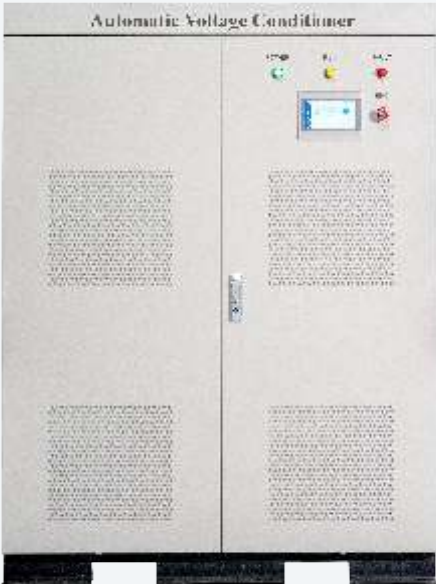




统一电能质量调节装置

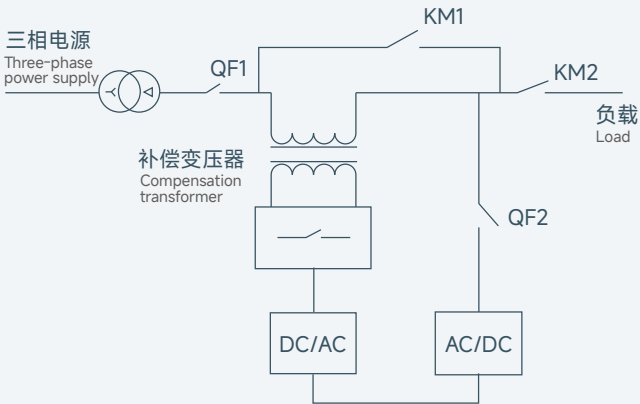
Unified power quality control device

GY-AVC-PLUS

统一电能质量调节装置（GY-AVC-PLUS）主要由整流器、逆变器、补偿变压器、监控系统以及交直流配电组成。具备电压暂降（-40%）治理、电压暂升（+30%）治理、无功补偿、谐波补偿以及三相不平衡补偿等功能的综合电能质量治理装置，在改善电网电能质量的同时，保证负载稳定供电，为生产用户避免因电压波动造成的经济损失。

The unified power quality control device (GY-AVC-PLUS) mainly consists of a rectifier, inverter, compensating transformer, monitoring system, and AC/DC distribution. A comprehensive power quality control device with functions such as voltage sag (-40%) control, voltage sag (+30%) control, reactive power compensation, harmonic compensation, and three-phase imbalance compensation. It improves the power quality of the power grid while ensuring stable power supply to the load, avoiding economic losses caused by voltage fluctuations for production users.

工作原理 Working Principle



外观与型号规格 Appearance and Model Specifications:

常用型号 Common models	补偿容量(kVA) Compensation capacity (kVA)	系统电压(V) System voltage (V)	冷却方式 Cooling method
GY-AVC-PLUS-0.22-30k	30	220	强制风冷 forced air cooling
GY-AVC-PLUS-0.4-30k	30	380	
GY-AVC-PLUS-0.4-60k	60	380	
GY-AVC-PLUS-0.4-80k	80	380	
GY-AVC-PLUS-0.4-100k	100	380	
GY-AVC-PLUS-0.4-150k	150	380	
GY-AVC-PLUS-0.4-300k	300	380	
GY-AVC-PLUS-0.4-400k	400	380	
GY-AVC-PLUS-0.4-500k	500	380	

性能特点 Performance characteristics:

- 1) 采用新型电力电子技术，电压无极调节，调节精度高，调节电压范围宽，调节过程不闪断。
- 2) 采用模块化设计，占地空间小、维护方便。
- 3) 可按用户要求调节补偿电压，调压速度可以设置，且采用分相控制独立调节输出电压，适应严重不平衡负载。
- 4) 可支持无功补偿、谐波补偿、三相不平衡补偿以及电压精确调节等多种功能可选。
- 5) 设备故障时无缝切换到电网供电，保证负载供电不闪断。
- 6) 具备过载保护、软/硬件过流保护、电网过/欠压保护、过温保护、缺相保护、频率异常保护、短路保护等，提高供电的可靠性。
- 7) 可配备 RS485（支持 4G/Wi-Fi）等多种通信接口，以方便用户将设备运行数据接入到监控系统。

