

Harmonic control, Reactive power compensation, Three-phase unbalance control

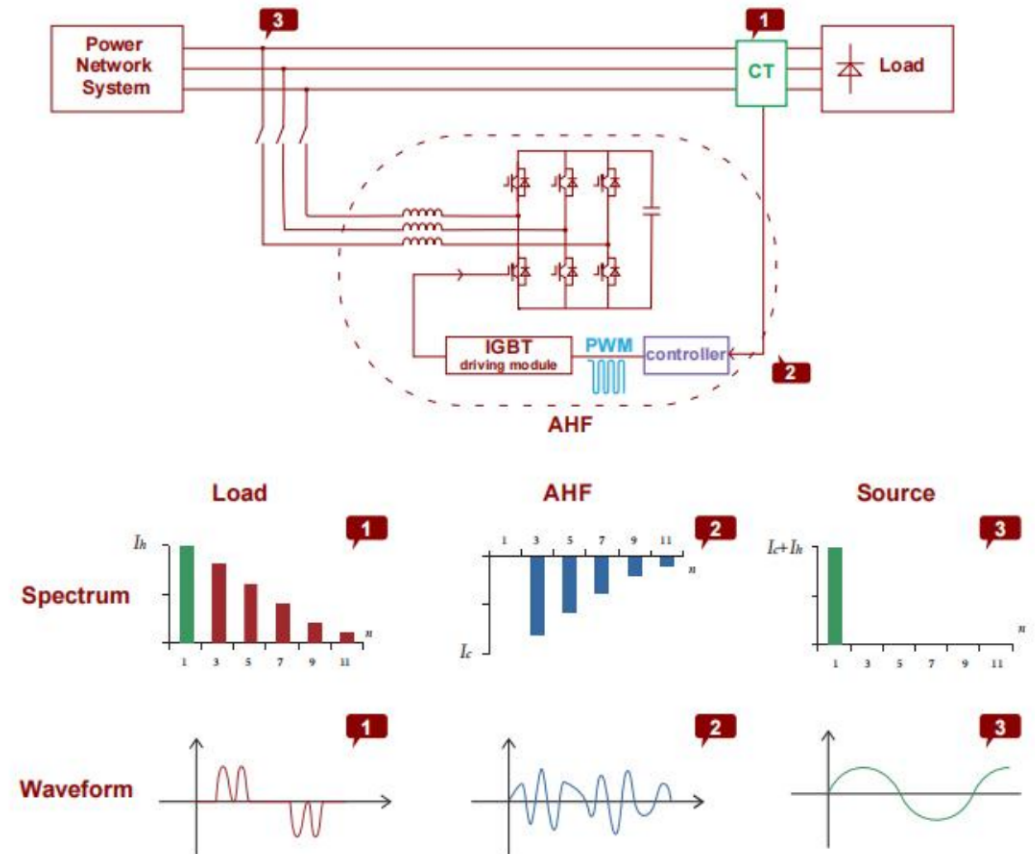
Active harmonic filters (AHF) are the ultimate answer to power quality problems caused by waveform distortions, low power factor, voltage variations, voltage fluctuations and load unbalance for a wide range of segments and applications. They are a high performance, compact, flexible, modular and cost-effective type of active power filters (APF) which provide an instantaneous and effective response to power quality problems in low or high voltage electric power systems. They enable longer equipment lifetime, higher process reliability, improved power system capacity and stability, and reduced energy losses, complying with most demanding power quality standards and grid codes.

AHFs eliminate waveform distortions from the loads like harmonics, inter harmonics and notching, and harmonic voltages caused by harmonic currents, by injecting in real-time the distorted current of same magnitude but opposite in phase in the electric power system. In addition, AHFs can take care of several other power quality problems by combining different functions in a single device.

### AHF Working Principle:

External CT detects the load current, DSP as CPU has advanced logic control arithmetic, could quickly track the instruction current, divides the load current into active power and reactive power by using the intelligent FFT, and calculates the harmonic content rapidly and accurately. Then it sends PWM signal to internal IGBT's driver board to control IGBT on and off at 20KHZ frequency. Finally generates opposite phase compensation current on inverter induction, at the same time CT also detects the output current and negative feedback goes to DSP. Then DSP proceeds the next logical control to achieve more accurate and stable system.

