PCR-W系列高性能可编程交直流电源

PCR-W Series Programmable AC & DC Power Source

PCR–W系列高性能可编程交直流电源，具备AC、DC、AC+DC等多种输出模式，输出频率范围可达1.0~1kHz，能轻松模拟各种任意波形输出，支持CSV文件导入，可对供电线路进行干扰仿真，同时具有电压、电流谐波测试及分析功能，为产品提供基于IEC61000–4系列标准的多种模拟测试环境，满足不同行业的需求，广泛应用于家电、电力电子、新能源、航空电子、IEC标准测试等多个领域。

PCR–W series programmable AC & DC power source with1.0~1kHz wide output frequency supporting AC, DC and AC+DC output modes and CSV files import, can simulate arbitrary waveform including IEC61000–4 series standard waveform to build a variety of simulation testing environment to meet the requirements of different industries. Also it integrates high precision electrical meter to realize electrical aprameter measurement and harmonic analysis. Now, it have been widely used in home appliances, power electronics, new energy, avionics, IEC standard testing and other fields.

任意波形输出
Arbitrary waveform output

低谐波失真
Low harmonic distortion

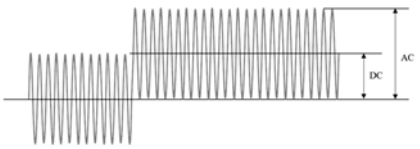
输出频率宽
Wide output frequency

主要特点 Characteristics

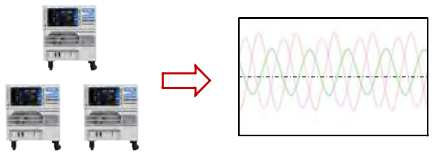
- 全球供电，具有AC、DC、AC+DC输出模式 Compatible with power supply globally, three output mode: AC, DC and AC+DC
- 源表一体化，实现电压、电流、功率的测量和谐波分析
  Integrate electrical meter to realize electrical aprameter measurement and harmonic analysis
- 内置丰富波形程序库,相位可设 Built multiply waveform in program library, phase editable
- 支持任意波形编辑输出，集成LIST、STEP、线路仿真等功能
  Support editing waveform output, integrate LIST, STEP, Simulate and other functions
- 谐波合成功能，模拟失真电网 Harmonic synthesis function, simulate distortion of power grid
- 模拟IEC 61000–4系列标准波形 Simulate IEC 61000–4 series standard waveform
- 三台组合输出三相电，并可模拟三相不平衡
  Three power supplies to realize three–phase output, and simulate three–phase imbalance
- 模拟量输入（波形、幅值控制）Simulate input (waveform and amplitude controllable)
- 同步信号输出 Synchronous output
- 支持全方位的保护特性（OV,OC,OP,OT） Support all–around protection (OV,OC,OP,OT)
- 配备PC软件，实现远程控制 Equipped PC software to realize remote control

测试功能 Test Functions

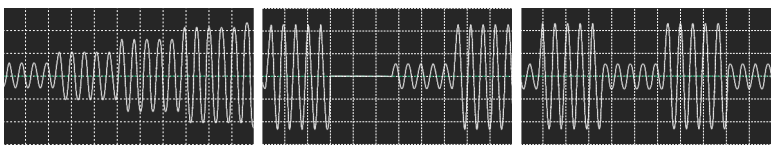
- PCR电源不仅可单独输出交流（AC）、直流电（DC），还能输出混合交/直流（AC+DC），适合交/直流伺服电机、工频变压器偏置等多种应用场景。
  PCR can not only achieve AC, DC output separately, but also can output hybrid AC+DC, suitable for AC/DC servo motor, power frequency transformer offset and other applications.



- **三台电源组合输出Three power supplies combined output**
  三台电源组成三相交流供电系统，并可独立控制相位和电压，模拟三相不平衡输出。
  Three power supplies constitute a three–phase AC power supply system to simulate the three–phase unbalanced output, and the phase and voltage are controllable independently.

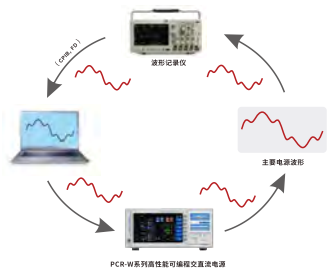


- **任意波形编辑 Arbitrary waveform editing**
  集成LIST、STEP、线路仿真（Simulate）等模式功能，直接任意编辑波形输出，可模拟多种电源瞬间断电、突波、陷波、缓升、缓降等特性的变化，为电子产品性能和功能的验证提供多种类型的电源输入。
  Integrate LIST, STEP, Simulate and other functions to simulate the changes of characteristics such as instantaneous power outage, surge, trap, slow increase and slow decrease of various power supplies, and provide various types of power input for the verification of the performance and function of electronic products.

