

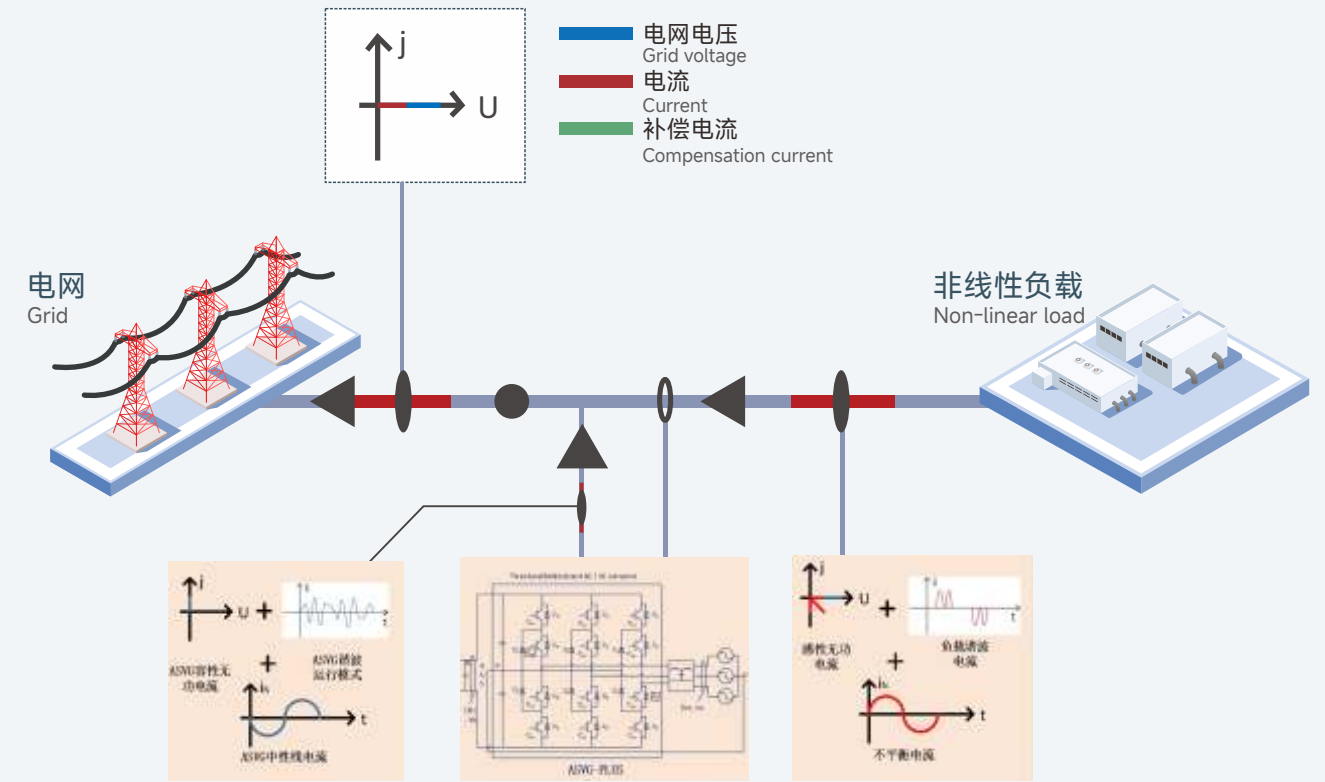
静止无功发生装置

Advanced Static Var Generator

GY-ASVG

增强型静止无功发生装置（GYASVG）的工作原理是将电压源变流器通过滤波器并联在电网上，其工作原理是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。

The working principle of the Enhanced Static Var Generator (GYASVG) is to connect the voltage source inverter in parallel to the power grid through a filter. Its working principle is to detect the current of the load in real time, based on advanced detection and control algorithms for reactive power, harmonics, and three-phase active power, and generate corresponding IGBT drive signals to achieve comprehensive compensation for reactive current, harmonic current, and three-phase unbalanced current.



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两倍（三倍可定制）。
- 1) DSP+CPLD full digital control core, three-level topology technology.
- 2) Modular design allows multiple modules to be connected in parallel, with small footprint and easy maintenance.
- 3) The independent air duct and independent plate compartment structure design ensure the stable operation of the equipment.
- 4) It has two external current sampling channels and can support various compensation methods such as low-voltage side sampling, low-voltage side compensation, high-voltage side sampling, and reactive power component compensation.
- 5) Support any one, two or three combinations of reactive power compensation, harmonic compensation, and three-phase imbalance compensation.
- 6) Reactive power compensation capability: compensation rate ≥ 99%.
- 7) Unbalance compensation capability: The imbalance degree after compensation is ≤ 5%.
- 8) Current harmonic compensation capability: compensation rate ≥ 95%; 2-50 times, with adjustable compensation rate per time.
- 9) The zero sequence current filtering capability of the neutral line is twice that of the phase line (three times can be customized).

技术参数 Technical parameters

机型 Model	220V	220V	380V	500V	690V	800V
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%)	AC220V (-20%~+20%)	AC380V (-20%~+20%)	AC500V (-20%~+20%)	AC690V (-20%~+15%)	AC800V (-20%~ 850V Max)
工作频率 Operating frequency	50Hz/60Hz (45Hz~63Hz)					
额定补偿容量 Rated compensation capacity	5Kvar	3/5/7/ 10/17/25 /37/50/ 75Kvar	5/10/15/ 20/35/50/ 75/100/ 150Kvar	90Kvar	120Kvar	150Kvar
电网结构 Grid configuration	L/N	三相三线，三相四线 Three-phase three-wire Three-phase four-wire				三相三线 Three-phase three-wire
并联台数 Number of parallel units	不限 No restrictions					
整机效率 Overall efficiency	≥97%					
开关频率 Switching frequency	32kHz	16kHz		12.8kHz		
功能选择 Function selection	A、B、A+B、B+A	A、B、A+B、B+A、B+C、A+C、B+C+A、A+C+B				A、B、A+B、B+A
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	无 No	补偿后不平衡度≤5% Unbalance degree after compensation ≤ 5%				无 No
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 2 倍（3 倍可定制） The neutral line filtering capability is twice that of the phase filtering capability (3 times can be customized)					
全响应时间 Full response time	无功 < 10ms, 谐波<40ms Reactive power<10ms, harmonic<40ms					
噪音 Noise level	≤60dB	≤65dB		≤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、短路保护等 Overload, software/hardware overcurrent, grid over-/undervoltage, grid voltage imbalance, power supply failure, overtemperature, frequency anomaly, short-circuit 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)					

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