YOUR FAITHFULLY INTELLIGENT AUTOMATION EQUIPMENT PARTNER

卓越的电源老化测试设备制造商

Excellent Power Supply Burn-in Testing Equipment Manufacturer

www.szcpet.com

April/ 2021

EXCELLENT POWER SUPPLY BURN-IN TESTING EQUIPMENT MANUFACTURER

深圳市中科源电子有限公司

SHENZHEN CPET ELECTRONICS CO.,LTD

http://www.szcpet.com

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品牌诠释
BRAND ANNOTATION

创造 Creative
是永不停息,创新创造是我们生存和发展的基础
Never stop, Innovation & creation is the foundation of our survival and development

力量 Power
是源源不断,用经久不息的力量铸造完美的产品
continuous, Manufacture perfect products with prolonged power

卓越 Excellent
是拒绝平庸,用坚定毅力执着的精神缔造卓越
Create excellence with firm perseverance and punctilious spirit.

团队 Team
是志存高远,协同合作为客户创造永续的价值
Create eternal value for clients by collaboration.

About CPET
关 于 我 们

CPET 专注于电力电子产品的电源老化测试、电池储能测试、自动老化测试设备，以及智能监控软件等多类相关产品研发、制造、销售与服务，广泛应用于网络通讯、LED驱动照明、工业电子、电池储能、充电桩、汽车电子等新能源领域，在华东与华南设有营销服务机构，全球超过3000家合作伙伴，是业界典范的智能制造系统服务商。

CPET始终以技术创新为发展的源动力，我们非常重视对研发的投入，现已获得发明专利与软件著作权50多项，获得了深圳市双软企业，深圳市优秀软件类企业，深圳市高新技术企业，国家级高新技术企业，深圳市中小微创新型企业等殊荣。

CPET已服务于全球上千家客户，如飞利浦、三星、松下、视源、雷士、三雄极光、兆驰、茂硕、比亚迪、天宝、光宝、伟创力、英飞特、鸣志、华为等等知名企业，CPET在国内外市场上享有较高的品牌知名度和美誉度。

现在CPET在产品创新上不断获得成功，但CPET人从未停下前进的脚步，以客户为中心我们不断追求着更好的技术、品质、服务、价值为经营理念。让我们共同见证中国创造。

CPET focus on the power of the power electronic products burn-in test, battery energy storage test, burn-in test equipment automatically, and intelligent monitoring software and so on many related products research and development, manufacture, sales and service, widely used in network communication, LED driver, lighting, industrial electronics, battery energy storage, charging pile, automotive electronics, and other areas of the new energy, With marketing service agencies in East and South China and more than 3,000 partners around the world, it is a model of intelligent manufacturing system service provider in the industry.

CPET always takes technical innovation as the source of development and attaches great importance to investment of research and development.We have obtained more than 50 patents for invention and software copyrights,and honors such as Shenzhen Double Soft Enterprise,Shenzhen Outstanding Software Enterprise, Shenzhen High-tech Enterprise and National High-tech Enterprise, Innovation-type company of Shenzhen.

CPET has served for thousands of clients around the world, such as Philips,SAMSUNG, Panasonic, CVTE, NVC, PAK, MTC, MOSO, BYD, TenPao, LITEON,Huawei, Flex, Inventronics and MOONS', CPET enjoys higher brand awareness and reputation in domestic and foreign markets.

CPET is achieving success continually on basis of product innovation;however,its staffs never stop making progress.We are continuously seeking for better technology, quality, service and value by customer-oriented management principle. Let us witness "Made by China" together.

企业文化

ENTERPRISE CULTURE

公司使命 COMPANY MISSION

选用我们产品的客户体验到科技创新的价值

It makes clients choosing our products experience the value of technical innovation

企业愿景 ENTERPRISE VISION

成为全球一流的工业设备供应商

Become top-notch supplier of burn-in test equipment all over the world

核心价值观 CORE VALUE

客户第一、拥抱变化、激情、创新、合作、分享

Customer first、Embracing changes、Passionate、Innovating、Cooperating、Sharing

我们的承诺 OUR COMMITMENT

快捷全面的服务,卓越性能的产品　全球领先的技术,行业知名的品牌

Provide rapid and comprehensive service and performance-excellent products.Become global leader in technology and have industrial well-known brands

感恩客户（全球超3000家客户，排名不分先后）

OUR CUSTOMERS(OVER 3000 CUSTOMERS WORLDWIDE, IN NO PARTICULAR ORDER)

