

# Active Power Filter

-   
 Durable
-   
 Wear resistant
-   
 Multiple specifications



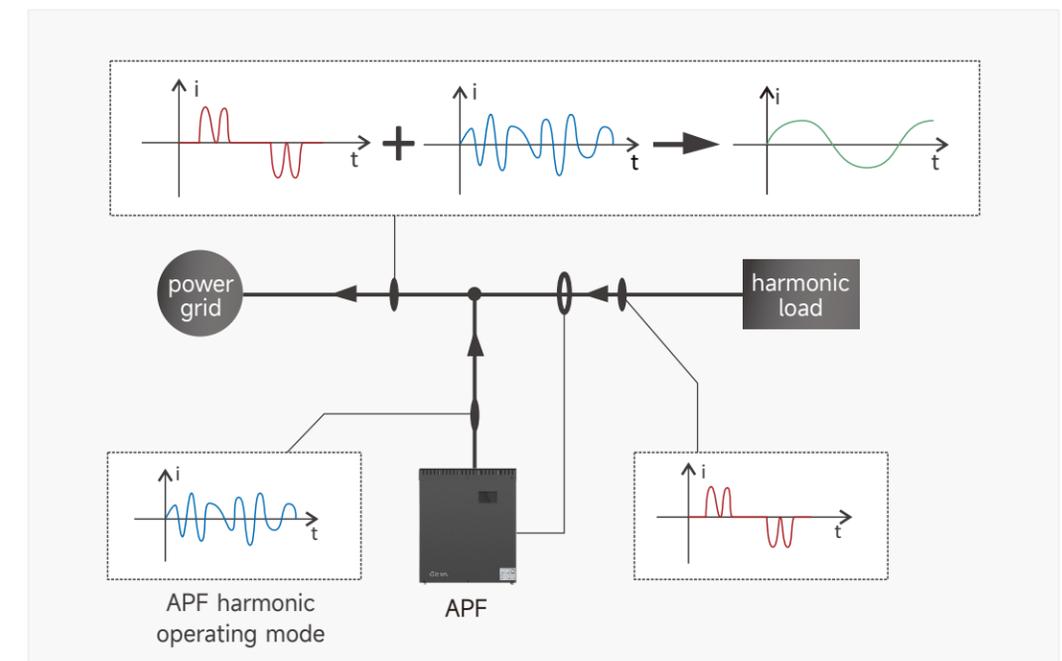
## Model description

IGY APF - 0.4 - 50A / 4L - W

Enterprise code	Active Power Filter	Voltage level 0.22: 220V 0.4: 380V±20% 0.5: 500V±20% 0.69: 690V±20%	Rated Capacity (kvar) 25/50/75 /100/150A	2L: Single-phase 3L: Three-phase three-wire 4L: Three-phase four-wire	W: Wall-mounted R: Rack mount C: Cabinet
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## Working principle

The working principle of the IGY APF series active power filter is to detect the load current in real time, separate the harmonic currents one by one based on the specified harmonic current detection algorithm, and generate control signals according to the set filtering percentage to drive the IGBT output and the load harmonic current amplitude, compensation currents with the same value and opposite phase achieve the purpose of harmonic cancellation.



## Features

- ☑ Use DSP+CPLD all digital control core, three-level topology technology, advanced harmonic detection algorithm and PWM control strategy to achieve accurate compensation of harmonic current.
- ☑ Adopt modular design, which facilitates parallel connection of multiple modules, takes up little space and is easy to maintain.
- ☑ The structural design of independent air ducts and independent warehouses ensures the stable operation of the equipment.
- ☑ It can filter harmonics in a wide range of harmonics, from 2 to 50 harmonics, and solve the problem of three-phase unbalance at the same time.
- ☑ The harmonic filtering rate is high. If the capacity allows, the harmonic current filtering rate can be as high as 95%.
- ☑ Set 100% current limiting output to ensure long-term stable operation of the equipment.



### Data center

A large number of devices in the data center, can cause harmonic pollution, affecting the stability and normal operation of the data center. Active power filter is a new power electronic device specially used for dynamic harmonic suppression and reactive power compensation. It can compensate for harmonics and reactive power that vary in size and frequency.



