



Wall Mount SVG

SVG Static Var Generator

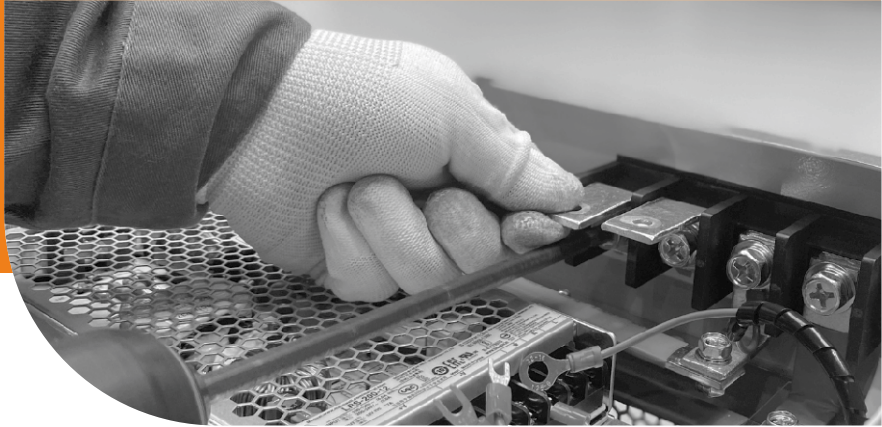
Wall Mount & Floor Mount

- ✓ Improves Power Factor
- ✓ Reduces Energy Costs
- ✓ Fast & Precise Compensation
- ✓ Compact & Maintenance-Free
- ✓ Enhances Equipment Life

A Static Var Generator (SVG) is an advanced power electronics device used for reactive power compensation and power factor correction in electrical systems. It dynamically adjusts reactive power in real time to maintain voltage stability, reduce losses, and improve power quality. It ensures that the voltage levels remain stable and the power factor (a measure of how efficiently electrical power is being used) stays close to unity (1). Unlike traditional capacitor banks or Static Var Compensators (SVCs), SVGs offer faster response, higher efficiency, and better harmonic suppression, making them ideal for industrial, commercial, and renewable energy applications.

Floor Mount SVG





How it Works



Real-Time Monitoring

Continuously measures voltage, current, and power factor



Reactive Power Detection

Identifies if the system needs capacitive or inductive power correction



Instantaneous Compensation

Uses power electronics (IGBTs) to inject or absorb reactive power dynamically



Harmonic Filtering & Voltage Stability

Improves power quality by reducing harmonics and stabilizing voltage



Fast & Efficient Adaptation

Responds in <5ms for continuous and precise power factor correction

SVG Module Range

Wall Mount SVG



Capacity: 15 kVAr

Size: 500(W)x465(H)x180(D) mm



Capacity: 30 kVAr

Size: 350(W)x465(H)x100(D) mm



Capacity: 50 kVAr

Size: 500(W)x510(H)x190(D) mm



Capacity: 100 kVAr

Size: 500(W)x550(H)x269(D) mm

Floor Mount SVG



Horizontal Rack Mounted Cabinet

Available in below Capacity Range

Capacity: 50 KVAR

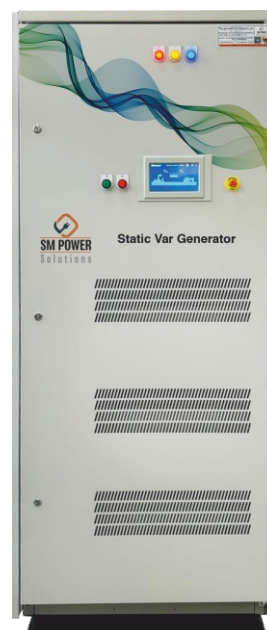
Size: 500(W)x 190(H) x 550(D) mm

Capacity: 100 KVAR

Size: 500(W)x 269(H) x 575(D) mm

Capacity: 150 KVAR

Size: NA



SVG Panel Capacity

The SM Power SVG panel is designed with five integrated horizontal rack slots, allowing for flexible configuration. Various combinations of the specified capacity cabinets can be utilized to meet specific operational requirements. The maximum reactive power compensation capacity of the SVG system is 500 kVAr.

Panel Size: 800(W)x2000(H)x1000(D) mm

Technical Specifications

ITEM	400V			
	SVG 15	SVG 30	SVG 50	SVG 100
System Parameters				
Rated input line voltage	400V			
Input phase voltage range	-40%~+20%			
Power grid frequency	50Hz/60Hz (range: 45Hz ~ 63Hz)			
Parallel operation	Unlimited			
Overall efficiency	>97%			
Power grid structure	3P3W/3P4W			
CT range	150/5 ~ 10,000/5			
Circuit topology	3-level			
Performance				
Single-module compensation capacity	15kVAr	30kVAr	50kVAr	100kVAr
Response time	<15ms			
Target power factor	Adjustable from -1 to +1			
Cooling mode	Smart air cooling: 220L/sec			Smart air cooling: 405L/sec
Noise level per module	<65dB			
Communications and Monitoring Capabilities				
Communications ports	RS485, CAN, RJ45 network port			
Communications protocols	Modbus RTU, Modbus TCP/IP, PMBus			
Alarm relay output	Optional via PCB. Connection to 7" HMI only			
Module display	LED or 2" for rack mount. 4.3" colour touch screen for wall mount			
Cabinet display	7" colour touch screen			
Mechanical Properties				
Mounting type	Wall mount only		Rack and Wall mount	
Cable entry	Rear entry for rack-mounted type; top entry for wall-mounted type			
Module net weight	28kg	21kg	35kg	48kg
Color	Natural aluminium-zinc alloy for rack and cabinet mount. Powder coated RAL7035 for wall mount			
Environment Conditions				
Altitude	1500 m. >1500m, 1% derating per 100m. 4000m max.			
Operating temperature	-10 ~ 40 °C			
Relative humidity	5% ~ 95%, non-condensing			
Protection grade	IP20 (other IP classes are customizable.)			
Qualifications and standards				
Qualifications	CE, ETL(UL508), BV, RCM			
Standards compliance	AS/NZS 3820, EN 50178, IEC 61439-2 (cabinet), IEC 61000-6-4, IEC 61000-3-6			

Key Features



Fast and Dynamic Reactive Power Compensation

Instantly adjusts to power factor changes



Precise Power Factor Correction

Maintains power factor close to unity (0.99 or better)



Bidirectional Compensation (Inductive & Capacitive)

Supports both leading and lagging power factors



Energy Efficiency Improvement

Minimizes power losses, reducing energy costs



Wide Range of Industrial Applications

Suitable for commercial buildings, factories, and renewable energy grids

Benefits



Reduces Electricity Bills

Avoids penalties for poor power factor, leading to cost savings



Enhances System Stability & Reliability

Prevents voltage fluctuations and power disruptions



Improves Equipment Lifespan

Reduces stress on electrical components, preventing overheating



Supports Green Energy Integration

Helps manage fluctuations from solar and wind energy sources



Compact & Space-Saving

Requires less space compared to traditional capacitor banks

Why SM Power Solutions?

- ✓ Power Quality Experts
- ✓ Reliable & High-Performance Solutions
- ✓ Customizable & Scalable Designs
- ✓ Smart Monitoring & Control
- ✓ Cost-Effective & Energy Efficient
- ✓ Commitment to Quality & Sustainability

For enquiry, please contact us at

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