

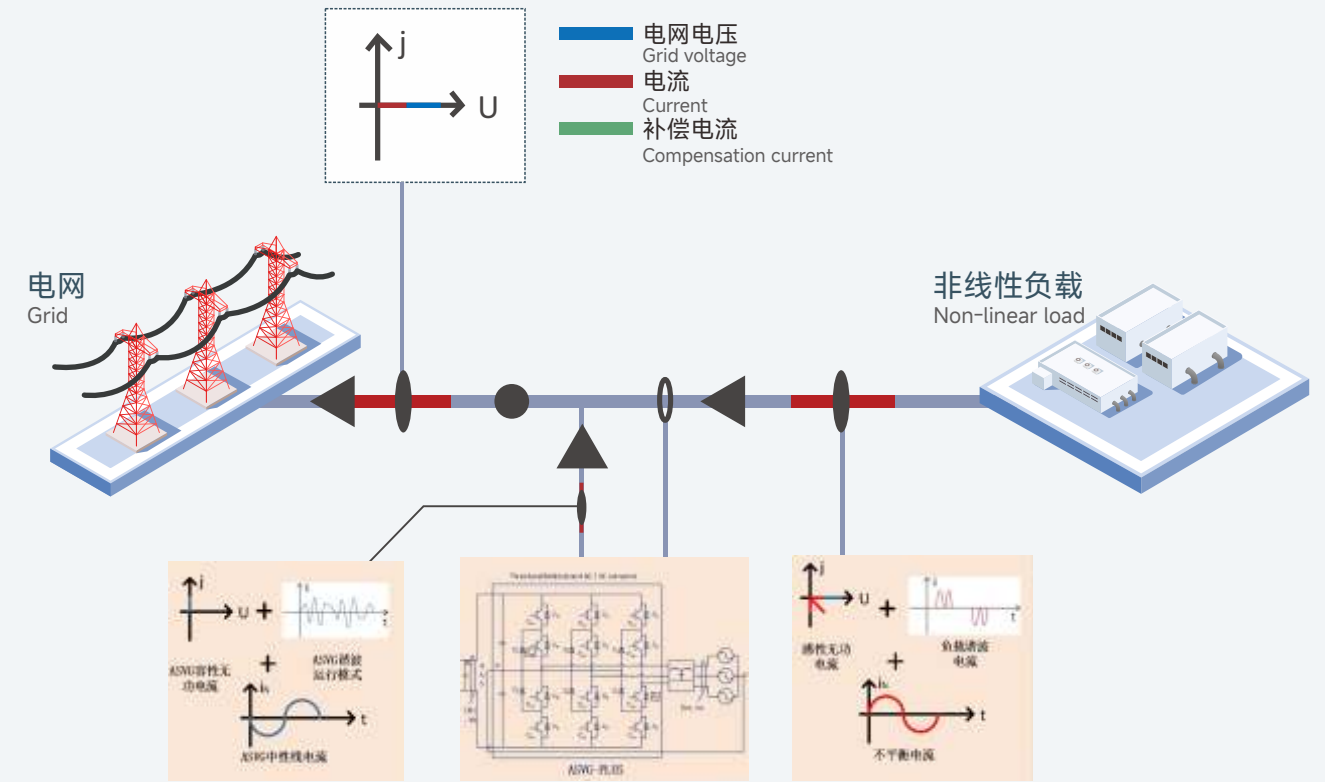
高配型静止无功发生装置

High-spec Advanced Static Var Generator

GY-ASVG-PLUS

增强型静止无功发生装置-高配机型（GY-ASVG-PLUS）的工作原理是将电压源变流器通过滤波器并联在电网上，通过实时检测负载的电流，基于先进的无功、谐波及三相有功功率的检测与控制算法，生成对应的 IGBT 驱动信号，实现对无功电流、谐波电流以及三相不平衡电流的综合补偿。同时，装置中性线零序电流滤波能力可达相线三倍，EMC 电磁兼容性能更优，稳定性更好。

Working Principle of the High-configuration Model Enhanced Static Var Generator (GY-ASVG-PLUS):
The device connects a voltage source converter (VSC) to the power grid via a filter in parallel. By detecting the load current in real time and based on advanced detection and control algorithms for reactive power, harmonics, and three-phase active power, it generates corresponding IGBT drive signals to achieve comprehensive compensation of reactive current, harmonic current, and three-phase unbalanced current. In addition, the device's neutral line zero-sequence current filtering capability can reach three times the phase line current. It also offers better EMC electromagnetic compatibility performance and improved stability.



