

# Active Harmonic Filter

## Optimal Power Quality Control

- Continuous power factor correction
- Capacitive & inductive reactive power compensation
- Accurate PF maintenance  $-1.0 \leq \text{Cos}\Phi \leq 1.0$
- Three-phase load unbalance less than 5%
- Reduction of neutral current

## Leading Edge Technology

- Three-level topology
- Ultra-compact modular design
- Fastest switching frequency 25.6kHz
- Lowest Power Consumption  $\leq 2\%$
- Leading Thermal Dissipation Technology

## Harmonic Filter

- Adaptive Algorithm (ADALINE)
- THDi less than 5% at rated loads
- Up to 98% filtration efficiency
- Full response time less than 5ms
- On-demand or fully compensated



## Technical Parameter

Rated Voltage	220V	400V	480V	690V
	(171-269V)	(300-456V)	(356-515V)	(483-793V)
Rated Capacity	15/25/50/75/100/150A	15/25/30/50/75/100/125/150A/200A	50/75/100/120/150A	50/100/125/150A
Phase System	3P3W/3P4W			
Mains Decadence	50/60Hz $\pm 5\%$			
Circuit Topology	Three-level			
Multiple Compensation Modes	Harmonic, reactive power, three-phase load imbalance compensation			
Filter Range	2 to 51 odd harmonics (by order or full compensation)			
Harmonic Filtering Rate	$\geq 98\%$			
Filtering Performance	Typically, THDi $\leq 5\%$ at rated loads			
Three-Phase Load Balancing Effect	$\leq 5\%$ to mitigate negative and zero sequence currents			
Neutral Linear Filtering Capability	3 times the rated filter current (in case of 4-wire equipment)			
Initial Response Time	$\leq 50\mu\text{s}$			
Output Current Limit	Automatic output limitation within 100% of rated capacity			
Control Algorithm	Intelligent FFT, ADALINE, Fast Fourier and Instantaneous Reactive Power Algorithms			
Controller	DSP+FPGA			
Protection	Hardware protection, software protection			
Control Connections	Electrical Connections			
Human Machine Interface	4.3" / 7" / 10" Touch TFT LCD HMI			
Noise	$< 60\text{db}$ ( $< 45\text{db}$ at low speed operation)			
Installation Method	Module embedded (rack), wall-mounted, floor-mounted			
Protection Level	IP30 maximum			
Cooling Method	Speed controlled intelligent air-cooled PWM fan			
Colour	RAL 7035 Industrial Grey/Black			
Ambient Temperature	$-20\sim 55^\circ\text{C}$			
Relative Humidity	95% max, no condensation			
Installation Height	Rated capacity at altitude $\leq 2000\text{m}$ , appropriate load shedding at altitude $> 2000\text{m}$			
Qualification	CE, IEEE61000, Type test report, ISO9001:2015			
Conformity Standard	IEEE 519, IEC61000-4			
Communication Protocol	Adopts Modbus RTU remote communication protocol and TCP/IP protocol; Two way RS485 and CAN bus, support mobile phone APP operation, support Ethernet			