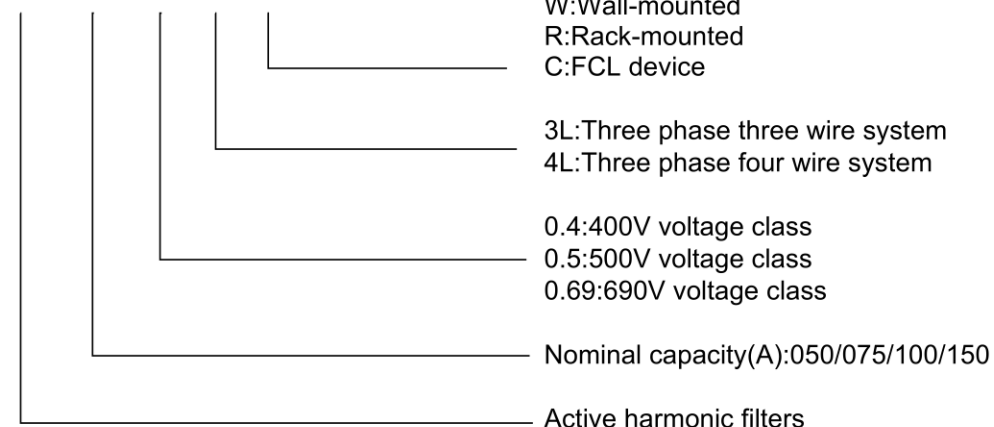
### AHF Operating Principle



Type	Series 220V	Series 380V	Series 500V	Series 690V
Norminal Voltage	AC220V±20%	AC380V±20%	AC500V±20%	AC690V±20%
Rated Frequency	50Hz±5%			
Compensating Current	25A	25A, 50A, 75A, 100A, 150A	100A	100A
Network	L/N	3P3W/3P4W		
Response Time	< 10ms	< 40ms		
Numbers in Parallel	No limitation			
Harmonic Compensation Rate	> 92%			
Harmonic Filtering	2~50th harmonics. * The number of compensation can be selected. * The range of single compensation can be adjusted			
Machine Efficiency	> 97%			
Switching Frequency	32kHz	16kHz	12.8kHz	
Communication Methods	Two-channel RS485 communication interface (support GPRS/WIFI wireless communication)			
Protection Function	Overload protection, hardware over-current protection, over-voltage protection, power failure protection, over-temperature protection, frequency anomaly protection, short circuit protection, etc			
Altitude without Derating	< 2000m			
Temperature	-20℃ ~ 50℃			
Humidity	< 90% RH			
Pollution Level	Below level III			
Noise	< 60dB		< 65dB	
Installation	Rack/Wall-mounted			
Inlet Way	Back entry (for Rack) / Top entry (for Wall-mounted)			
Protection Grade	IP20			

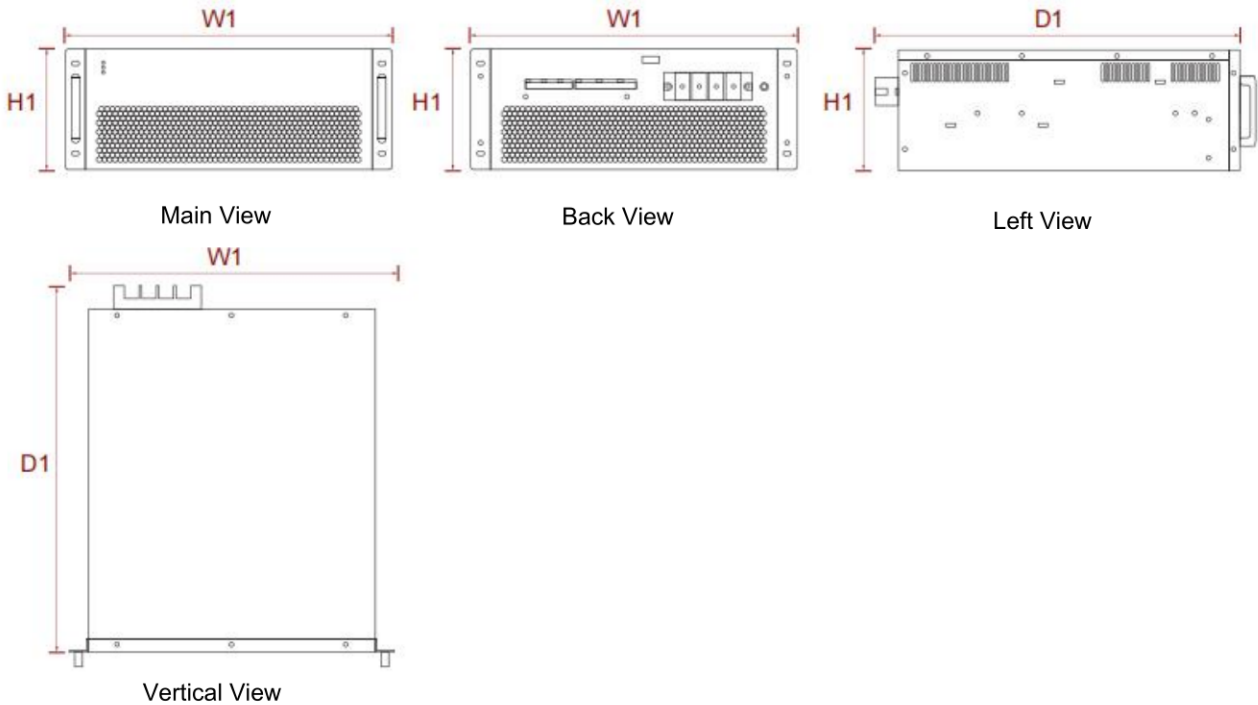
## Code Rule:

AHF - 075 - 0.4 - 4L - W



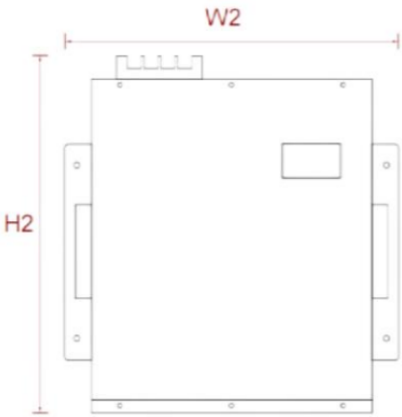
1 Rack-mounted

Model	Compensation Capacity (A)	System Voltage (V)	Size (W1*D1*H1) (mm)	Cooling Mode
AHF-0.22-25A/2L-R	25	220	220*330*160	Forced Air Cooling
AHF-0.4-25A/4L-R	25	400	460*490*89	Forced Air Cooling
AHF-0.4-50A/4L-R	50	400	460*490*89	Forced Air Cooling
AHF-0.4-75A-4L-R	75	400	500*510*190	Forced Air Cooling
AHF-0.4-100A/4L-R	100	400	500*550*240	Forced Air Cooling
AHF-0.4-150A/4L-R	150	400	500*550*240	Forced Air Cooling
AHF-0.5-100A/4L-R	100	500	495*675*275	Forced Air Cooling
AHF-0.69-100A/4L-R	100	690	495*675*275	Forced Air Cooling

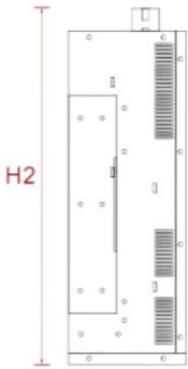


2 Wall-mounted

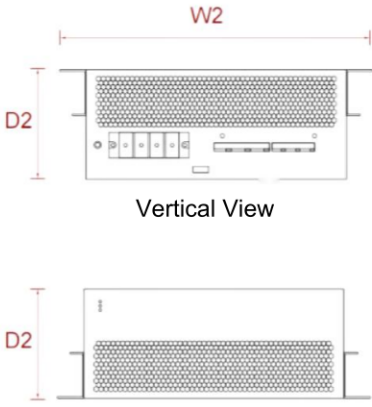
Model	Compensation Capacity (A)	System Voltage (V)	Size (W2*D2*H2) (mm)	Cooling Mode
AHF-0.22-25A/2L-W	25	220	220*160*330	Forced Air Cooling
AHF-0.4-25A/4L-W	25	400	460*89*490	Forced Air Cooling
AHF-0.4-50A/4L-W	50	400	460*89*490	Forced Air Cooling
AHF-0.4-75A-4L-W	75	400	500*190*510	Forced Air Cooling
AHF-0.4-100A/4L-W	100	400	500*240*550	Forced Air Cooling
AHF-0.4-150A/4L-W	150	400	500*240*550	Forced Air Cooling
AHF-0.5-100A/4L-W	100	500	495*275*675	Forced Air Cooling
AHF-0.69-100A/4L-W	100	690	495*275*675	Forced Air Cooling



Main View



Left View



Vertical View

Bottom View

3 Full Cabnet Load

Model	Compensation Capacity (A)	System Voltage (V)	Size (W3*D3*H3) (mm)	Cooling Mode
AHF-0.4-100A/4L-C	100	400	1000*1000*2200	Forced Air Cooling
AHF-0.4-150A/4L-C	150	400	1000*1000*2200	Forced Air Cooling
AHF-0.4-200A/4L-C	200	400	1000*1000*2200	Forced Air Cooling
AHF-0.4-250A-4L-C	250	400	1000*1000*2200	Forced Air Cooling
AHF-0.4-300A/4L-C	300	400	1000*1000*2200	Forced Air Cooling
AHF-0.4-400A/4L-C	400	400	1000*1000*2200	Forced Air Cooling
AHF-0.5-300A/4L-C	300	500	1000*1000*2200	Forced Air Cooling
AHF-0.69-300A/4L-C	300	690	1000*1000*2200	Forced Air Cooling

