



EW series Active Power Filter

EW系列有源电力滤波器



EW 系列有源电力滤波器 EW-APF (Active Power Filter) 以并联方式接入电网, 通过实时检测负载的谐波分量, 采用 PWM 变换技术, 将与谐波分量大小相等、方向相反的电流注入供电系统中, 实现动态抑制谐波的功能。

EW 系列有源电力滤波器采用基于 DSP+FPGA 的主控制器和模块驱动器的分层分布式控制器体系, 并采用基于彩色触摸屏的人机界面, 具有动态连续平滑补偿、响应速度快、数字化、自动化、智能化、人机界面友好及控制方法灵活等特点。

The EW series active power filter EW-APF (Active Power Filter) is connected to the power grid in parallel. By detecting the harmonic components of the load in real time, it adopts PWM conversion technology to inject the current with the same magnitude and opposite direction with the harmonic components into the power supply and distribution system. And achieve the function of dynamic harmonic suppression.

EW series active power filter adopts a hierarchical distributed controller system based on DSP+FPGA main controller and module driver. It adopts a human-machine interface based on color touch screen, with characteristics of dynamic continuous smooth compensation, fast response speed, digitization, automation, intelligence, friendly human-machine interface and flexible control method.

EW-APF□□□-□L□□□/□□

选型说明 Model definition

版本号

Version number

C: 柜式 R: 机架式 H: 壁挂式

C: cabinet type R: rack-mounted type H: wall-mounted type

380: 380V 电压等级

380: 380V voltage level

690: 690V 电压等级

690: 690V voltage level

3L: 三相三线制

3L: three-phase three-wire system

4L: 三相四线制

4L: three-phase four-wire system

容量等级: 050/075/100/200/300/400: 50A/75A/100A/200A/300A/400A

Capacity level: 050/075/100/200/300/400: 50A/75A/100A/200A/300A/400A

APF: 有源电力滤波器

APF: active power filter

EW 系列有源电力滤波器

EW: EW series active power filter

特征

Features

- 控制算法为具有自适应能力的领域筛选矢量补偿算法，优于其他单一算法。
- 具有2-50次谐波的单次或多次的动态滤波功能。
- 具备交流侧过压、欠压、缺相、IGBT、直流侧过压、过流等保护功能。
- 具备开机自诊断、软启动、自动限流等功能。
- 关键器件采用进口国际一流品牌器件。
- 采用7寸彩色触摸屏，具有参数设置、查看电能质量、设备运行状态等功能。
- 采用分相结构模块化设计，模块之间相互独立，运行维护方便。
- 可与无源型谐波消除装置或低压无功补偿装置结合使用，提高整体容量，降低工程投资。
- EW-APF能实现多台直接并联运行的平滑扩容。
- 安全稳定地独立运行，不受电网阻抗和系统阻抗变化的影响。

- The control algorithm selects the vector compensation algorithm for the domain with adaptive ability. This algorithm is superior to other single algorithms.
- With a single or multiple dynamic harmonics filtering function of 2-50 times.
- With AC side overvoltage, undervoltage, phase loss, IGBT, DC side overvoltage, overcurrent and other protection functions.
- With power-on self-diagnosis, soft start, automatic current limiting and other functions.
- Key components are imported international first-class brand.
- Using a 7-inch color touch screen, with functions of parameter setting, viewing the power quality and operating status of the equipment.
- The modular design of split phase structure is adopted, and the modules are independent from each other, which is convenient for operation and maintenance.
- It can be combined with passive harmonic cancellation device or low-voltage reactive power compensation device to improve the overall capacity and reduce the project investment.
- EW-APF can realize smooth expansion of direct parallel operation of multiple devices.
- It can run independently in a safe and stable manner all weather, not affected by changes in the power grid impedance and system impedance.

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技术参数

Technical parameters

额定容量 Rated capacity	50A	75A	100A	150A	200A	250A	300A	350A	400A
额定电压 Rated voltage	AC380V/690V±10% (三相三线/三相四线) AC380V/690V±10% (Three-phase three-wire/three-phase four wire)								
工作频率 Working frequency	50Hz±5%								
滤波范围 Filter range	2-50次								
滤波能力 Filter capacity	≥ 95%								
整机效率 Overall efficiency	≥ 97%								
智能保护 Intelligent protection	开机自检，过流保护，直流电压保护，过热保护，系统欠压及过压保护等 Power-on self-test, overcurrent protection, DC voltage protection, overheating protection, system undervoltage and overvoltage protection etc.								
过载能力 Overload capacity	120%								
响应时间 Response time	≤ 100us								
全响应时间 Total response time	≤ 10ms								
控制器 Controller	DSP + FPGA								
通信协议 Communication protocol	Modbus协议 Modbus protocol								
防护等级 Protection class	IP20 (其他等级可定制) IP20 (Other protection class customizable)								
风冷方式 Air cooling mode	智能风冷 (可选水冷) Intelligent air cooling (water cooling selectable)								
噪音 Noise	≤ 65dB (A声级) A-weighted sound level								
安装方式 Installation way	柜式、抽屉式 Cabinet type/drawer type								
工作温度 Operating temperature	-15°C ~ +40°C, 且24h内平均气温不高于+35°C The average temperature within 24 hours should not be higher than +35°C								
储藏温度 Storage temperature	-40°C ~ +60°C								
相对湿度 Relative humidity	室内温度在+20°C以下时15% ~ 90%，非凝露即可；在+40°C时不超过50% 15% ~ 90% when the indoor temperature is below +20°C, no condensation is ok; 50% at most when the indoor temperature is +40°C.								
海拔高度 Altitude	安装海拔小于1000米 (1000-4000米之间，按GB/T3859.2降额使用) The installation altitude is less than 1000 meters. Between 1000 and 4000 meters, derating according to GB/T3859.2								

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