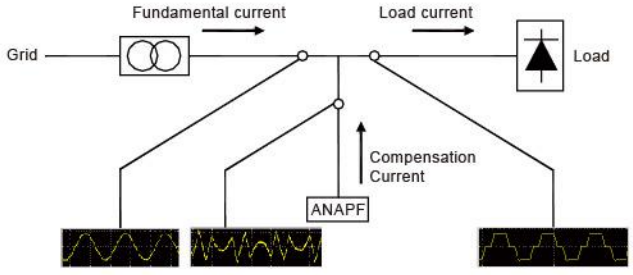
ANAPF

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
Response time	Full response time≤5ms，Instantaneous response time≤100μs
Switching frequency	20kHz
Function setting	Compensate for harmonics only, compensate for reactive power only, compensate for both harmonics and reactive power
The frequency of harmonic compensation	2-51st,2-31st
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

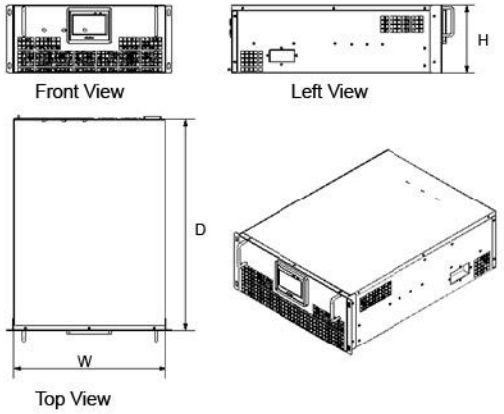
Model Description

AN APF 100 - 380 / □ □ □

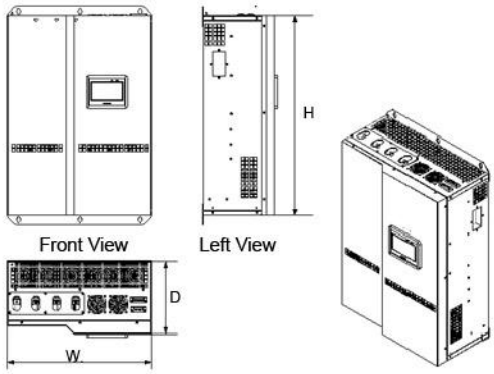
- C- Grid side
  L-Load side
- G- Cabinet
  B- Wall-mounted
  C- Module
- Wiring method:
  A:3P3W
  B:3P4W
- Voltage level
- Harmonic Compensation current: 30-600A
- ActivePower Filter

Structure and size

MODULE:



Wall-mounted:



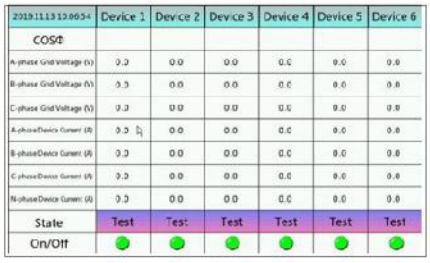
Active Power Filter	Module Size(W*D*H)(mm)	Weight(kg)
30A	480*440*130	25
50A	480*530*200	30
75A	450*622*201	35
100A	450*622*201	35

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

LCD operation

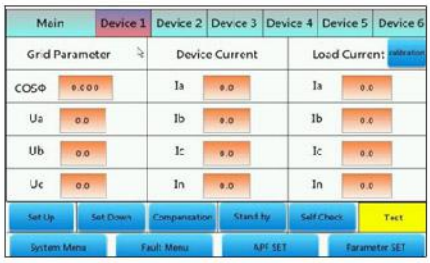
■ Main interface

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.



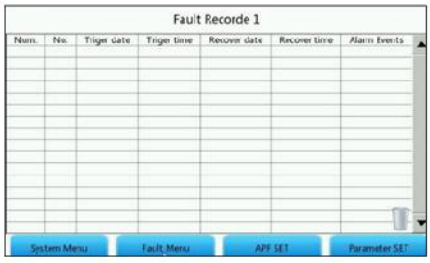
■ System information interface

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.



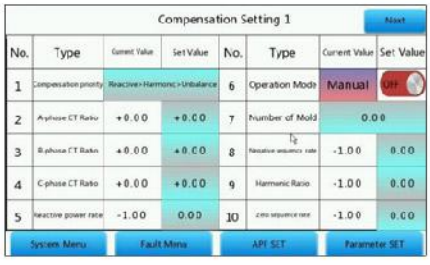
■ Fault information interface

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.



■ 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.



Wiring Diagram