BYD · HUAWEI · LITEON · INVENTRONICS 英飞特电子 · PHILIPS

欧陆通 HONOTO · Hisense · OPPLE 欧普照明 · 三雄·极光照明 · TOPBAND 拓邦

SAMSUNG · CVTE Dream·Future · TCL · SOSEN · Skyworth 创维

MEGMEET 麦格米特技术 · Cultraview 金锐显 · Great Wall 长城 · KONKA 康佳 · 技研新阳有限公司

雷士照明 · SUNGROW · ADAYO 华阳光电 · CHANGHONG 长虹 · VIDEOTEX

MOSO · ECU · AMTC 股票代码 002429 · HAVELLS · FOXCONN

Panasonic · TenPao · IE · TTI · EUCHIPS

MOONS' · flex · CEC 中国电子 · CLICK · EAGLE EYE

HKC · BULL 公牛 · WALTON · TP-LINK · 清华大学

ONIDA · BAJAJ · JABIL · Jaguar · Condor

Salcomp · Yingli Group · 中国民航大学 · Lighting Technologies

资质证书

OUALIFICATION CERTIFICATE

国家级高新技术企业

深圳市高新技术企业

深圳市软件行业 会员单位

中国电源学会 会员单位

崧盛电源战略合作供应商

中国电源学会 会员单位

优秀软件企业

ISO 9000质量认证证书

专利号:201510796736.9

专利号:201510055546.1

计算机软件著作权登记证书

专利号: 201310069313.8

专利号: 201330534591.7

专利号: 201320098157.3

中国电源学会 会员单位

CE认证证书

专利号:201510026999.1

专利号:201510039417.3

深圳市创新型中小微企业备案确认证书

专利号: 201510741084.9

专利号: 201420098157.9

专利号: 201420098157.10

CE认证证书

CE认证证书

专利号:201510027031.0

专利号: 201510055536.8

专利号: 201420098157.7

专利号: 201320098157.5

专利号: 201320098157.03

专利号: 201320098157.7

CE认证证书

CE认证证书

发展历程

DEVELOPMENT PATH

CPET成立于深圳

Set up CPET at Shenzhen

2010

第一台LED模式
可编程电子负载量产

Mass production of the first programmable electronic load with LED mode

2012

成为深圳市高新技术企业
中国电源协会会员单位

Became Shenzhen High-tech Enterprise
Became one member of China Power Supply Society

2014

发明专利与实用新型专利超过50项

Obtained more than 50 patents for invention and patents for utility models

2016

节能型老化设备销量突破万台

Sales of energy-saving burn-in equipment exceeded 10,000 units

2018

获得ISO9001质量管理体系认证
获得ISO14001环境管理体系认证

Obtained ISO9001 quality management system certification
Obtained ISO14001 environmental management system certification

2020

2011

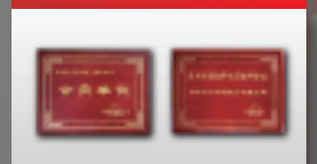
发明专利与实用新型专利超过10项

Obtained more than 10 patents for inventionand patents for utility models

2013

成为深圳市双软企业
注册资本额增至300万

Became Shenzhen Double Soft Enterprise
Registered capital amount increased to 3 million



