Static Var Generator

Optimal Power Factor Correction

- Continuous power factor correction
- Accurate PF maintenance -1.0 ≤ CosΦ ≤ 1.0
- Capacitive and inductive control
- No overcompensation or undercompensation
- Mixed power factor correction

Advanced Performance

- Harmonic Control
- Three-phase load balancing
- Low noise
- Friendly human-machine interface

Quality Assurance

- TI DSP, Top Brand IGBT (Infineon)
- High stability, resonance avoidance
- Hardware and software protection
- High reliability testing
- Good environmental adaptation

Making Every Watt Count

Technical Parameter

Rated Voltage	220V (171-269V)	400V (300-456V)	480V (356-515V)	690V (483-793V)
Rated Capacity	10/20/30/40/50kvar	30/50/75/100/150kvar	30/50/75/100kvar	150/175/200kvar
Phase System	3P3W/3P4W/single phase			
Main Frequency	50/60Hz±5%			
Circuit Topology	Three-level			
Multiple Compensation Modes	Reactive power compensation, three-phase load imbalance compensation			
Filter Range	Filtering range 2 to 25th odd harmonics, 100% of rated capacity			
Harmonic Reduction Rate	≥97.5% of rated capacity			
Filtering Performance	Typically, THDi ≤ 5% for rated loads			
Neutral Line Filtering Capability	3 times the rated filtering current in case of 4-wire equipment			
Three-Phase Load Balancing Effect	≤ 5% to mitigate negative and zero sequence currents			
Switching/Control Frequency	25.6kHz			
Initial Response Time	≤50us			
Total Response Time	≤5ms			
System Active Loss	≤2.5 per cent			
Output Current Limit	Automatically limited to 100% output of rated capacity			
Control Algorithm	FFT, Adaptive Control Algorithm , Fast Fourier & Instant Reactive Power Algorithms			
Controller	DSP+FPGA			
Protection	Hardware protection, software protection			
Control Connections	Electrical Connections			
Human Machine Interface	4.3-inch / 7-inch / 10-inch touch TFT LCD HMI			
Noise	<60db (<45db at low speed operation)			
Installation Method	Module embedded (rack), wall-mounted, floor-mounted			
Protection Level	IP20~IP54			
Cooling Method	Speed Control Intelligent Air-cooled Cooling PWM Fan			
Colour	RAL 7035 Industrial Grey/Black			
Ambient Temperature	-20~55°C			
Relative Humidity	95% max, no condensation			
Installation Height Above Sea Level	Rated capacity at altitude ≤2000m, appropriate load shedding at altitude >2000m			
Qualification	CE, IEEE61000, Type Test Report, ISO9001:2015			
Conformity	IEEE 519, ERGS/4			
Communication Protocol	Adopts Modbus RTU remote communication protocol and TCP/IP protocol; Two way RS485 and CAN bus, support mobile phone APP operation, support Ethernet			

SVG Technical Advantages

1 Fast Response

The closed-loop response time of an SVG is 10 milliseconds, while the response speed of an SVC is 40-60 milliseconds or even longer.

2 Good Low Voltage Characteristics

When the SVC voltage drops from 1.0 to 0.4, the SVC output current drops from 1.0 to 0.4, and the output reactive power drops from 1.0 to 0.16. In contrast, the SVG output current remains at 1.0, and the output reactive power drops from 1.0 to 0.4.

Superior Harmonic Characteristics

3

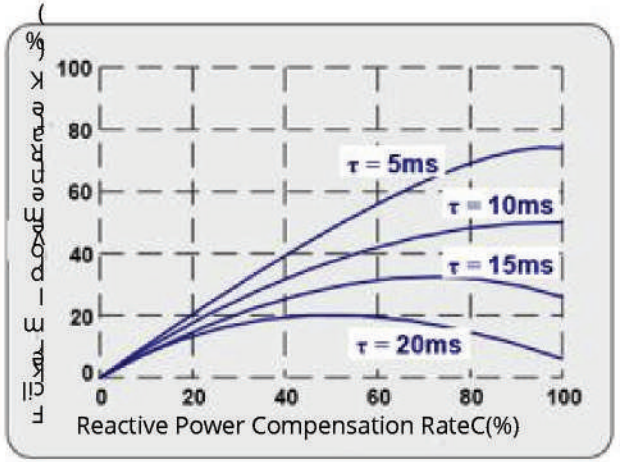
Use PWM modulation technology to reduce harmonics

4 High Compensation Accuracy

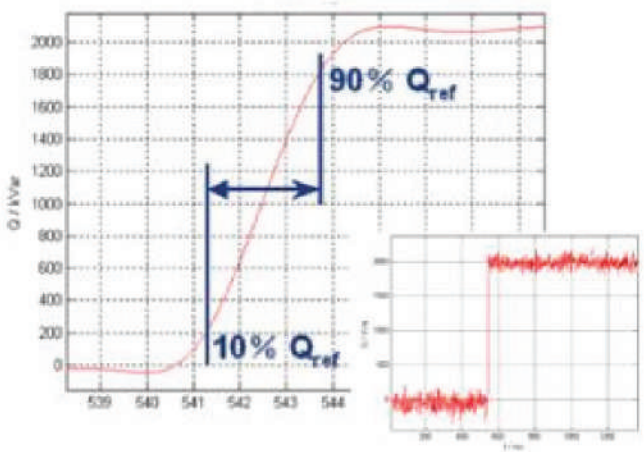
Typically, an SVC can only compensate the power factor to about 0.9, whereas an SVG can compensate the power factor to above 0.99

5 Improved Safety Performance

SVG uses an active type and does not generate resonance.



Compensation Effect & Compensation Capacity Response Time Curve



Response Time **< 10ms**