EcoStruxure™
Innovation At Every Level

Green innovation for sustainable future

GM AirSeT™ Performance

SF_6-free Primary Gas Insulated Switchgear up to 24kV

New generation of green, innovative, and smart switchgear:

- As first step, up to 24 kV, 25 kA, 1250 A.
- Vacuum circuit breaker in a hermetically sealed stainless steel tank & busbar with three position disconnector in a separate sealed tank with pure air at a relative pressure of 0.12 MPa
- Double busbar arrangements possible for increased redundancy and reliability
- Fully equipped with Ecostruxure™ connectivity including IoT sensors to enable 24/7 condition monitoring.

Benefits at a glance:

- **Sustainability:** pure air as insulation gas
- **Efficiency:** plug-in design, fast installation, no gas handling on site, sensing capabilities to reduce downtime risks and costs
- **Flexibility:** easy extension of both sides, thanks to innovative B-Link
- **Enhanced safety:** advanced interlocks and anti-internal arc design, nearby control capability help ensure the safety of operators

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Powerful and future-ready, with air

GM Air**SeT** Performance delivers all the advantages of gas-insulated switchgear. All switching components are fully isolated from external environmental influences. With low maintenance costs and no gas handling on site, it is also equipped ready for 24/7 cloud connected condition monitoring.

For insulating gas, it utilizes pure air, instead of SF_6 gas, which reduces both environmental and regulatory concerns. The use of pure air also eliminates toxic byproducts. End-of-life treatment and recycling are considerably simplified.

As the primary distribution equipment, GM Air**SeT** Performance is suitable for:

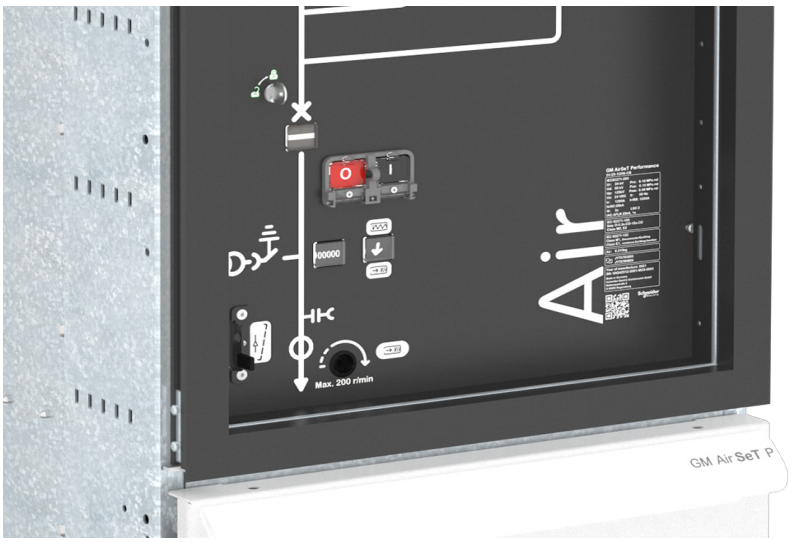
- Power Generation and Distribution
- Buildings
- Transportation
- Data Center
- Oil & Gas
- Mining, Minerals and Metals

Pure air insulation for sustainability and regulatory immunity

GM Air**SeT** Performance has the circuit breaker in a separate hermetically-sealed metal compartments segregated from the hermetically-sealed busbar compartment containing the three-position disconnector. Circuit breaker is equipped with vacuum interrupters for breaking load and fault current. The compartments are both filled with pure air pressurized at 0.12 MPa relative.

No Fluorinated gas is used in the switchgear, reducing environmental impact and end-of-life disposal costs. No alternative gases are used, which helps eliminate concerns about future regulatory actions, and special precautions, requirements for the operating personnel when handling gases.

Pure air is not dependent on any special source of supply and the natural choice for a sustainable future.



Pure air

is an insulating medium made by filtering ambient air in order to remove humidity and impurities, according to ISO 8573-1 standard

Sustainable design and performance

Design boosts efficiency

In the manufacturing process the use of material and energy consumption are optimized.