2015

成为深圳市创新型中小微企业

Became Shenzhen Innovative Medium & Micro-sized Enterprise

2017

成立智能制造创新园

Set up Intelligent manufacturing innovation park

2019

LED/OBC/5G通信新能源
节能老化测试系统解决方案

LED/OBC/5G communication new energy energy-saving burn-in test system solution

目录 CONTENT

第一章 智能老化设备篇 Intelligent Burn-in equipment

第二章 定制电源老化测试系统 Customized power Burn-in test system

第三章 自动老化测试设备篇 Automatic Burn-in test equipment

第四章 测试仪器与测试软件篇 Testing instruments and Software

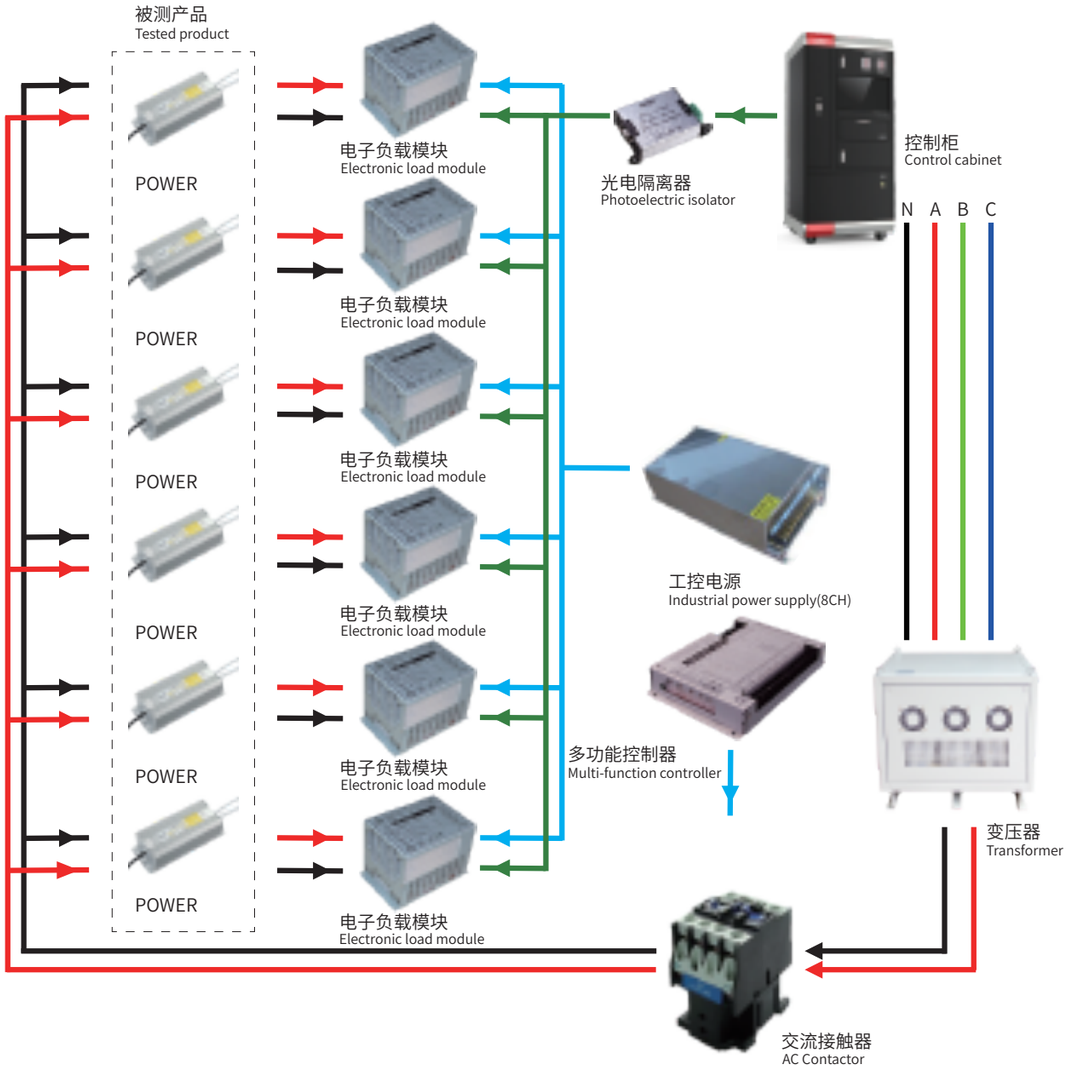
01

智能老化设备篇

INTELLIGENT BURN-IN
TESTING EQUIPMENT

电子负载型电源老化系统架构图

Architecture of electronic-load type power supply burn-in system



老化的原理介绍

BI operating principle introduction

老化属于环境应力筛选(Environmental Stress Screening)简称 ESS，为现代高科技电子产品一种相当盛行的质量与可靠度爆发。顾名思义，环境应力筛选乃利用外加的环境应力，使潜存于电子硬件中因制程中因软弱零组件与不良工艺等因素所造成之瑕疵提早发生而暴露出来，然后利用各种适切的检验或测试方法，将这些带有疵病的产品找出来予以去除，或采取改正行动加以检修，以便提高硬品之制造质量，维持设计时赋予之水平，因此通过筛选的交货产品都是具有优良质量与高可靠度者，可以让客户安心的正常使用。

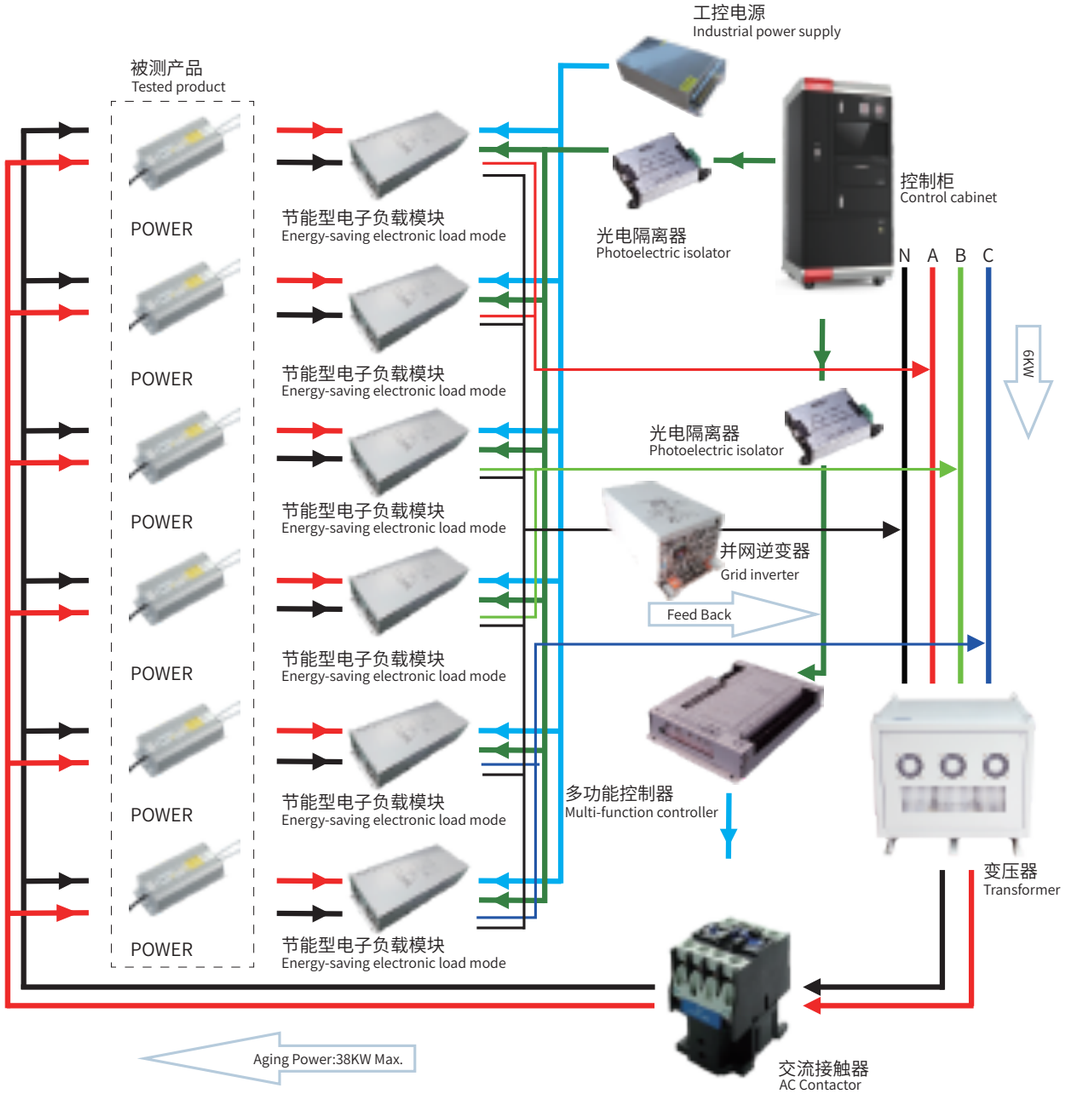
Burn-in, an Environmental Stress Screening (ESS), is a kind of quite popular method to ensure the quality & reliability of modern high-tech electronic products. That is, ESS forces failures hidden in electronic hardware and caused by weak parts & components and poor technology during production to occur and expose in advance, by applying additional environmental stress. Then it finds these defective products by applying various applicable inspection or test methods, and eliminates them; or repairs them through modification, to improve the manufacturing quality of hardware and maintain the level given during design. Therefore, the delivered products passing screening are all of good quality and high reliability and ensure that clients can feel free to use them.