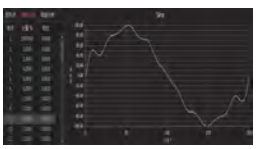


STEP　　Pulse　　LIST

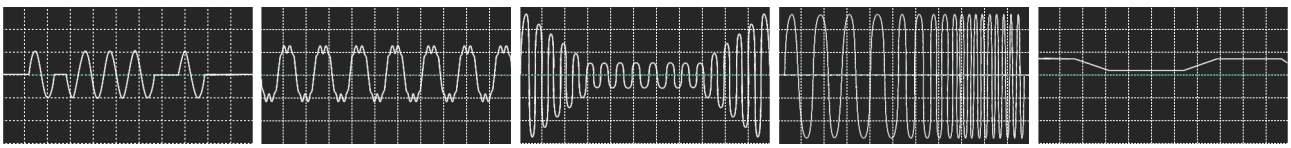
- **市电波形模拟 Simulate waveform of grid power**
  由于设备用电，经常受市电供电影响。可通过功率分析仪或示波器记录的波形数据，如CSV、txt、Excel等格式文件，直接导入PCR电源，简化波形编辑工作，还原真实的市电波形，提高产品对市电电压变化的抗干扰测试。
  The waveform data in CSV, txt, Excel and other format recorded by power analyzer or oscilloscope can be imported into the PCR power supply to output the real waveform simulating real environment.



- **谐波合成及分析 Harmonic synthesis and analysis**
  PCR源拥有强大的谐波模拟能力，可生成谐波抗干扰测试所需的电压波形，支持用户自定义各次谐波幅值和输出特定的谐波，最多可编辑50次谐波。
  PCR has a powerful harmonic simulation capability, which generates the voltage waveform required by harmonic anti–interference. The amplitude of each harmonic can be customized and the specific harmonic can be output up to 50th harmonic can be edited.



- **IEC标准特性波形的输出 Output IEC standard waveform**
  PCR源可模拟多种IEC标准特性的电网输出波形，适用于电子设备研发等测试需求。
  PCR power supply can simulate a variety of IEC standard waveform of output gridpower , and suitable for electronic equipment research, development and other testing requirements.



IEC61000–4–11 电压暂降、短时中断和电压变化的抗扰度试验

IEC61000–4–13 交流电源端口谐波、间谐波及电网信号的低频抗扰度试验

IEC61000–4–14 电压波动抗扰度试验

IEC61000–4–28 工频频率变化抗扰度试验

IEC61000–4–29 直流电源输入端口电压暂降、短时中断和电压变化的抗扰度试验

技术参数 Specifications

型号 Model		PCR-1000W	PCR-2000W	PCR-4000W	PCR-8000W	PCR-12000W
额定输入 Rated input						
电压 Voltage		AC 85V~260V				
频率 Frequency		1Φ，50 Hz /60Hz				
功率因数 Power factor		0.94				
额定输出AC模式 Rated output: AC mode						
电压 Voltage		1V ~ 150V；2V ~ 300V（150V/300V量程）				
最大电流 Maximum current		10A/5A (150V/300V量程)	20A/10A (150V/300V量程)	40A/20A (150V/300V量程)	80A/40A (150V/300V量程)	120A/60A (150V/300V量程)
相数 Phase number		1				
功率容量 Power capacity		1000VA	2000VA	4000VA	8000VA	12000VA
最大峰值电流 Max peak current		最大电流（RMS）的4倍				
频率 Frequency		1.0Hz~1KHz				
额定输出 DC模式，AC+DC Rated output: DC /AC+DC						
电压 Voltage		1.4~212V/2.8~424V（150V量程/300V量程）				
最大电流 Maximum current		5.0A/2.5A (150V/300V量程)	10A/5A (150V/300V量程)	20A/10A (150V/300V量程)	40A/20A (150V/300V量程)	60A/30A (150V/300V量程)
功率容量 Power capacity		500VA	1000VA	2000VA	4000VA	6000VA
电压稳定度 Voltage stability		≤0.1%				
电压输出准确度 Voltage output accuracy		≤1%设定值 +0.2V				
频率稳定度 Frequency stability		≤0.03%读数 +0.1Hz				
输出频率准确度 Output frequency accuracy		≤0.016%设定值 +0.01Hz				
电压总失真 Total voltage distortion		≤0.2% (40.0Hz~65.0Hz)；≤0.3% (65.1Hz~500.0Hz)				
暂态反应时间 Transient response time		<60 μ s				
负载效应 Load effect		≤0.2%+0.2V				
源电压效应 Source voltage effect		≤0.1%				
测量 Measurement						
电压 Voltage	量程 Range	75V/150V/300V				
	分辨率 Resolution	0.1V				
	基本精度Basic accuracy	0.2%读数+0.1%量程 +1个字				
电流 Current	量程 Range	0.5A/1A/2A/ 5A/10A	1A/2A/5A/ 10A/20A	2A/5A/10A/ 20A/40A	5A/10A/20A/ 40A/80A	7A/15A/30A/ 60A/120A
	分辨率 Resolution	0.001A（0~9.999A）；0.01A（10A~99.99A）				
	基本精度 Basic accuracy	0.2%读数+0.1%量程 +1个字				
功率 Power	分辨率 Resolution	0.1W（0.1W~999.9W）；1W（1000W以上）				
	基本精度 Basic accuracy	0.3%读数+0.2%量程 +1个字				