- 1) Adopting new power electronics technology, voltage stepless regulation, high regulation accuracy, wide voltage regulation range, and no flicker during the regulation process.
- 2) Adopting modular design, it occupies a small space and is easy to maintain.
- 3) The compensation voltage can be adjusted according to user requirements, and the voltage adjustment speed can be set. The output voltage can be independently adjusted using phase separation control to adapt to severely unbalanced loads.
- 4) It can support various functions such as reactive power compensation, harmonic compensation, three-phase imbalance compensation, and precise voltage adjustment.
- 5) When the equipment fails, seamlessly switch to the power grid to ensure that the load power supply does not flash off.
- 6) Equipped with overload protection, software/hardware overcurrent protection, power grid overvoltage/undervoltage protection, over temperature protection, phase loss protection, frequency anomaly protection, short circuit protection, etc., to improve the reliability of power supply.
- 7) It can be equipped with various communication interfaces such as RS485 (supporting 4G/Wi-Fi) to facilitate users in accessing device operation data to the monitoring system.

技术参数 Technical parameters:

交流参数 Communication parameters		
额定功率 Rated Power	30kVA	30kVA~500kVA
额定电流 Rated Current	135A	45A~750A
额定电压 Rated Voltage	AC220V	AC380V
电压范围 Voltage Range	-40%~+30%	-40%~+30%
额定频率 Rated Frequency	50Hz/60Hz	50Hz/60Hz
电网结构 Grid Structure	L/N+PE	三相四线+PE Three-phase four-wire
交流过载能力 AC Overload Capability	1.1倍长时间 1.1 times the duration	1.1倍长时间 1.1 times the duration
输出电压精度 Output Voltage Accuracy	±1%	±1%
功能选择 Function Selection	电压补偿+(无功补偿、谐波补偿无功补偿+谐波补偿) Voltage compensation+(reactive power compensation, harmonic compensation, reactive power compensation+harmonic ompensation)	电压补偿+（无功补偿、谐波补偿、三相不平衡补偿、无功补偿+谐波补偿、无功补偿+三相不平衡补偿、无功补偿+三相不平衡+谐波补偿） Voltage compensation+(reactive power compensation, harmonic compensation, three-phase unbalance compensation, reactive power compensation+harmonic compensation)Reactive power compensation+three-phase unbalance compensation, reactive power compensation+three-phase unbalance+harmonic compensation)
补偿电压范围 Compensation Voltage Range	AC380±20%(-40%~+30%可定制) AC380 ± 20% (-40%~+30% customizable)	
变压器变比 Transformer Ratio	5:1 5:1	
谐波补偿率 Harmonic Compensation Rate	3-13次综合谐波补偿≥95% 3-13 times comprehensive harmonic compensation ≥ 95%	
无功补偿率 Reactive Power Compensation Rate	无功补偿≥99% Reactive power compensation ≥ 99%	
三相不平衡补偿率 Three-Phase Unbalance Compensation Rate	/	补偿后不平衡度≤5% Unbalance degree after compensation ≤ 5%
允许电网频率 Allowable Grid Frequency	45~63Hz	
输出电压谐波畸变率增量 Output Voltage THD Increment	≤1%	
补偿响应时间 Compensation Response Time	< 20ms	
变压器参数 Transformer parameters		
额定容量 Rated Capacity	6kVA	6kVA~100kVA
类型 Type	干式，磁芯由叠层硅钢片制作而成，架壳接地 Dry type, the magnetic core is made of stacked silicon steel sheets, and the frame is grounded	
过载 Overload Capability	1.1倍长时间运行 1.1 times longer running time	
绝缘 Insulation	绝缘等级H级 Insulation level H	
变比 Transformation Ratio	220: 44 220: 44	
设计温度 Design Temperature	温升≤90K Temperature rise ≤ 90K	
执行标准 Applicable Standard	IEC 726 IEC 726	
系统参数 System parameters		
海拔高度 Altitude	<2000m, 2000米以上按照GB/T3859.2降额使用 <2000m, Use in accordance with GB/T3859.2 for downgrading above 2000 meters	
环境温度 Ambient Temperature	-10~+50°C(40°C以上降容) -10~+50 ° C (reduced capacity above 40 ° C)	
相对湿度 Relative Humidity	90%，月最低温度25°C表面无凝露 90%, monthly minimum temperature 25 ° C, no condensation on the surface	
污秽等级 Pollution Degree	I级以下 Below Level I	
噪音 Noise Level	≤70dB ≤70dB	
防护等级 Degree of Protection	IP20(IP54可定制) IP20 (IP54 customizable)	