

Power Quality Filter PQF



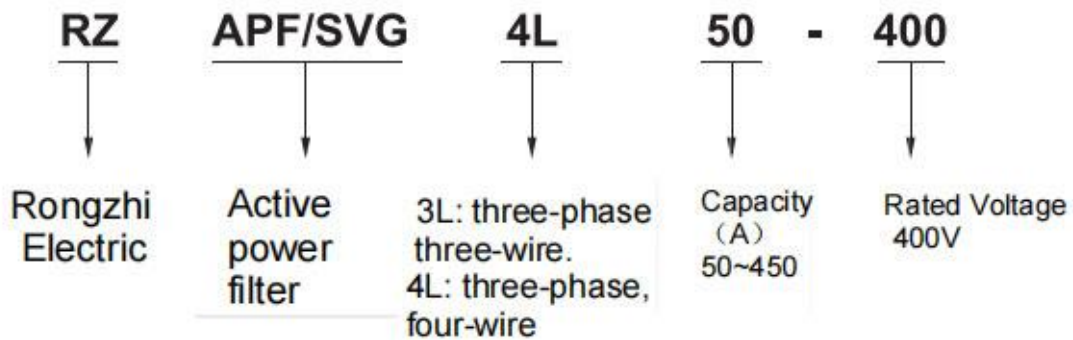
Rongzhi Electric Power is a large-scale Power Quality Filter PQF manufacturer and supplier in China. We have been specialized in High voltage equipment for many years. Our products have a good price advantage and cover most of the South America, Middle East, Africa, Southeast Asia markets. We look forward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

Rongzhi Power Quality Filter PQF Introduction

Active power filter (APF: Active power filter (Active power filter) is a new type of power electronic device used for dynamic suppression of harmonics and compensation of reactive power. It can quickly track and compensate harmonics of different sizes and frequencies. The reason why it is called active is that compared with passive LC filter, it can only passively absorb harmonics of fixed frequency and size. APF can control and actively output the size, frequency and phase of current by sampling load current and separating each harmonic and reactive power, and quickly respond to offset the corresponding current in the load, realizing dynamic tracking compensation, and can complement both harmonic and reactive power and unbalance.

SVG Operating Mode	Waveform and Vector	Remark
No Load Mode	<p>SVG Outputs on Current U_i U_s (a) $U_i = U_s$</p>	$UI = U_s \cdot I_{svg} = 0$ · SVG outputs no reactive current.
Capacitive Mode	<p>Leading Current U_i U_s I_{svg} (b) $U_i > U_s$</p>	$UI > U_s \cdot I_{svg}$ is leading the voltage, and its amplitude is continuously adjustable.
Inductive Mode	<p>Lagging Current U_s U_i I_{svg} (c) $U_i < U_s$</p>	$UI < U_s \cdot I_{svg}$ is lagging the voltage, and its amplitude is continuously adjustable.

Rongzhi Power Quality Filter PQF Model Instruction



Rongzhi Power Quality Filter PQF Parameter (Specification)

Size	400V
	50A-450A
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	support

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compensation	
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	-10℃~+40℃

temperaturel	
Relative humidity	5%~95%, without condensation
Protection Grade	Other IP levels can be customized

Rongzhi Power Quality Filter PQF Technological advantage

1) Greening

The efficiency reaches 97.2%, and the annual energy saving is about 6, 500kwh compared with the active power filter with 95% efficiency

More efficient topology enhanced control algorithm

Thermal design and structural optimization based on accurate models

1) Miniaturization

The volume is only 1/6 of that of similar mainstream brands, occupying less space.

Live to adapt to different working conditions of installation innovation, wall mounted or rack mounted using less raw materials, protect the environment

1) Intelligence

Compensation specified number of harmonic adjustable inductive, capacitive reactive power compensation compensation system unbalance load automatic detection, suppression system resonance monitoring system

2) Modularity

N+1 redundancy, significantly improve system reliability pipelined production, better quality assurance reduce the system single fault point flexible parallel, adapt to different working conditions

3) Functional features

At the same time, the response time is less than 300 μ s by filtering out 2~50 harmonics or selecting any number of harmonics within 2~50

Adopt 3DSP+CPLD full digital control mode and international famous brand high-speed IGBT, closed-loop control, accurately filter harmonics

4). Use four-phase line technology to eliminate neutral line current

Automatic elimination of resonance, not affected by the grid impedance and system impedance changes with harmonic compensation; Compensating harmonic and reactive power at the same time; At the same time compensate harmonic, reactive power and negative load three phase current unbalance three modes of operation

5) Electronic overload protection

Inverter control has the machine fast FPGA, power digital signal processing function

Modular design, easy to expand multi-machine parallel centralized monitoring function

remote network monitoring function

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Easy maintenance, in line with the requirements of the working environment, non-machine failure without maintenance