Power semiconductors | | IGBTs, diodes |
| Inverter | | Encapsulated IGBT powerpole |
| Control | | Sensorless open loop (closed-loop optional) |
| | | Pulse width modulated (PWM) output |
| Power section isolation | | Fiber-optic cable |
| Nominal efficiency | | 97.5% |
| Service duty | Standard | 110% for 1 minute every 10 minutes |
| | Optional | 150% for 1 minute every 10 minutes |
| Input frequency | | 50/60 Hz ±5% |
| Output frequency | | 0–120 Hz |
| Input voltage | | 2400 V to 4160 V |
| Output voltage | | 2400 V to 13.8 kV |
| Speed regulation | | 0.1% without tach feedback |
| | | 0.02% with tach feedback |
| Power loss ride-through | | 5 cycles |
| Ambient temperature | | 0–40 °C, 50 °C with derating |
| Altitude | | 0–3300 ft, >3300 ft—consult factory |
| Enclosure | | NEMA 1A, gasketed and filtered |
| Standards | | UL,® CSA,® cUL,® IEC, IEEE,® 519 |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