### Hospital medical treatment

In hospitals, the use of a large number of modern medical equipment generates a large amount of harmonic currents, which can interfere with the hospital's power distribution system, reduce power quality, and affect the normal operation of medical equipment. The harmonics generated by these devices may also cause overheating of the capacitor, aging of the insulation, and shortening the service life of the capacitor.



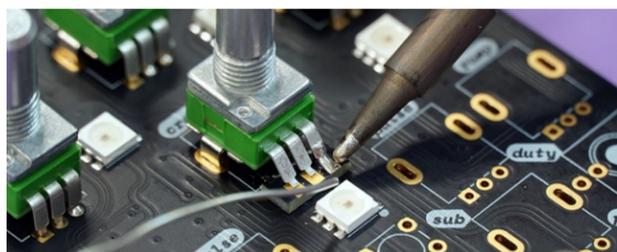
### pharmaceutical industry

Active power filters can not only suppress harmonics, stabilize voltage, improve power quality, and maintain the stability of the power system, thereby ensuring that the power system in the pharmaceutical manufacturing industry can always maintain a reliable and stable state.



### Steel industry

Due to the large number of modern power electronic devices that generate a large amount of harmonic currents during operation, these devices have a significant impact on the power quality of the power grid. Active power filters can suppress harmonics, stabilize voltage, improve power quality, and maintain the stability of the power system, thereby ensuring that the power system in the steel industry can always maintain a reliable and stable state.



### semiconductor

In semiconductor factories, a large number of power equipment generates a large amount of harmonic currents. These harmonic currents can cause interference to the power grid, reduce power quality, and affect the normal operation of equipment. Active power filters can dynamically suppress harmonics and compensate for reactive power.



### Light Industry and Textile Industry

After the application of active power filters, the problem of poor power quality in power consumption systems caused by the extensive use of power electronic equipment has also been successfully solved.

## Applications

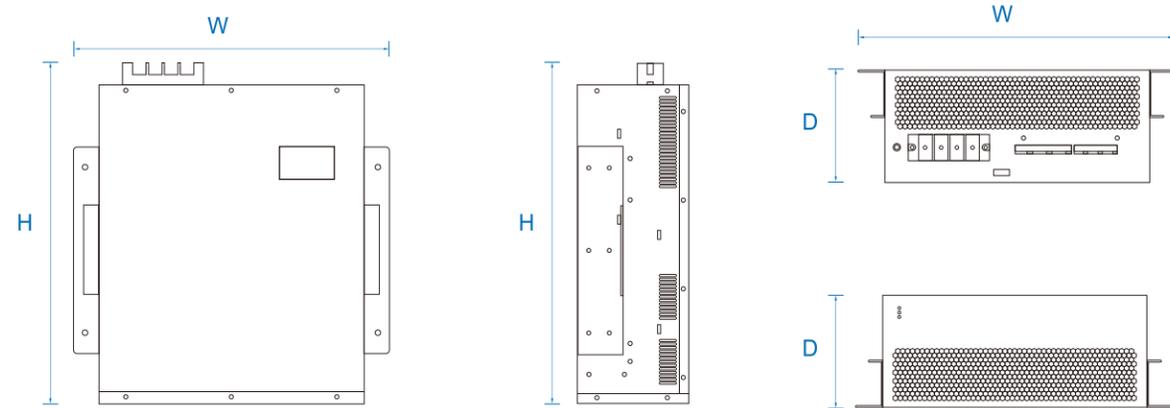
Data centers, hospitals, petrochemical industry, pharmaceutical manufacturing, steel industry, semiconductor manufacturing, light industry and textile industry, etc.

