



GM-SG-AR, ARC-RESISTANT, DRAWOUT, METAL-CLAD

Medium-voltage air-insulated switchgear

Up to 27 kV, 63 kA, 125 kV BIL
usa.siemens.com/mvswitchgear

Features and benefits:

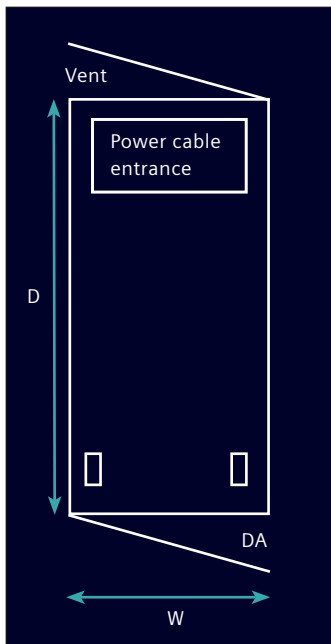
- Arc-resistant to IEEE Std. C37.20.7, up to 63 kA, 0.5 sec, accessibility type 2B
- Top-mounted pressure relief channel factory-installed combined with modular exhaust plenum system for reduced installation time
- Instrumentation and controls located in a separate compartment isolated from all primary circuit elements and effects of an internal arcing fault
- One-high or two-high construction; indoor or outdoor types available
- Up to 100 full-fault interruptions; 10,000 operations to overhaul
- Horizontal drawout GMSG vacuum circuit breaker with 3AH3 operating mechanism
- Common 3AH3 operator for all ratings; >200,000 3AH3 operators produced since 1998
- Universal spare circuit breaker by rating
- Uses the latest developments in vacuum interrupter technology
- Interlocks permit insertion of higher rated vacuum circuit breaker into lower rated cell but not vice versa
- Closed door racking
- Front-accessible circuit breaker operating mechanism
- Visible secondary disconnect
- Floor rollout circuit breaker in lower cell without a dolly
- Main and transfer bus arrangements
- Highly reliable vacuum interrupters MTTF >55,000 years
- Generator circuit breakers to IEC/IEEE 62271-37-013
- Three-cycle interrupting time*
- Pair with Siemens protective relays to match any typical application
- Meets or exceeds the latest ANSI, IEEE, and NEMA standards; UL or c-UL Listing available
- SIERS* integrated electrical-racking system
- Sm@rtGear* functionality provides predictive diagnostics, continuous monitoring, and control from a remote location
- Trained and certified local personnel in U.S. available for start-up, commissioning, and maintenance.

*Optional

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Technical ratings

Characteristics	Unit	Voltage class				
Rated maximum voltage	kV	4.76	8.25	15.0	17.5	27.0
Rated interrupting rating	kA	40, 50, 63	40	25, 40, 50, 63	50, 63	25, 40
Maximum interrupting and short-time ^{1, 2}	kA	40, 50, 63	40	25, 40, 50, 63	50, 63	25, 40
Voltage range factor	k	1.0	1.0	1.0	1.0	1.0
Continuous current ³	A	1,200, 2,000, 3,000, 4,000FC	1,200, 2,000, 3,000, 4,000FC	1,200, 2,000, 3,000, 4,000FC	1,200, 2,000, 3,000, 4,000FC	1,200, 2,000, 2,500, 3,000FC
Withstand voltage: power frequency	kV rms	19	36	36	36	60
Withstand voltage: lightning impulse	kV peak	60	95	95	95	125
Closing and latching (momentary): asymmetrical	1.55 x I kA rms	62, 78, 98	62	39, 62, 78, 98	78, 98	39, 62
Closing and latching (momentary): peak	2.6 x I kA peak	104, 130, 164	104	65, 104, 130, 164	130, 164	65, 104



Dimensions in inches (mm)^{3, 4, 5, 6, 7, 8, 9} ; weight in lbs (kg)

Type	Height (H)	Width (W)	Depth (D)	Drawout aisle (DA)	Weight
GM-SG-AR up to 17.5 kV	116.4 (2,957)	40.0 (1,016)	102.8 (2,611)	72.0 (1,829) recommended	4,100 (1,864)
GM-SG-AR up to 27 kV	128.5 (3,264)	40.0 (1,016)	204.3 (5,189)	72.0 (1,829) recommended	5,064 (2,297)
SGM-SG-AR up to 17.5 kV	135.6 (3,444)	40.0 (1,016)	179.8 (4,566)	72.0 (1,829) included	5,900 (2,682)
SGM-SG-AR up to 27 kV	145.3 (3,691)	40.0 (1,016)	204.3 (5,189)	72.0 (1,829) included	6,388 (2,898)

Footnotes:

- All values apply to polyphase and line-to-line faults.
- Standard duty cycle is O - 0.3 s - CO - 3 min. - CO.
- An exhaust system to direct arc-fault products outside the switchgear room is supplied with each lineup of equipment.
- No obstructions permitted within 10" (254 mm) of top of switchgear structure.
- The switchgear must have at least 6" (152 mm) horizontal clearance:
 - From left and right sides to nearest wall or equipment, and
 - From rearmost extension of vents on rear to nearest wall or equipment.
- Add 9" (229 mm) to length of lineup for end trims.
- Add 4.5" (114 mm) to depth for front and rear doors.
- 72.0" (1,829 mm) aisle space recommended and allows room for interchange of circuit breakers. Minimum aisle space required for handling circuit breakers with lift truck is 65" (1,651 mm). Minimum aisle space required if all circuit breakers are at floor level is 55" (1,397 mm).
- Add 1.0" (25 mm) for GM-SG-AR equipment rated 63 kA.
- Dimensions are approximate size of floor footprint. Shelter-Clad+ switchgear assemblies (type S+GM-SG) are built in partnership with Siemens-qualified vendors, who provide detailed drawings of each custom assembly which include dimensions and weights.
- Add weight of circuit breakers.
- Maximum shipping group five sections.
- Shelter-Clad+ switchgear assemblies (types S+GM-SG) are built in partnership with Siemens-qualified vendors, who provide detailed drawings of each custom assembly, which include dimensions and weights. Please be sure to carefully review and follow all instructions provided in the order-specific Shelter-Clad+ drawing package.
- For transfer bus arrangements, add 15" (381 mm) to the depth.

Legal Manufacturer

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Types available:

- Indoor (GM-SG-AR)
- Outdoor, walk-in, Shelter-Clad (SGM-SG-AR)
 - Single-aisle (factory-assembled aisle)
 - Factory insulated and assembled aisle (optional)
- Outdoor, walk-in, Shelter-Clad+, factory-assembled switchgear and aisle on common base with power equipment center (S+GM-SG-AR).