何为电源产品的生命周期 ？产品的失效率随生命周期时间变化，一般的变化趋势呈浴缸形，称之为浴缸曲线 (Bathtub curve)，典型的产品浴缸曲线如下图所示。失效率浴缸曲线大致可分为三个阶段：早天失效期 (infantmortality period)、偶发失效期 (random failure period) 和磨耗失效期 (wear-out failure period)，当产品刚制造完成时，就好像婴儿容易生病一样，失效率很高，因而称为早天失效期，在这个阶段中产品的失效率随时间增加而逐渐递减，称为递减失效率 (decreasing failure rate, DFR)，当失效率随时间减低至某一程度后即不再有显著变化，失效现象为偶然随机发生，因此称为偶发失效期，所以电源产品的老化便是检出产品的早天失效，不难得出一个论：电源制程中需要切实的负载并在一定的环境中老化测试，所以行之有效的电源老化方式是对产品品质的基本保证，CPET 创造出业界典范的电源老化电子负载模块，为电源老化测试提供全方面解决方案。

What is life circle of power? The failure rate of products varies over time of life circle and general variation trends present in bathtub shape, therefore, we call this bathtub curve. The following figure shows bathtub curve of typical products. Bathtub curve of failure rate generally includes three stages: infant mortality period, random failure period and wear-out failure period. As soon as products manufacturing is completed, they are of high failure rate just as baby easy to get sick; therefore, we call this infant mortality period. During this period, failure rate of products diminishes gradually over time, so we call this decreasing failure rate (DFR). When failure rate diminishes to a certain degree (i.e., obvious changes occur no longer and failure phenomenon occurs occasionally and randomly), we call this random failure period. Therefore, power burn-in is to inspect infant mortality failure of products. It is not difficult to conclude: power production requires practical loads and burn-in test under a certain condition. Therefore, effective method for power burn-in test is essential for products quality. CPET creates professional power burn-in electronic load module, to provide solutions for power burn-in test.

节能型电源老化系统架构图

Energy recovery type power supply burn-in system



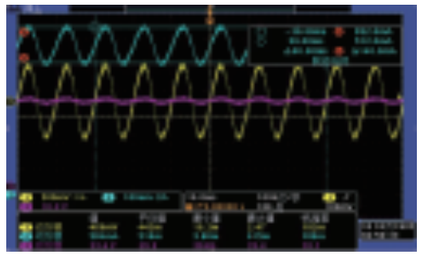
LED与电子负载测试波形对比图

LED and electronic load test waveform Comparison chart

为对比测试 LED 灯和 LED 模式的测试数据 , 采用 36V/570mA LED 电源对两种负载对比测试 , 确认电子负载 LED 模式与 LED 灯珠的差异性。

To compare the test data of LED lamp and LED mode, apply LED power of 36 V/570 mA for comparison test of both loads, to determine the differences between LED mode and LED lamp with electronic load.

LED灯珠测试与负载波形对比
Test waveform of LED lamp



CH1:输出电压纹波;CH2:电流波形;CH3:输出电压
LED电源实际输出电压为:35.98V,电流:0.570A;纹波电压:489mV;纹波电流幅度:140mA

CH1: ripple of output voltage; CH2: current waveform; CH3: output voltage
The actual output voltage of LED power: 35.98 V, current: 0.570 A; ripple voltage: 489 mV; amplitude of ripple current: 140 mA.

电子负载LED模式测试波形
Test waveform of LED mode with

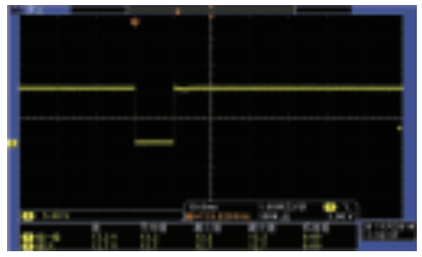
CH1: 输出电压纹波 ;CH2: 电流波形 ;CH3: 输出电压
LED 模式设置参数为 :VO=36V;IO=0.57A;RD 系数 (RDC)=0.15; 测试电压 :36.01V; 电流 :0.571A; 纹波电压 :494mV; 纹波电流幅度 :140mV
从以上对比测试数据可以看出 ,LED 电源输出有 100HZ 的纹波电压和纹波电流。