性能特点 Performance characteristics

- 1) DSP+CPLD 全数字控制核心，三电平拓扑技术。
2) 模块化设计，可多模块并联，占地空间小、维护方便。
3) 独立风道和独立板仓结构设计，保证设备的稳定运行。
4) 具有两路外部电流采样通道，可支持低压侧采样低压侧补偿、高压侧采样低压侧补偿、无功分量补偿等多种补偿方式。
5) 支持无功补偿、谐波补偿、三相不平衡补偿任意一种、两种或三种搭配可选。 6) 无功补偿能力：补偿率≥99%。
7) 不平衡补偿能力：补偿后不平衡度≤5%。
8) 电流谐波补偿能力：补偿率≥95%；2~50 次，单次补偿率可调。
9) 中性线零序电流滤波能力为相线三倍。
10) EMC 电磁兼容 RE、CE 项目满足 Class A 测试标准。
- 1.DSP+CPLD full-digital control core, three-level topology technology.
Modular design with multi-module parallel connection; small footprint, easy maintenance.
2.Independent air duct and independent board compartment design to ensure stable operation of the equipment.
3.Equipped with two external current sampling channels, supporting various compensation modes such as low-voltage side sampling with low-voltage side compensation, high-voltage side sampling with low-voltage side compensation, and reactive component compensation.
4.Supports any one, any two, or all three of reactive power compensation, harmonic compensation, and three-phase unbalance compensation as selectable options.
5.Reactive power compensation capability: compensation rate ≥99%.
6.Unbalance compensation capability: unbalance degree after compensation ≤5%.
7.Current harmonic compensation capability: compensation rate ≥95%; 2nd to 50th harmonics, individual compensation rate adjustable.
9.Neutral line zero-sequence current filtering capacity is three times that of the phase line.
10.EMC (Electromagnetic Compatibility) – RE and CE meet Class A test standard.

技术参数 Technical parameters

机型 Model	220V	380V
海拔高度 Altitude	<2000m,2000米以上按照GB/T3859.2降额使用 <2000 m; above 2000 m, derate according to GB/T 3859.2	
环境温度 Ambient temperature	-10~+50℃(40℃以上降容不超过30%) -10 to +50 °C (above 40 °C, capacity derating ≤30%)	
相对湿度 Relative humidity	≤90%，月最低温度25℃表面无凝露 ≤90% relative humidity, no condensation on the surface at a monthly minimum temperature of 25 °C	
污秽等级 Pollution degree	III级以下 Pollution degree ≤ Class III	
工作电压 Operating voltage	AC220V(-20%~+20%)	AC380V(-20%~+20%)
工作频率 Operating frequency	50Hz/60Hz (45Hz~63Hz)	
额定补偿容量 Rated compensation capacity	37Kvar、50Kvar	75Kvar、100Kvar
电网结构 Grid configuration	三相三线，三相四线 Three-phase three-wire Three-phase four-wire	
并联台数 Number of parallel units	不限 No restrictions	
整机效率 Overall efficiency	≥98%	
开关频率 Switching frequency	16kHz	
功能选择① Function selection	A、B、A+B、B+A、B+C、A+C、B+C+A、A+C+B	
无功补偿率 Reactive compensation rate	无功补偿≥99% Reactive power compensation ≥99%	
不平衡补偿能力 Unbalance compensation capability	补偿后不平衡度≤5% Unbalance degree after compensation ≤5%	
电流谐波补偿能力	电流谐波补偿≥95% Current harmonic compensation ≥95%	
中性线滤波能力 Neutral line filtering capability	中性线滤波能力为相滤波能力的 3 倍 Neutral line filtering capacity is 3 times that of phase filtering capacity.	
全响应时间 Full response time	无功 < 10ms，谐波<40ms Reactive power: <10ms, Harmonics: <40ms	
冷却方式 Cooling mode	强制风冷 Forced air cooling	
噪音 Noise level	≤65dB	
通讯方式 Communication method	2 路 RS485 通信接口（支持 Wi-Fi） 2 RS485 communication interfaces (Wi-Fi supported)	
保护功能 Protection functions	过载、软/硬件过流、电网过欠压、电网电压不平衡、电源故障、过温、频率异常、短路保护、谐振保护等 Overload, software/hardware overcurrent, grid overvoltage/undervoltage, grid voltage unbalance, power supply failure, overtemperature, frequency anomaly, short circuit protection, resonance protection, etc.	
过载能力 Overload capability	额定1.2倍过载60秒 Rated overload 1.2 times for 60 seconds	
安装方式 Installation method	机架/壁挂 Rack-mount / Wall-mount	
进线方式 Cable entry	后进线(机架式)、上进线(壁挂式) Rack-mount / Wall-mount	
防护等级 Protection rating	IP20(IP54可定制) IP20 (IP54 available on request / customizable)	
尺寸 (W*D*H) Size	500*730*240mm	
电磁兼容 Electromagnetic Compatibility	EMC 电磁兼容 RE、CE 项目满足 Class A 测试标准 EMC (Electromagnetic Compatibility) – RE and CE meet Class A test standard.	

① A:无功补偿 Reactive compensation B:谐波补偿 Harmonic compensation
C:三相不平衡补偿 Three-phase unbalance compensation