

DESIGNED FOR INTERNET DATA CENTER

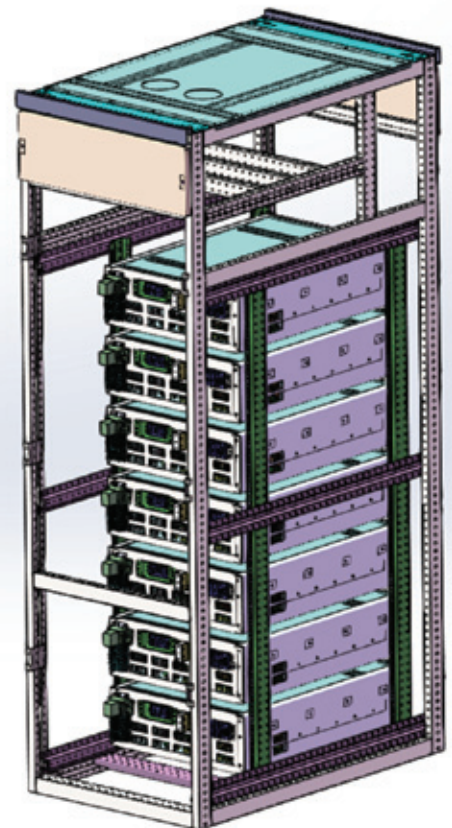
## PAMax-P Active Power Filter Plug-in Type

PAMax-P active power filter was designed for internet data center (IDC). It adopted 19inch standard rack having advantages of small size, light weight, safe and reliable.

PAMax-P active power filter was designed and manufactured according to industrial product standards. It can meet the various commercial and industrial applications. This product collects harmonic filtering, reactive power compensation and three-phase imbalance correction in one body. It is an ideal choice for the power quality control.

### HOT PLUG-IN ACTIVE POWER FILTER

- >> Compatible with network cubicle, GGD, MNS and others.
- >> Achieve module hot plug.
- >> Has automatic current transformer short-circuit control circuit.
- >> Has terminal automatic positioning and position correction function.
- >> Reduce user maintenance work.
- >> Achieve machine outage maintenance.





## POWER QUALITY CHALLENGES IN MISSION-CRITICAL FACILITIES AND MODERN BUILDINGS

### BASIC FUNCTIONS

- **Harmonic filtering:** harmonic filter function which can set the numbers of harmonic compensation and filtering rate.
- **Dynamic reactive power compensation:** reactive power compensation function which can set target power factor (inductive or capacitive).
- **Three phase unbalance correction:** three phase unbalance correction (active power unbalance compensation) function which can be set.
- **Multiple work mode:** has work modes of "filter priority", "reactive power priority", "harmonic filtering only", "reactive power compensation only", can flexibly choose work mode according to specific details of power distribution system.
- **Comprehensive analysis and display function:** Real-time take samples of current and voltage, analysis system harmonic, reactive power and active power, and display in the form of chart and waveform.



## MAIN CHARACTERISTICS

### □ Efficient energy-saving

- Constant frequency PWM patent technology, high current tracking speed, small ripple wave, low power loss
- The low loss amorphous alloy magnetic core reactor, low noise, high efficiency
- Overall loss is less than 3%

### □ High filtering ability

- Multiple DSP cooperative control, high accuracy, fast speed
- High harmonic filtering rate, for target harmonic, effective filtering rate can be 97%
- Can filter 2nd to 50th harmonic

### □ Multi-function, multi-mode, high adaptability

- Harmonic graded compensation function, harmonic reactive power integrated compensation, active power balance compensation function
- Advanced control algorithm, adapt to all kinds of complicated site and stable operation, can be parallel running with reactive power compensation cabinet
- Source current and load current detection function can be programmable at site
- True color touch screen, Chinese and English double language interface can be switchover at site

- RS485 port, standard MODBUS RTU communication protocol, computer remote monitor function

### □ Stable, reliable

- Design and manufacture according to industrial standard, safe and reliable
- Strict thermal design, insure system running safely and reliably
- Have over-voltage, over-current and over-heat multiple protection functions
- Automatic current limiting after output full load, no need to worry about over load
- Fault self diagnosis function
- History event record function



