PF3000 High Accuracy Electrical Power Analyzer

PF3000 Electrical Power Analyzer is suitable for production, measurement and R&D research, meanwhile it can offer analysis during the research and improve the efficiency of production test,widely applied in electric vehicle, high speed railway, photovoltaic, wind electricity, electrical machine, transformer, fuel cell, lighting circuit, switching power supply and etc. PF3000 meets with the requirements of standard IEC61000-4-7.

最多支持 4 通道输入协同测量

Support up to 4 channels input synergy measurement

基本精度：0.05%读数 Basic Accuracy: 0.05%rdg	宽带宽：5MHz Wide bandwidth: 5MHz
内置锂电池供电 Battery powered	最多 4 个输入通道协同测量 4 input channels
2 组 PLL 同步源 Two PLL synchronous source	256 次谐波测量 256 harmonic measurement
10.1 寸LCD 触摸屏 10.1 inches LCD touch screen	大容量内存 Large capacity memory

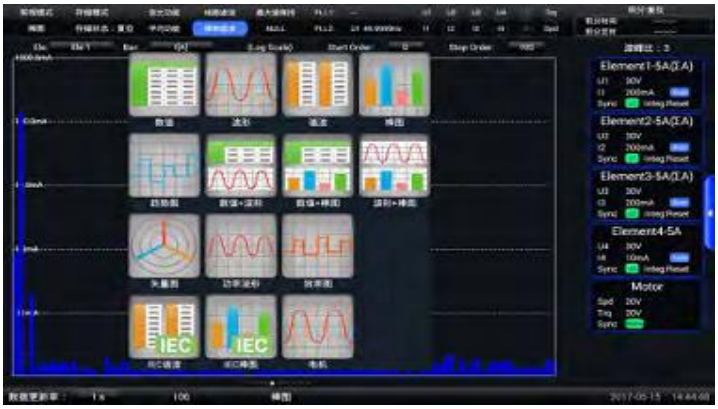
Characteristics:

◆Humanization Design,10.1-inch

Big LCD touch screen, 1280*800 pixel, it is easy operation and check

◆Multiple Data Display Modes

Multiple data display modes include value indication, waveform and bar graph, as well as combination display.



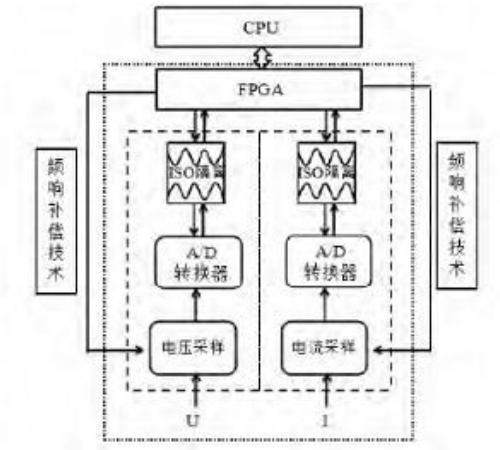
◆Wider Bandwidth and Higher Stability

Power bandwidth is up to 5MHz, it conform to the measurement of high speed switching signal. High frequency and high stability sensor make sure the current high frequency,meanwhile both current and voltage feedback compensation technology ensure higher measurement accuracy

◆FPGA Processor

Both power and motor measurement units are equipped with high speed and high stability FPGA and carry out multi-channel synchronous clock control, which improve signal sampling and data processing.

Each channel can be selected for different measurement range for power unit or motor unit.



◆Intelligent switching of sampling frequency

Intelligent switch to proper sampling frequency real-time monitor and analysis for data

◆Multiple communication interface and PC software

USB, LAN, RS-232 and GP-IB communication interface are available

◆Data Storage/ Export

Data storage and export through PC software..

Items	Specification
Input Element	Element1 ~ Element4 is optional ,maximum 4+1 channels
Measuremnet range	Voltage: CF3:1.5/3/6/10/15/30/60/100/150/300/600/1000[V] CF6:0.75 / 1.5/3/ 5 /7.5 /15/30/ 50/ 75 /150/300/ 500[V]
	current: Direct input: 5AElement: CF3:10m / 20m / 50m / 100m / 200m / 500m / 1 / 2 / 5 [A] CF6:5m / 10m / 25m / 50m / 100m / 250m / 500m / 1 / 2.5 [A] 20AElement: CF3:500m / 1 / 2 / 5 / 10 / 20 [A] CF6:250m / 500m / 1 / 2.5 / 5 / 10 [A] 30AElement: CF3:500m / 1 / 2 / 5 / 10 / 30 [A] CF6:250m / 500m / 1 / 2.5 / 5 / 15 [A] 50AElement: CF3:500m / 1 / 2 / 5 / 10 / 50 [A] CF6:250m / 500m / 1 / 2.5 / 5 / 25 [A] External current sensor input: CF3:50m / 100m / 200m / 500m / 1 / 2 / 5 / 10 [V] CF6:25m / 50m / 100m / 250m / 500 / 1 / 2.5 / 5 [V]

	Frequency:DC,0.1Hz~500KHz,Bandwidth:5MHz(-3dB,typical)
Sample rate	1Ms/s
Measurement Accuracy	0.05%rdg(Reading)+0.05%rng(Range)
Range switch	Fixed /Auto range is selected , Range can be independent set for each input element .
Filter	Line Filter:OFF、500kHz、5kHz、50kHz Frequency filter:OFF、100Hz or1kHz
A/D Converter	Resolution:16bit;Sampling time :500ns

◆ Efficiency evaluation of inverter andmotor

The THD measurement is up to 500 times, two group PLL sources can measure two groups signals and work in 6 input channels. The inverter efficiency and motor conversion efficiency between electrical energy and mechanical energy can be precisely evaluated by measuring the input and output power and mechanical power

◆ EV charger and battery performance evaluation

The motor drive system is the core of the electric vehicle, which mainly includes the power battery, the frequency converter and the driving motor. The electric vehicle testing platform, which is built on the core of the PF power analyzer, can accurately evaluate the electric drive system of the electric vehicle.

◆ SMPS and UPS performance evaluation

SMPS and UPS are widely used and the power measurement accuracy of PF5000 is 0.03%, besides the bandwidth is 5MHz and there are abundant harmonic measurement functions which can not only precisely measure parameters including output voltage, current, power, harmonic and conversion efficiency, etc, butalso the standby power consumption of power supply.

◆ The measurement of photovoltaic and wind energy generating devices conversion efficiency

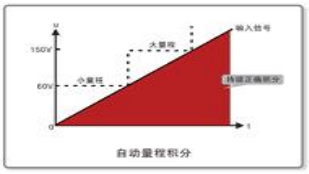
The DC electric power came from photovoltaic and wind energy can be converted to AC electric power by boost converter and DC/AC converter. There are 6 measurement channels of PF5000 which can measurement parameters of each converter like voltage, current, power, frequency both before and after the conversion and instantaneous peak value.

◆ The high accuracy measurement of power transformer

High accuracy measurement with low PF which satisfies the requirement of transformer load test and can precisely evaluate the loss as well as other parameters of transformer.

◆ The accuracy measurement of power transformer

Auto range function in integrating mode, and evaluate the power consumptions of domestic appliance under any running status. Wide input range of voltage/current, and support for power consumption measurement of high power one. One device with six measurement channels with which can be used in power evaluation pf domestic appliance production line.



◆ Power detection and analysis in Lighting appliance

Accuracy measurement of voltage, current, power and THD of LEDs.