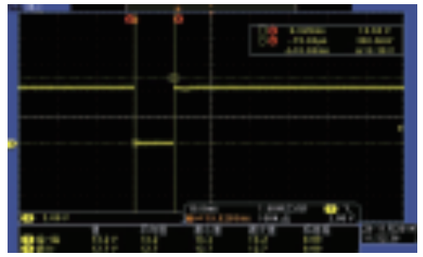
CH1: ripple of output voltage; CH2: current waveform; CH3: output voltage
Setting parameters of LED mode: VO=36 V; IO=0.57 A; RD coefficient (RDC)=0.15; test voltage: 36.01 V; current: 0.571 A; ripple voltage: 494 mV; amplitude of ripple current: 140 mV.
From the above comparison of test data, LED power output consists of ripple voltage and current of 100 HZ.

电压瞬间跌落波形图

Waveform of instant voltage drop

电压跌落测试波形图
Waveform of instant voltage drop





由以上波形可以看出 , 对电压瞬间跌落的反应时间≥0.01S(即是 10mS), 能可靠地捕捉到电压跌落。
From the above waveform, the reaction time for instant voltage drop≥ 0.01 S (i.e. 10 mS), which can reliably capture the voltage drop.

CP8102 100W*4CH 通道隔离 2-500V/0.05-10A/CH

CP8104 150W*4CH 通道隔离 2-500V/0.05-10A/CH

CP8103 125W*4CH 通道隔离 2-500V/0.05-10A/CH

CP8108 40W*8CH 通道隔离 2-500V/0.05-5A/CH

可编程电子负载模组CP8100系列

Programmable electronic load module of CP8100

应用范围 Scope of application

- 隔离型与非隔离型LED驱动器
- TV电源、LED背光驱动器
- 电源充电器、适配器
- DC-DC变换器
- 多组电压输出及有正负电压输出电源

- Isolated & non-isolated LED driver
- TV power, LED backlight driver
- Power charger, adapter
- DC-DC converter
- Power with multiple voltage output and positive & negative voltage output

卓越功能 Outstanding functions

1. 具有CC、CV、CR、CP、LED五种负载模式
2. LED 稳态工作点模拟，可编程LED 内阻系数
3. 任意负载模式下的通道并联，满足产品功率扩展
4. 电压,电流的峰值和谷值监测(纹波频率10KHz以下)
5. 高达5KHz的动态负载
6. 电流上升下降斜率可编程
7. Von/Von latch设定
8. PWM调光信号输出
9. 2路可扩展逻辑信号输出
10. 100us以上电压、电流输出异常检测
11. 采用6½标准仪系统自动校准
12. 满足低电压到高电压、小电流到大电流的电源产品老化测试
13. 多通道隔离,支持隔离与非隔离电源及多通道输出电源的老化测试
14. PASS/FAIL判断信号输出
15. 有过温,过流,过功率等保护功能

1. Be of five kinds of load modes, such as CC, CV, CR, CP and LED
2. Support simulation of LED steady state operating point, with programmable internal resistance coefficient of LED
3. Support parallel connection of channels under any load modes and meet the requirements for product power extension
4. Support monitoring of peak value and valley value of voltage and current (ripple frequency below 10 KHz)
5. Support the maximum dynamic load of 5K and programmable rising and falling slope of current
6. Programmable current up and down the slope
7. Support settings of Von/Von latch
8. Support output of PWM dimming signals
9. 2 Road extension logic signal output
10. Support anomaly detection of voltage and current output above 100 us
11. Apply 6½ regulator to calibrate automatically
12. Meet the requirements for burn-in test of power from low voltage to high voltage and from low current to large current
13. Isolate through multi-channels, and support burn-in test for isolated & non-isolated power and multi-channel output power
14. Support output for PASS/FAIL detecting signals of tested module
15. Be of protection functions for over-temperature, over-current and over-power