## CLEANER AND SAFER GRIDS AS SIMPLE AS RACK/WALL TYPE SERIES



Easy installation



Hot-swappable



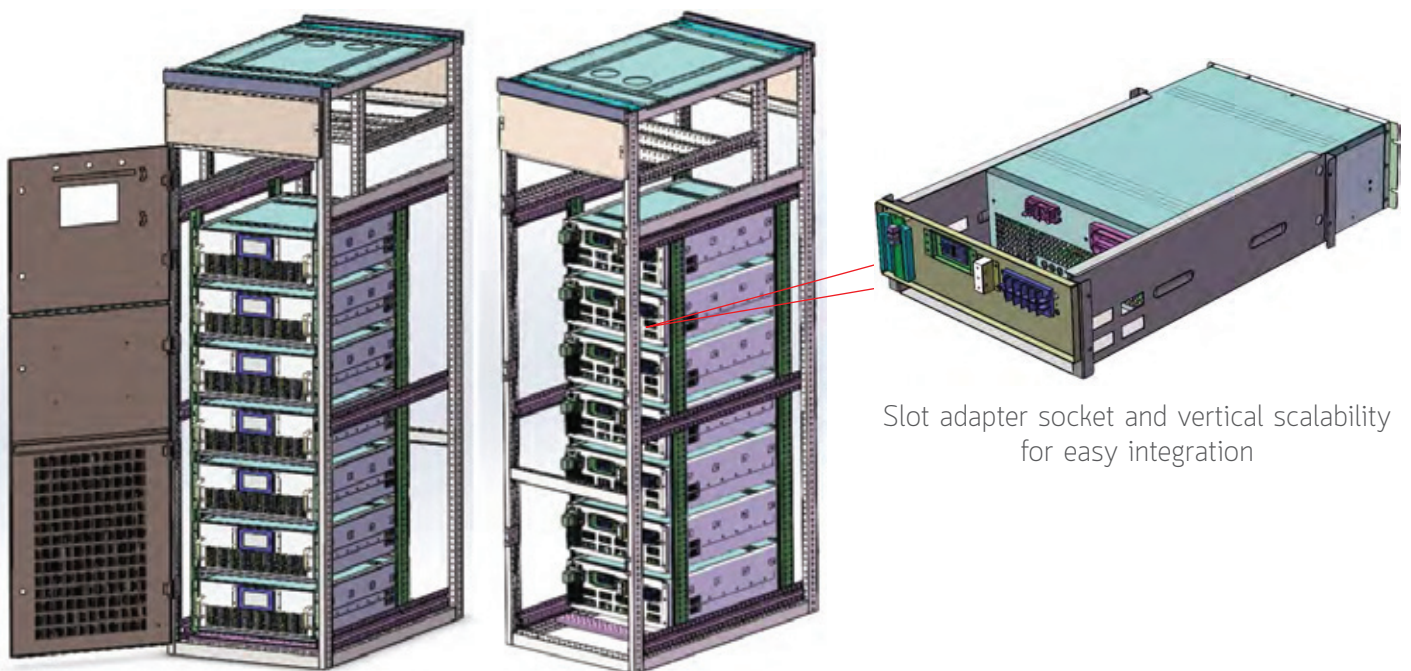
Scalability



Cost-Effective



To realize the hot plug-in replacement of modular, and the automatic short circuit and break of CT's sampling circuit, to reduce the customer maintenance work, enhance the overall manufacturability when multiple modules in parallel.



Slot adapter socket and vertical scalability for easy integration

## SPECIFICATIONS

Name	PAMax-P 3L-0.4 Three phase three line	PAMax-P 4L-0.4 Three phase four line
<b>General Electrical Parameters</b>		
Nominal Voltage	400V -20/+15%	
Nominal Frequency	50Hz ±5%	
<b>Performance Specifications</b>		
Compensation Current	35A, 60A, 75A, 100A	
Compensation Efficiency	Up to 97%	
Harmonic Spectrum	2 <sup>nd</sup> to 50 <sup>th</sup> harmonics	
Harmonic Compensation Selection	2 <sup>nd</sup> to 50 <sup>th</sup> harmonics all can be selected individually, up to 20 harmonics can be filtered simultaneously	
Response Time	Instantaneous response time < 0.1ms, Full response time < 20ms	
Neutral Current Compensation	N/A	3 times the RMS line current, capable of zero-sequence harmonic compensation
Power Factor Correction	Power factor programmable from 0.6 (inductive) to 0.6 (capacitive)	
Load Balancing	Programmable load balancing between phases	
Overload Current	100% of compensation current ratings	
Power Loss	Less than 3% of rated power	
<b>HMI &amp; Communication</b>		
Display	4.3-inch English language menu-based touch screen	
Communication Interface	Modbus RTU (RS232/485 ) capable of multi-module communication	
<b>Operation Configuration</b>		
Parallel Operation	Up to 12 units	
CT Requirements	3 CTs required (class 0.2 or better), Secondary rating: 5A	
CT Location	CT location programmable on site for single unit applications. When multiple APFs operate in parallel, please specify source side or load side when placing order.	
Color	RAL 9004 Black, other color on request	
<b>Environmental Conditions</b>		
Protection Class	IP20 (higher protection class available on request)	
Operation Environment	Indoor, cleaning environment	
Operation Temperature	-10°C ~ 40°C (higher operation temperature allowed with derating)	
Humidity	Maximum 95% non-condensation	
Altitude	1000m (higher operation altitude allowed with derating)	

## PRODUCT SELECTION TABLE

PAMax-P	PAMax-P 3L-0.4/□□□□ PAMax-P 4L-0.4/□□□□			
	Model	35A	60A	75A
Wiring Method	Three phase three line/ Three phase four line			
Rated Voltage (V)	400 -20% /+15%			
Rated Frequency (Hz)	50			
Rated Compensation Current (A)	35	60	75	100
Rated Compensation Capacity (kvar)	23	40	50	66
Weight (kG)	20	28	48	60
Installation	Rack Mount (Compatible with 19" rack)			
Width (mm)	440	440	440	440
Depth (mm)	630	630	575	575
Width (mm)	176	176	233	233
Cable Entry	Bottom Entry			
Current Detection Method	Load current detection/source current detection optional			
Color	RAL9004 (can be customized)			
Protection Level	IP3X (can be customized)			

