

ANAPF

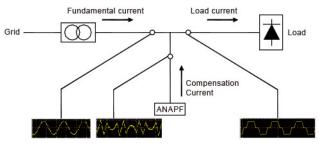
ANAPF





Principles of the ANAPF

The active power filter is a new type of power electronic device used for controlling harmonics, compensating reactive power, and regulating imbalance. When the equipment is connected in a low-voltage distribution system with harmonic loads in parallel, the integrated intelligent control system could automatically adjust the output of the module according to the linear dynamic demand of the system. The whole machine is mainly composed of multiple ANAPF modules to meet the actual requirements of compensating. In addition, the device also has a 7-inch LCD screen which communicates with the module in real time via the RS485 protocol, enabling users to interact with the device.



The schematic of ANAPF Technical Parameter Wiring method Three-phase three-wire, Three-phase four-wire Rated voltage 380V ±10% Rated frequency 50Hz ±2% Compensation method Linear compensation Full response time≤5ms, Instantaneous response time≤100us

Compensate for harmonics only, compensate for

reactive power only, compensate for both harmonics

20kHz

and reactive power

2-51st,2-31st

Switching frequency

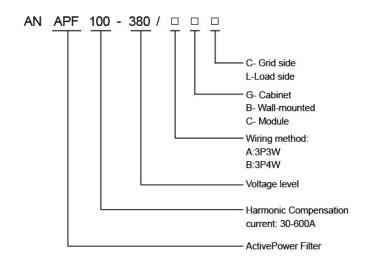
Function setting

The frequency of

harmonic compensation

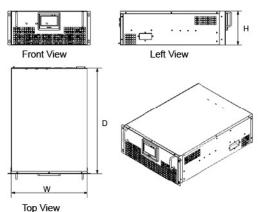
Self-loss	≤2.5%
Efficiency	≥98%
Total harmonic compensation rate	≥ 97%
Cooling method	Forced air cooling
Noise	≤60dB
Operating temperature	-10℃~+45℃
Storage temperature	-25℃~+60℃
Relative humidity	≤95%(No condensation)
Altitude	≤1000m
Protection level	IP20
Communication	RS485(Modbus-RTU) or Ethernet(Modbus-TCP
Module capacity	30A, 50A, 75A or 100A
Working mode	Automatic or manual
Overload protection	Automatic limit to rated current output

Model Description



Structure and size

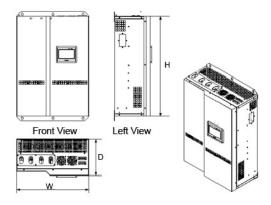
MODULE:







Wall-mounted:



Top View

Active Power Filter	Module Size(W*D*H)(mm)	Weight(kg)	
30A	480*440*130	25	
50A	480*530*200	30	
75A	450*622*201	35	
100A	450*622*201	35	

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LCD operation

■ Main interface

The main interface is used to display the grid parameters of all modules. Besides that, the communication connection status of each module could be switched through the green button at the bottom, and the specific parameters and control interface of each module could be entered by clicking the device name at the top. The interface is shown as below.

2019.11.13.10.0654	Device 1	Device 2	Device 3	Device 4	Device 5	Device 6
COSΦ						
A-phase Grid Voltage (1)	0.0	0.0	0.0	0.0	0.0	0.0
B-phase Grid Voltage (1)	0.0	0.0	0.0	0.0	0.0	0.0
C-phase Gid Voltage (V)	0.0	0.0	0.0	0.0	0.0	0.0
A-phiseDevica Current (A)	0.0 A	0.0	0.0	0.0	0.0	0.0
B-phaseDevice Current (A)	0.0	0.0	0.0	0.0	0.0	0.0
C-phase Device Current (A)	0.0	0.0	0.0	0.0	0.0	0.0
N-phuse Device Current (4)	0.0	0.0	0.0	0.0	0.0	0.0
State	Test	Test	Test	Test	Test	Test
On/Off	0	0	0		0	0

System information interface

The system information interface is used to display the electrical parameters of each module and control the running state of them. The interface is shown as below.

Mair	1	Device 1	Device 2	Device 3	Device 4	Device 5	Device 6
Grid P	arame	ter 🗦	Device	Current	L	oad Curre	nt relibration
соѕф	0.00	,	Ia	0.0	1	0.0	
Ua	0.0		1b	0.0	1	0.0	
Ub	0.0		lc lc	0.0	1	0.0	
Uc	0.0		In	0.0	1	0.0	
Set Up	5	et Down	Compensatio	n Stand h	y Self	Check	Test
System Menu Fr			sult Menu APF SE		F SET	ET Farameter SET	

Fault information interface

The fault interface allows users to view the faults of every equipment and it also indicates the trigger time and recovery time for each fault. The interface is shown as below.

Fault Recorde 1									
Num.	No.	Triger date	Triger time	Recover date	Recover time	Alarm Events			
							,		
Sys	tem Me	nu	Fault Menu	APF	SET	Parameter SET			

■ Parameter setting interface

The parameter setting interface is used to set the parameters of every module. In addition, the compensation priority and the operation mode could also be switched on this interface. The interface is shown as below.

		(Compensat	tion 9	setting 1		Next
No.	Туре	Current Value	Set Value	No.	Туре	Current Value	Set Value
1	Compessation priority	Reactive>Harm	onic>Unbalance	6	Operation Mode	Manual	OF
2	A phase CT Ratio	+0.00	+0.00	7	Number of Mold	0.00	
3	R-phose CT Ratio	+0.00	+0.00	8	Negative sequence rate	-1.00	0.00
4	C-phase CT Ratio	+0.00	+0.00	9	Harmonic Ratio	-1.00	0.00
5	Reactive power rate	-1.00	0.00	10	Sup refinence late	-1.00	0.00
	System Menu	Fault	Menu		APF SET	Paramet	ter SET

Wiring Diagram

