

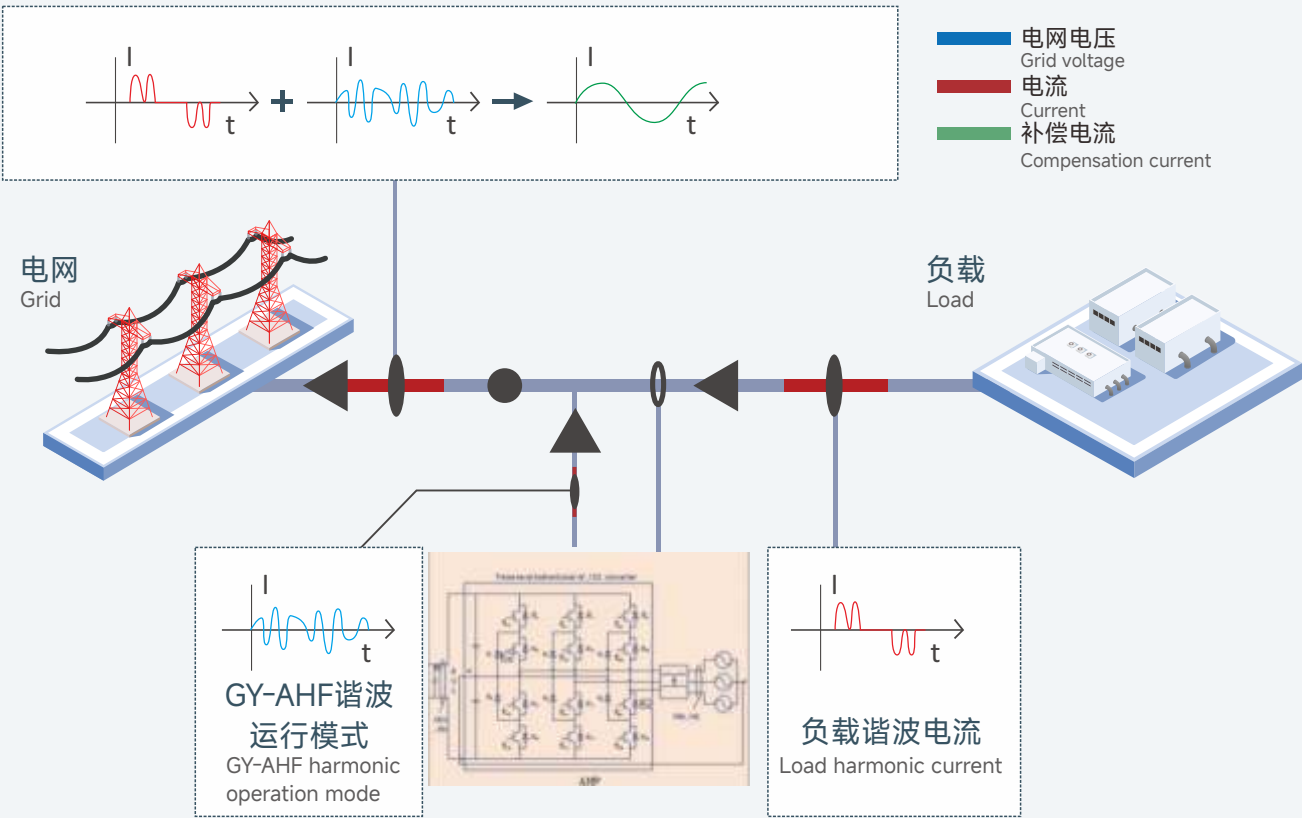


有源电力滤波装置 整柜
Active Harmonic Filter Cabinet
GY-AHF-cabinet

有源电力滤波装置（GY-AHF）主要由交流配电、AHF模块、监控系统等组成。有源电力滤波装置（GY-AHF）将电压源变流器通过滤波器并联在电网上，通过实时检测负载电流，基于指定次谐波电流检测算法将谐波电流逐次分离，按照设定的滤波百分比生成控制信号，驱动IGBT输出与负载谐波电流幅值相同相位相反的补偿电流，实现谐波补偿的功能。采用模块化设计，集成度高，安装方便灵活。

The active power filter device (GY-AHF) mainly consists of AC distribution, AHF module, monitoring system, etc. The active power filtering device (GY-AHF) connects the voltage source inverter in parallel to the power grid through a filter. By detecting the load current in real time and using a specified sub harmonic current detection algorithm, the harmonic current is gradually separated. According to the set filtering percentage, a control signal is generated to drive the IGBT to output a compensation current with the same amplitude and opposite phase as the load harmonic current, achieving the function of harmonic compensation. Adopting modular design, high integration, easy and flexible installation.

系统图 System diagram



性能特点 Performance characteristics

- (1) DSP+CPLD全数字控制核心，三电平拓扑技术，先进的谐波检测算法和PWM控制策略。
 - (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) 可设定100%限流输出，保证设备长期稳定运行。
 - (5) 支持谐波补偿、谐波补偿+三相不平衡补偿模式可选。
 - (6) 电流谐波补偿能力：补偿率≥95%。
 - (7) 不平衡补偿能力：补偿后不平衡度≤5%。
- (1) DSP+CPLD full digital control core, three-level topology technology, advanced harmonic detection algorithm and PWM control strategy.
- (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) 100% current limiting output can be set to ensure long-term stable operation of the equipment.
- (5) Supports optional modes of harmonic compensation, harmonic compensation+three-phase unbalance compensation.
- (6) Current harmonic compensation capability: compensation rate ≥ 95%.
- (7) Unbalance compensation capability: The imbalance degree after compensation is ≤ 5%.

技术参数 Technical parameters

机型 Model	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%)	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	100A~900A			100A~600A		100A~600A
电网结构 Grid configuration	三相三线，三相四线 Three-phase three-wire, three-phase four-wire					三相三线 Three-phase three-wire
整机效率 Overall efficiency	≥97%					
开关频率 Switching frequency	16kHz			12.8kHz		
功能选择 Function selection	谐波补偿、谐波补偿+三相不平衡补偿 Harmonic compensation, harmonic compensation + three-phase unbalance compensation					谐波补偿 Harmonic compensation
电流谐波补偿能力 Current harmonic compensation capability	电流谐波补偿≥95% Reactive power compensation ≥95%					
电流谐波补偿范围 Current harmonic compensation range	2~50次，单次补偿率可调 2nd to 50th harmonics, adjustable individual compensation rate					
不平衡补偿能力 Unbalance compensation capability	补偿后不平衡度≤5% Unbalance degree after compensation ≤5%					无 NO
全响应时间 Full response time	< 40ms					
噪音 Noise level	≤75dB					
通讯方式 Communication method	2路RS485通信接口（支持Wi-Fi） 2 RS485 communication ports (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 overvoltage/undervoltage, grid voltage unbalance, power supply failure, overtemperature, frequency anomaly, short circuit protection.					
过载能力 Overload capability	额定1.2倍过载60秒 Rated 1.2 times overload for 60 seconds					
安装方式 Installation method	立式安装 vertical installation					
进线方式 Cable entry	上进线、下进线 Entering the upper line and entering the lower line					
防护等级 Protection rating	IP20(IP54可定制) IP20 (IP54 customizable)					
冷却方式 Cooling method	强制风冷 Forced air cooling					
重量 Weight	与容量相关，最大 450KG Related to capacity, maximum 450KG			与容量相关，最大 620KG Related to capacity, maximum 620KG		