Recycling made easy

The use of pure air for insulation eliminates the need for complex and costly gas recycling at the end of service life. Recyclable materials can be effectively utilized and treated according to the recycling data sheet provided.

Efficiency for time and cost saving

Installing GM Air**SeT** Performance cubicles is easy on site, as no gas handling is required. The switching and busbar compartments are gas filled, sealed and tightness tested in the factory. B-Link allows for a quick and trustworthy installation of panels in a lineup. Should a need arise to change cubicles on site, one cubicle can be removed and replaced without affecting the adjacent cubicles. Likewise, extending a switchboard is a simple matter of adding a cubicle and utilizing the B-link system to connect. Fully equipped with EcoStruxure™ connectivity including IoT sensors to enable 24/7 condition monitoring.

High performance

- Rated short-time withstand current: 25 kA, 3 s
- Internal arc classification:
  - IAC AFL 25 kA, 1 s
  - IAC AFLR 25 kA, 1 s
- Service temperature: -5 °C to +40 °C, -25 °C to +50 °C (option)

Easy installation

- Easy and time-efficient installation: combined modular design.
- Low voltage compartment is easy to remove / install and convenient for transportation.
- Large connection space in the cable compartment.
- Cable and busbar VT disconnector for easy disconnection during HV testing.

Compactness and flexibility

- Compact design greatly reduces the need for space and floor space.
- Optimized system configuration with appropriate accessories and modular design.
- Scalable solution, with options for step-wise extension as needed.

User-friendly interface for ease of operations

- Compact operation panel.
- Clear and intuitive arrangement of visual and mechanical panel indications.
- Logical operation sequence.

Enhanced operator safety

- All live switchgear components are enclosed in a hermetically-sealed compartment to help prevent accidental contact and reduce risk.
- Logical mechanical interlocking system helps avoid maloperations.
- Nearby control capabilities to operate without physically interacting.
- No toxic by-products in breaking.

Withstand to external conditions

Hermetically sealed compartment for all live medium voltage components and switching devices. All live parts are unaffected by corrosive environment, aggressive gases, dirt, dust or vermin.

GM Air**SeT** Performance at a glance

SF_6-free primary gas insulated switchgear up to 24 kV	Applicable Standards		
Name	IEC standard		
Switchgear	IEC 62271-1		
	IEC 62271-200		
Earthing switch	IEC 62271-102		
Disconnector	IEC 62271-102		
Circuit breaker	IEC 62271-100		
Current transformer	IEC 61869-2		
Voltage transformer	IEC 61869-3		
Degrees of protection	IEC 60529		
Technical parameters			
Rated voltage	12 kV	17.5 kV	24 kV
Rated short duration power frequency withstand voltage (Ud)			
Phase to phase, phase to earth, open contact gap	28 kV	38 kV	50 kV
Across the isolating distance	32 kV	45 kV	60 kV
Rated lightning impulse withstand voltage (Up)			
Phase to phase, phase to earth, open contact gap	75 kV	95 kV	125 kV
Across the insolating distance	85 kV	110 kV	145 kV
Rated frequency (Fr)	50 Hz		
Rated normal current (Ir) for busbar	up to 1250 A		
Rated normal current (Ir) for cubicle	630 A / 800 A / 1250 A		
Rated short-time withstand current (Ik), 1s/3s	16 kA / 20 kA / 25 kA		
Rated peak withstand current (Ip)	40 kA / 50 kA / 63 kA		
Partition class	PM		
Loss of service continuity class	LSC2		
Ambient air temperature	-25°C to 50°C		
Internal arc classification (up to 25kA-1s)	IAC AFL / AFLR		
Cubicle height (650 mm LV cabinet)	2320 mm AFL / 2500 mm AFLR		
Cubicle height (1000 mm LV cabinet)	2670 mm		
Cubicle depth (SBB)	1340 mm AFL / 1530 mm AFLR		
Cubicle depth (DBB)	1740 mm AFL / 1930 mm AFLR		
Cubicle width (Circuit breaker, Disconnector)	600 mm		
Cubicle width (Bus sectionalizer, Cross coupler)	900 mm		

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