

DC Switchgear Solutions

Engineered Power. Built to Perform.

Overview

Mission Critical Group (MCG) designs and manufactures direct current (DC) switchgear systems engineered for high-reliability applications where uptime, safety, and precision control are essential. Built for environments where DC power plays a mission-critical role, MCG's systems provide complete protection, isolation, and distribution across data centers, energy storage, industrial facilities, transportation infrastructure, and renewable power systems.

Each assembly is engineered-to-order, integrating advanced arc-quenching technology, redundant protection schemes, and intelligent controls to ensure dependable performance—even under the most demanding operating conditions.

Features & Benefits

DC power introduces unique challenges—from continuous current flow to complex arc suppression requirements. MCG's engineering teams apply decades of experience to design DC protection and distribution systems using blowout magnetics, vacuum or SF₆ interrupters, and advanced materials to eliminate arc propagation and ensure safe performance under fault conditions.

Every system is factory-assembled and tested within MCG's U.S. manufacturing network, ensuring consistent quality, superior reliability, and faster time-to-power.

- **Voltage Range:** 24 VDC – 1,500 VDC standard; higher ratings available
- **Current Ratings:** Up to 10,000A continuous with high fault-rating options
- **Configurations:** Breaker, contactor, or hybrid isolation designs
- **Protection:** Overcurrent, short-circuit, and ground-fault protection with programmable trip settings
- **Arc-Resistant Options:** Tested to ANSI C37.20.7 for personnel safety
- **Enclosures:** NEMA 1–4X, stainless or aluminum, indoor/outdoor
- **System Integration:** Compatible with UPS, BESS, renewable generation, and traction systems
- **Controls & Monitoring:** PLC-based automation, SCADA integration, and remote communication



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Applications

- Battery Energy Storage Systems (BESS)
- Data Centers (DC distribution & backup)
- Electric Vehicle Charging Infrastructure
- Rail & Transit Systems
- Renewable Energy Generation (Solar, Wind, Microgrid)
- Industrial DC Drives & Process Controls

Specifications Snapshot

- Voltage Rating: 24–1,500 VDC
- Continuous Current: Up to 10 kA
- Short-Circuit Rating: Up to 150 kA DC
- Enclosure Type: NEMA 1–4X, arc-resistant options
- Control System: PLC or DCS integrated
- Standards: UL 891, UL 1558, ANSI C37.20.7, IEC 61641 (as applicable)

Powering What's Next

MCG delivers precision-engineered power systems from switchgear to fully integrated E-Houses — designed, built, and serviced in the USA by teams dedicated to performance, safety, and reliability.



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Us**

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