



Integrated Arc Resistant Solutions

ARC RESISTANT SWITCHGEAR AND MEDIUM VOLTAGE MOTOR CONTROL



OVERVIEW

Powell is a solutions provider of engineered-to-order electrical equipment. As a technology leader in arc resistant designs, the driving energy behind one of the latest offerings was to simultaneously solve two customer issues. Combining the need for an arc resistant version of NEMA E2 Motor Control and the need by many customers to have a circuit breaker primary disconnect, Powell designed the MVMCC-AR[®] to match exactly in line with the main bus of the PowlVac-AR[®] metal-clad switchgear design. You now have the ability to take advantage of Powell as a single source for reliability, technical expertise and on time delivery. Your switchgear and medium voltage motor control center can be both arc resistant and assembled as a single lineup without the need for coordination between manufacturers or different equipment designs. The result is safer, more reliable equipment with a smaller footprint and no field coordination issues.

SAFETY BY DESIGN

The Powell arc resistant NEMA E2 Motor Control design exceeds applicable standards and includes:

- Barriers between contactor compartment and horizontal main bus
- Both main bus and ground bus are supported and braced to 50kA switchgear standards
- Main bus ampacity to 4000 Amperes
- Epoxy insulated bus bars with vinyl joint cover boots
- Seamless integration with PowlVac-AR switchgear

Powell utilizes the same single action door and handle design for both arc resistant products for easier accessibility and more reliable operator action. The integrated design incorporates a top mounted plenum to direct gas and debris away from equipment and personnel in case of an arc fault.

IEEE Type 2 Arc Resistant Construction

400A and 800A Vacuum Contactors

Front or Rear Accessible MCC Design

**FVNR, FVR, FVC, RVAT, and SSRV
Configurations Available**

2300, 4160, 7200 Voltage Ratings

**Close couples to switchgear without the
need for a transition section**



Medium Voltage Arc Resistant Motor Control and Switchgear										
Ratings					Dimensions					
Design	AR Rating	Maximum Voltage (kV)	MCC Continuous Current (Amperes)	Internal Arcing Short Circuit Current (kA)	Width (inches)		Height (inches)		Depth (inches)	
					SWGR	MCC	SWGR	MCC	SWGR	MCC
One-High	IEEE Type 2	7.2	360	50	36	36	95	92	95	50
Two-High	IEEE Type 2	7.2	360/360	50	36	36	95	92	95	50
One-High	IEEE Type 2	7.2	720	50	36	36	95	92	95	50



CONFIGURATIONS

MVMCC-AR® comes in the following configurations:

- One-High - 400A contactor
- Two-High - 400A contactor
- One-High - 800A contactor
- One-High and Two-High Back-to-Back
- Main Bus and Breaker 1200 - 4000 Amperes

PowlVac-AR® comes in all standard switchgear configurations

- One-High - 1200A, 2000A, 3000A Circuit Breaker
- One-High and Two-High Breaker Compartments
- PT and CPT Roll-outs with AR Doors
- Instrument Compartments

CODES AND STANDARDS

- *IEEE C37.20.7* - Guide for Testing Medium Voltage Metal-Enclosed Switchgear for Internal Arcing Faults
- *ICS 3* - Industrial Control & Systems: Medium Voltage Controllers Rated 2001 to 7200 Volts AC
- *IEC 62271-200* - AC Metal-Enclosed Switchgear & Controlgear for Rated Voltages Above 1kV and Up To and Including 52kV
- *UL 347* - High Voltage Industrial Control Equipment