性能参数 Performance parameters

型号Model			CP8102	CP8103	CP8104	CP8108	
通道数量 Quantity of channel			4通道(4-channels)			8通道(8-channels)	
通道并联 Parallel connection of channels			支持Support			支持Support	
每通道最大输入功率 Maximum input power of each channel			100W	125W	150W	40W	
模组总最大输入功率 Total maximum input power of whole module			400W	500W	600W	320W	
输入电流／通道 Input current			0.05-10A			0.05-5A	
最小工作电压 Minimum operating voltageInput current			1V@2.5A,3V@10A			2V@2.5A,3V@5A	
最高输入电压 Maximum input voltage			500V		500V	500V	
CC(定电流)负载模式 CC (Constant current) load mode	量程 Measurin range		低量程Low range 0.05A-2.5A		高量程High range 2.5A-10A	低量程Low range 0.05A-2A	高量程High range 2A-5A
	解析度 Resolution		1mA		1mA	1mA	1mA
	精度 Precision		±(1%0.05%FS)			±(1%0.05%FS)	
CV(定电压)负载模式 CV(Constant current) load mode	量程 Measurin range		低量程Low range 1V-50V		高量程High range 50V-450V	低量程Low range 1V-50V	高量程High range 50V-450V
	解析度 Resolution		0.012V		0.12V	0.012V	0.12V
	精度 Precision		±(1%0.1%FS)			±(1%0.1%FS)	
CR(定点阻)负载模式 CR(constant resistance) load mode	量程 Measurin range		0.4Ω-9.999KΩ			0.4Ω-9.999KΩ	
	解析度 Resolution		12bit			12bit	
	精度 Precision		±(1%0.1%FS)			±(1%0.1%FS)	
CP(定功率)负载模式 CR(constant power) load mode	量程 Measurin range		100W	125W	150W	40W	
	解析度 Resolution		50mW			50mW	
	精度 Precision		±(1%0.05%FS)			±(1%0.05%FS)	
LED模拟负载模式 LED load simulating mode	量程 Measurin range	Vo	低量程Low range 1V-50V		高量程High range 50V-450V	低量程Low range 1V-50V	高量程High range 50V-450V
		Io	低量程Low range 0.05A-2A		高量程High range 2A-10A	低量程Low range 0.05A-2A	高量程High range 2A-5A
		Rd	0.001-0.999			0.001-0.999	
	解析度 Resolution	Vo	0.012V		0.12V	0.012V	0.12V
		Io	1mA		10mA	1mA	10mA
		Rd	0.001			0.001	
	精度 Precision		±(1%0.05%FS)			±(1%0.05%FS)	
电流测量 Current measurement	量程 Measurin range		低量程Low range 0.05A-2.5A		高量程High range 2.5A-10A	低量程Low range 0.05A-2A	高量程High range 2A-5A
	解析度 Resolution		1mA		10mA	1mA	10mA
	精度 Precision		±(1%0.05%FS)			±(1%0.05%FS)	
电压测量 Voltage measurement	量程 Measurin range		低量程Low range 1V-50V		高量程High range 50V-450V	低量程Low range 1V-50V	高量程High range 50V-450V
	解析度 Resolution		0.005V		0.5V	0.005V	0.5V
	精度 Precision		±(1%0.05%FS)			±(1%0.05%FS)	
功率测量 Power measurement	量程 Measurin range		100W	125W	150W	40W	
	解析度 Resolution		50mW			50mW	
	精度 Precision		±(1%0.05%FS)			±(1%0.05%FS)	
工作温度 Working temperature	0~45°C						

CP8115 100W*4CH 通道非隔离 2-100V/0.05-8A/CH

CP8118 50W*8CH 通道非隔离 2-100V/0.05-5A/CH

CP8119 65W*8CH 通道非隔离 2-100V/0.05-5A/CH

快充型可编程电子负载模组系列
Programmable quick charge electronic load module series

应用范围 Scope of application

- 手机充电器及快速充电器
- 笔记本电脑充电器、移动电源
- DC-DC变换器
- 各种用途的直流电源适配器

- Mobile phone charger and quick charger
- Notebook charger, portable power supply
- DC-DC converter
- DC power adapter for variety use

卓越功能 Outstanding functions

1. 负载8路通道
2. 通道独立控制
3. CC、CV负载模式
4. 温控自动启动风扇
5. 负载精度及读取精度≦2%
6. 工业级RS485通讯结构
7. 负载低压供电保证操作安全
8. 对被测产品的PASS/FAIL 判断信号输出
9. 过温保护、过流保护、过功率保护
10. 支持带有QC3.0、QC4.0、PD2.0、PD3.0、MTK、华为海思等快充协议的充电器做老化测试

1. Load with 8 channel
2. Channel independent control
3. CC and CV load mode
4. Automatic fan start for temperature-controlled system
5. Precision of load and data saving less than 2%
6. RS485 Communication Structure is industrial grade
7. Low power supply for load to ensure the safety of operation
8. Output detecting of PASS/FAIL signal of tested product
9. Over-temperature protection,OVP,OPP
10. Support the burn-in testing of charger with QC2.0,MTK, Hass and other quick charge protocol

性能参数 Performance parameters

型号Model		CP8115	CP8118	CP8119
通道数量 Quantity of channel		4通道(4-channels)	8通道(8-channels)	8通道(8-channels)
通道并联 Parallel connection of channels		支持support	支持support	支持support
每通道最大输入功率 Maximum input power of each channel		100W	50W	65W
模组总最大输入功率 Total maximum input power of whole module		400W	400W	520W
输入电流／通道 Input current		0.05-8A	0.05-5A	0.05-6A
最小工作电压 Minimum operating voltageInput current		2V@8A	2V@5A	2V@5A
输入电压范围 Range of input voltage		2~100V	2~100V	2~100V
CC(定电流)负载模式 Constant current load mode	量程 Measuring range	0.05-8A	0.05-5A	0.05-5A
	解析度 Resolution	1mA	1mA	1mA
	精度 Precision	±(1%+0.1%FS)	±(1%+0.1%FS)	±(1%+0.1%FS)
CV(定电压)负载模式 Constant voltage load mode	量程 Measuring range	2~100V	2~100V	2~100V
	解析度 Resolution	10mV	10mV	10mV
	精度 Precision	±(1%+0.1%FS)	±(1%+0.1%FS)	±(1%+0.1%FS)
电流测量 Current measurement	量程 Measuring range	0.05-8A	0.05-5A	0.05-5A
	解析度 Resolution	1mA	1mA	1mA
	精度 Precision	±(1%+0.1%FS)	±(1%+0.1%FS)	±(1%+0.1%FS)
电压测量 Voltage measurement	量程 Measuring range	10mV	10mV	10mV
	解析度 Resolution	2~100V	2~100V	2~100V
	精度 Precision	±(1%+0.1%FS)	±(1%+0.1%FS)	±(1%+0.1%FS)
功率测量 Power measurement	量程 Measuring range	100W	50W	65W
	解析度 Resolution	50mW	50mW	50mW
	精度 Precision	±(1%+0.1%FS)	±(1%+0.1%FS)	±(1%+0.1%FS)
工作环境温度 Operating ambient temperature		0~+45°C		
工作环境湿度 Operating ambient humidity		20~80%无冷凝 20~80%Non-condensing		
机身重量(KG) Weight(KG)		2.3KG		

