

## Waterproof Active Harmonic Filter



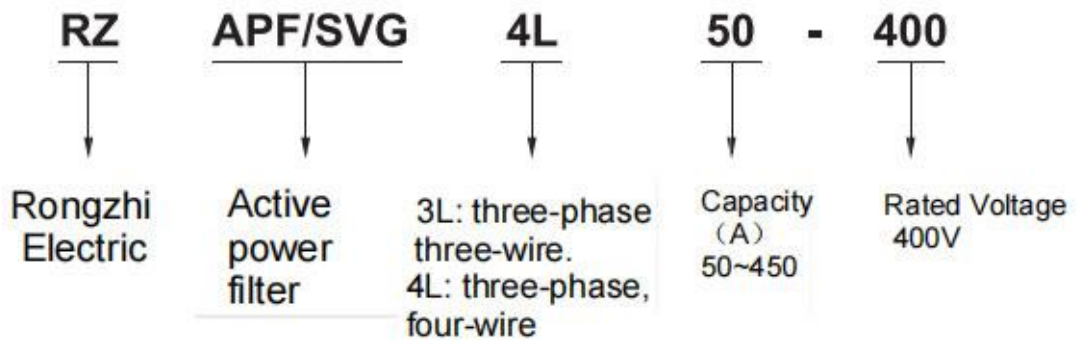
Rongzhi Electric Power is a large-scale Waterproof Active Harmonic Filter manufacturer and supplier in China. We have been specialized in High voltage equipment for many years. Our products have a good price advantage and cover most of the South America, Middle East, Africa, Southeast Asia markets. We look forward to becoming your long-term partner in China.

## Rongzhi Waterproof Active Harmonic Filter Working principle

Active filter uses current transformer to collect the current on the DC line. After sampling, the current signal is processed by the harmonic separation algorithm to obtain the harmonic reference signal as the modulated signal, which is compared with the triangular wave to obtain the switching signal. The switching signal is used to control the single-phase bridge. The harmonic current is equal to and opposite to the harmonic signal on the line, and the harmonic current on the line is cancelled out. This is the feedforward control part. Then the harmonic component of the on-line current after the APF access point is fed back as the input of the regulator to adjust the error of the feedforward control



## Rongzhi Waterproof Active Harmonic Filter Model Instruction



## Rongzhi Waterproof Active Harmonic Filter Parameter (Specification)

Size	400V
	50A-450A

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Rated input line voltage	380V(-40%~+20%)
Power frequency	50/60Hz(Range45Hz~62Hz)
Number of Parallelable	unlimited
overall efficiency	≥97%
Power network structure	Three phase three wire four phase four wire
Current transformer	150/5~10000/5
circuit topology	Three level
performance index	
harmonic compensation	support
reactive compensation	support
unbalance compensation	support
harmonic range	>97%
fast response time	<100us
total reponse time	<10ms
Target power factor	Capacitive sensibility is continuously adjustable
Switch frequency	10kHz
Cooling Type	Intelligent air cooling
noise label	<65dB

communication interface	RS485, CAN, network interface
communication agreement	General electric protocol. Modbus protocol
Module display interface	LCD multi-function touch color screen
Protection function	Protection of overvoltage .short circuit, inverter reverse and over compensation
Fault Alarm	Yes
Environmental requirement	
Altitude	≤ 1500mm,Between 1500 and 4000m, according to GB/T3859-2, every 100m increase, the power is reduced by 1%
Operating temperature	-10℃~+40℃
Relative humidity	5%~95%, without condensation
Protection Grade	Other IP levels can be customized

## Rongzhi Waterproof Active Harmonic Filter Application situation

1. Application of frequency conversion equipment With the progress of technology, frequency conversion equipment is widely used in all kinds of occasions, frequency conversion equipment will produce a large number of harmonics, therefore, this kind of occasion is one of the main target markets of active power filter.
  2. Applications of unstable loads Unstable loads are not the main market for active power filters, but they are an extremely important aspect of the power system, because although unstable loads take up a small proportion, their impact on the power system is far greater than that of other loads. Therefore, this kind of application should also be regarded as one of the main market directions of active power filter.
  3. Steel works Electric arc furnace and rolling mill in steel works are the main harmonic generating equipment, and they are mainly impact loads, which have great influence on other loads near the steel works. At the same time, the harmonic problem has great
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influence on the reactive power compensation of steel works, so the reactive power compensation and harmonic control should be treated as the target.

4. Non-ferrous metallurgy loads of non-ferrous metallurgy, in addition to the electric arc furnace type loads, also due to the use of DC hydrometallurgy to produce a large number of DC components.

5. Port machinery Port machinery is a large lifting equipment, generally using a large frequency converter, so it is the main source of harmonics of port machinery, so it should also be used as one of the market directions of active filter for this kind of application.

6. Electrified railways Electrified railways are generally driven by DC motors and are therefore a major source of harmonics for municipalities. According to the operation of existing electrified railways in Shanghai, Beijing and other places, most systems have been installed with filters. It is expected that this product can achieve the role of domestic electric railway filter.

7. High-precision automatic production line High-precision automatic production line itself does not produce harmonics, but has high requirements for power quality, so it is necessary to install active filter on the power supply side of high-precision automatic production line, in order to reduce the impact of harmonics on the production line.

8. Office buildings, large commercial areas and other energy-saving lamps and air conditioning concentrated places of harmonics in office buildings, large commercial areas and other energy-saving lamps and air conditioning concentrated places of harmonics is also very serious, the treatment method should adopt the centralized treatment method, in order to save costs.

