

HYAPF Active power filter /HYSVG static var generator

Overview

HYAPF active power filter detects the load current in real-time through the external current transformer (CT), calculates the harmonic of the load current through the internal DSP, and sends it to the internal IGBT through the PWM signal, then generate a compensating current with the same amplitude but opposite phase angles to the detected harmonics to achieve the filtering function.

- Harmonic compensation: APF can filter 2 ~ 50 times random harmonics at the same time
- Reactive power compensation: Capacitive & Inductive (-1 ~ 1) stepless compensation
- Fast response
- Design life is more than 100,000 hours (more than ten years)

The HYSVG static var generator detects the load current in real-time through the external current transformer (CT), calculates the reactive power of the load current through the internal DSP, and sends it to the internal IGBT through the PWM signal according to the set value, then generate the required reactive compensation current to achieve the dynamic reactive compensation function.

- Capacitive & inductive load -1 ~ 1 compensation.
- Three-phase imbalance compensation.
- Working switching frequency is 10K, extremely fast response dynamic compensation.



Model and Meaning

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No.	Name	Meaning				
1	Enterprise code	HY				
2	Product type	APF: active power filter SVG: static var generator				
3	Voltage level	400V				
4	Capacity	300A(200kvar)				
5	Wiring Type	4L: 3P4W 3L: 3P3W				
6	Mounting type	No mark: drawer type、A: cabinet type、B: Wall-mounted type (Three options)				

Technical parameters

Normal working and installation conditions						
Ambient temperature	-10℃ ~ +40℃					
Relative humidity	5%～95%， no condensation					
Altitude	≤ 1500m, 1500~3000m (derating 1% per 100m) according to GB / T3859.2					
Environmental conditions	no harmful gas and steam, no conductive or explosive dust, no severe mechanical vibration					
Outdoor installation	At least 15cm space should be reserved for the upper and lower air outlets of the module, and at least 60cm space should be reserved for the front and rear of the cabinet for easy maintenance.					
System parameters						
Rated input line voltage	380V (-20% ~ +20%)					
Rated frequency	50Hz (45Hz ~ 55Hz)					
Power grid structure	3P3W/3P4W (400V)					
Current transformer	100/5 ~ 5,000/5					
Circuit topology	three-level					
Overall efficiency	≥ 97%					
Standard	JB/T 11067-2011, DL/T 1216-2013					
Performance						
Response time	< 10ms					
Target power factor	1					
Intelligent air cooling	excellent ventilation					
Noise Level	< 65dB					
Communication monitoring capability						
Communication interface	RS485, CAN interface					
Communication protocol	Modbus protocol					
Module display interface	LCD multi-function touch color screen (optional)					
Protective function	Over-voltage protection, under-voltage protection, short-circuit protection, over-current protection, over-temperature protection, drive fault protection					
Error alarm	Support independent monitoring or centralized monitoring					
APF/SVG Dimension and structure	capacity	Dimension(W×H×D)		Mounting dimension(W×H)		
		drawer type	wall-mounted type	drawer type	wall-mounted type	drawer type Hole dimension
	50A(35kvar)/4L	486×183×550	500×550×183	465×130	470×350	445×185
	75A(505kvar)/4L	486×220×610	492×610×220	465×150	466×350	445×222
	100A(70kvar)/4L	486×220×610	492×610×220	465×150	466×350	445×222
	100kvar/4L	540×278×540	555×540×278	525×220	530×350	508×280

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