四通道可编程直流灯珠负载模块
Programmable 4 channel DC lamp bead load module

应用范围 Scope of application

- Local diming 电源，调光电源
- LED驱动电源、LED、TV电源等老化测试
- Local diming power supply, Dimming power supply
- Burn-in test of LED drive power, LED, TV power, etc

卓越功能 Outstanding functions

1. LED负载模式
2. 支持在任意模式下的通道并联，满足大功率电源的测试
3. 可编程测试模式,支持负载特性测试
4. 支持PASS信号輸出,方便测试及扩展应用
5. 依用户设定的条件判断被测产品状态
6. 可保存设置参数,方便多种产品测试时快速调用

1. LED load mode
2. Support parallel connection of channels under any mode and meet large power supply test
3. Be of programmable test mode and support load characteristic test
4. Support PASS signal output and is convenient for test and extensive application
5. Judge status of tested product in accordance with conditions set by user
6. Save setting parameters, and is convenient for fast call during tests of multiple products

性能参数 Performance parameters

型号Model			CP8114	CP8130
通道数量 Quantity of channel			4	
通道并联 Parallel connection of channels			LED模式 LED mode	
每通道最大输入功率 Maximum input power of each channel			75W	100W
模组总最大输入功率 Total maximum input power of whole module			300W	400W
输入电流／通道 Input current			1A@≤75V 0.3A@≥75V	1A@≤100V 0.5A@≥100V
最小工作电压 Minimum operating voltageInput current			3V	
输入电压 Input voltage			3V-384V	3V-200V
LED模拟负载模式 LED load simulating mode	量程 Measurin range	Vo	3V-384V	3V-200V
		Io	0.01A-1A	0.01A
		Rd系数 Rd coefficient	0.001~0.999	
	解析度 Resolution	Vo	3V	
		Io	1mA	
		Rd系数 Rd coefficient	0.001	
	精度 Precision		±(1%+0.1%FS)	
电流测量 Current measurement	量程 Measurin range		0.01A-1A	0.01A-1A
	解析度 Resolution		0.5mA	
	精度 Precision		±(1%+0.1%FS)	
电压测量 Voltage measurement	量程 Measurin range		3V-384V	3V-200V
	解析度 Resolution		60mV	
	精度 Precision		±(1%+0.1%FS)	
功率测量 Power measurement	量程 Measurin range		75W	100W
	解析度 Resolution		50mW	
	精度 Precision		±(1%+0.1%FS)	
动态测试模式 Dynamic tesing mode	周期T1&T2 Cycle T1&T2		100uS-50S	
	分辨率 Resolution		100uS	
	精度 Precision		2uS+100ppm	
	电流速度 Current speed		0.05mA-200mA/uS	
尺寸 Dimension			L391mm*W211.5mm*H145.5mm	

CP8506 250W*8CH 通道非隔离
10-400V/0.5-10A/CH

CP8508 250W*8CH 通道非隔离
3-60V/0.5-20A/CH

CP8509 250W*8CH 通道非隔离
10-100V/0.5-10A/CH

CP8523 600W*4CH 通道隔离
8-420V/0.1-12A/CH

节能型电子负载模组CP8500系列
Energy-saving electronic load module CP8500

应用范围 Scope of application

- 适配器、工业电源、开关电源、LED驱动电源等老化测试
- 用于老化台车、老化柜、老化房、自动老化系统等
- 电池放电老化测试

- Apply to the burn-in testing of Adapter, Industrial power supply, Switching power supply,LED driver and other kind of power supply
- Apply to aging vehicles ,burn-in cabinet,burn-in room,automatic burn-in testing system
- Battery discharge burn-in testing

卓越功能 Outstanding functions

1. 通道独立控制
2. 效率85%以上
3. 支持Von设定
4. CC、CV负载模式
5. 输出EMC处理
6. 电网谐波校正
7. CC模式可通道并联
8. 工业级RS485通讯 RS485
9. 电源功率因素校正
10. 输入、输出电气隔离
11. 180-264VAC宽电压输出
12. 电压远端采集功能、电压测量精度
13. 高频软开关技术，整机体积小，效率高
14. 安规要求设计，符合信息技术设备安全标准
15. 输出短路保护、过流保护、过压保护、孤岛保护、输入过欠压保护等功能

1. Channel take independent control
2. Efficiency is more than 85%
3. Support Von setting
4. CC / CV load mode
5. Output take EMC progress
6. Harmonic correction of power harmonic
7. Support parallel connection of channel under CC load mode
8. RS485 Communication Structure is industrial grade
9. Correction of power factor
10. Electrical isolation of input and output power
11. Width range of output voltage 180v-264v
12. Remote acquirement of voltage with high measurement precision
13. High-frequency soft switching technology, with small size, high efficiency
14. Safety requirements designed to meet the safety standards of information technology equipment
15. With the functions of output short circuit protection, over-current protection, over-voltage protection, islanding protection, input over-voltage/under-voltage protection