## Technical Parameters

	220V series	380V series	500V series	690V series
Altitude	<2000m, above 2000m, derate according to GB/T3859.2			
ambient temperature	-20 ~ +50°C			
Relative humidity	≤90%, no condensation on the surface when the monthly minimum temperature is 25°C			
pollution level	Level III below			
Operating Voltage	AC220V±20%	AC380V±20%	AC500V±20%	AC690V±20%
working frequency	50Hz±5%			
Compensation current	25A	25/50/75/100/150A	100A	100A
Grid structure	L/N	3P3W/3P4W	3P3W/3P4W	3P3W/3P4W
Number of units connected in parallel	Unlimited			
Overall machine efficiency	≥97%			
Grid structure	32kHz	16kHz	12.8kHz	12.8kHz
Compensation range	2 ~ 50times, single compensation rate is adjustable			
Function selection	Reactive power	Reactive power, reactive power + asymmetry		
Reactive power compensation rate	≥95%	>92%		
Neutral filtering capability	Neutral line filtering capability is 3 times that of phase filtering capability			
full response time	<10ms	<40ms	<40ms	<40ms
noise	≤60dB	≤60dB	≤65dB	≤65dB
control method	2-way RS485 interface (supports GPRS/WIFI)			
Protection	Overload, software/hardware overcurrent, grid overvoltage and undervoltage, power failure, overtemperature, frequency abnormality protection, etc.	Overload, software/hardware overcurrent, grid overvoltage and undervoltage, grid voltage imbalance, power failure, overtemperature, frequency abnormality, short circuit protection, etc.		
Installation method	Rack/wall-mounted		Rack	
Incoming line	Back incoming (rack type) 、 upper incoming (wall-mounted)		Back incoming line	
Protection level	IP20			

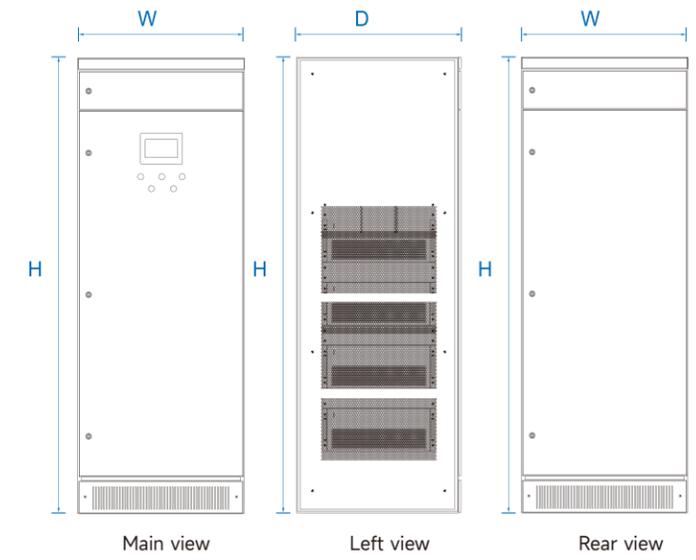
▶ Model & Specification

- Wall-mounted
- Rack mount



Models				
Model Number	Rated Current(A)	System voltage (V)	Dimensions (D*W*H)	Cooling method
IGY APF-0.22-25A/2L-R/W	25	220	220*330*160mm	Forced air cooling
IGY APF-0.4-25A/4L-R/W	25	380±20%	460*490*89mm	
IGY APF-0.4-50A/4L-R/W	50	380±20%	460*490*89mm	
IGY APF-0.4-75A/4L-R/W	75	380±20%	500*510*190mm	
IGY APF-0.4-100A/4L-R/W	100	380±20%	500*550*240mm	
IGY APF-0.4-150A/4L-R/W	150	380±20%	500*550*240mm	
IGY APF-0.5-100A/4L-R/W	100	500±20%	495*675*275mm	
IGY APF-0.69-100A/4L-R/W	100	690±20%	495*675*275mm	

Cabinet



Cabinet device model				
Model Number	Compensation capacity (kvar)	System voltage (V)	Dimensions (D*W*H)	Cooling method
IGY APF-0.4-100A/4L-C	100	380±20%	800*1000*2200mm	Forced air cooling
IGY APF-0.4-150A/4L-C	150	380±20%	800*1000*2200mm	
IGY APF-0.4-200A/4L-C	200	380±20%	800*1000*2200mm	
IGY APF-0.4-250A/4L-C	250	380±20%	800*1000*2200mm	
IGY APF-0.4-300A/4L-C	300	380±20%	800*1000*2200mm	
IGY APF-0.4-400A/4L-C	400	380±20%	800*1000*2200mm	
IGY APF-0.5-300A/4L-C	300	500±20%	800*1000*2200mm	
IGY APF-0.69-300A/4L-C	300	690±20%	800*1000*2200mm	