性能参数 Performance parameters

型号Model	CP8506	CP8508	CP8509	CP8523	CP8524
输入电压范围 Input voltage range	10~400V	3~60V	10~100V	8~420V	5~420V
输入电流范围 Input current range	0.5~10A	0.5~20A	0.5~10A	0.1~12A	0.1~15A
通道数量 Channel number	8CH（非隔离型） 8CH(Non-isolated type)	8CH（非隔离型） 8CH(Non-isolated type)	8CH（非隔离型） 8CH(Non-isolated type)	4CH（隔离型） 4CH(Isolated)	4CH（隔离型） 4CH(Isolated)
单通道功率 Single Channel power	250W	250W	250W	600W	600W
拉载模式 Pull mode	CC/CV	CC/CV/CR/CP	CC/CV/CR/CP	CC/CV/CR/CP/LED	CC/CV/CR/CP/LED
电压控制精度 Voltage control precision	±(1%+0.2%FS)	±(1%+0.2%FS)	±(1%+0.2%FS)	±(1%+0.2%FS)	±(1%+0.2%FS)
电压回读精度 Voltage accuracy	±(1%+0.2%FS)	±(1%+0.2%FS)	±(1%+0.2%FS)	±(1%+0.2%FS)	±(1%+0.2%FS)
电流控制精度 Current control accuracy	±(2%+0.2%FS)	±(2%+0.2%FS)	±(2%+0.2%FS)	±(2%+0.2%FS)	±(2%+0.2%FS)
电流回读精度 Current reading accuracy	±(2%+0.2%FS)	±(2%+0.2%FS)	±(2%+0.2%FS)	±(2%+0.2%FS)	±(2%+0.2%FS)
输出电压/电流 Output voltage/current	200V/9A	72V/28A	72V/28A	400V/5A	400V/5A
通信方式 Communication mode	RS-485	RS-485	RS-485	RS-485	RS-485
输入/输出隔离 Input/output isolation	N	N	N	Y	Y
配对逆变器 Paired inverter	CP5302	CP5309	CP5310	CP5306	CP5306

CP5302
180-230V/25A输入
180-264V/28A输出

CP5306
375-420V/15A输入
180-264V/28A输出

CP5309
60-90V/0.2-84A输入
180-264V/28A输出

CP5310
100-130V/0.2-55A输入
180-264V/28A输出

并网逆变器CP5300系列
Grid-connected inverter CP5300

应用范围 Scope of application

- 适配器、工业电源、LED 电源、车载电源、通信电源等老化测试配合节能型模块使用
- 老化台车、老化柜、老化房、自动老化系统等节能逆变
- 电池放电等老化测试

- Adapter, industrial power supply, LED power supply, vehicle power-supply, communication power and other power supply burn-in test cooperate with energy-saving modules
- Apply to the energy saving burn-in vehicles ,burn-in cabinet,burn-in room, automatic burn-in testing system
- Battery discharge burn-in testing

卓越功能 Outstanding functions

1. 模块化设计 , 使用扩充容易
2. 输出 EMC 处理
3. 电网谐波校正
4. 电源功率因素校正
5. 先进大功率点跟踪技术
6. 180-264V 宽电压输出
7. 隔离变压器设计
8. 符合安规要及信息技术安全标准
9. 输出短路保护、过流保护、过压保护、孤岛保护、输入过欠压保护

1. Modular design, easy to take expansion
2. Output take EMC progress
3. Harmonic correction of power harmonic
4. Correction of power factor
5. Advanced high power point tracking technology
6. Width range of output voltage 180v-264v
7. Isolation transformer design
8. Safety requirements designed to meet the safety standards of information technology equipment
9. With the function of output short circuit protection, over-current protection, over-voltage protection, islanding protection, input over-voltage/under-voltage protection

性能参数 Performance parameters

型号Model	CP5302	CP5306	CP5309	CP5310
输入电压范围 Input voltage range	180～230V	375～420V	60～90V	100～130V
输入电流范围 Input current range	0～25A	0~15A	0.2~84A	0.2~55A
输入功率 Input Power	5KW	5KW	6.6KW	6KW
拉载模式 Load mode	CC/CV	CV	CV	CV
配对负载 Matched load	CP8506	CP8523/CP5824	CP8508	CP8509
负载类型 Load type	单相交流并网 Single-phase AC and grid			
输出电压范围 Range of output voltage	180～264VAC			
输出额定电压 Rated output voltage	220VAC/50Hz			
输出并网电流 Output grid current	28A Max.			
跟踪频率范围 Tracking frequency range	47～63 Hz			
电流谐波(THD) Current harmonics	@≥50% LOAD			
直流注入分量 DC injection component	≤5mA			
保护功能 Protection function	过压、欠压、过流、过温、短路、过频、欠频 Overvoltage, undervoltage, overcurrent, overtemperature, short circuit, overfrequency, underfrequency			
输入/输出隔离 Isolate of input / output	有 Yes			

节能型电子负载模组CP8600系列
Energy-saving electronic load module CP8600

应用范围 Scope of application

- 工业电源、服务器电源、ATX电源、通讯电源、BMP模块、矿机电源、车载电源等老化测试
- 用于老化台车、老化柜、老化房、自动老化系统等
- 电池放电老化测试

- Apply to the burn-in testing of Industrial power supply,ATX power supply communication power supply,BMP module,mining power suply,vehicle power supply and other kind of power supply
- Apply to Burn-in vehicles ,Burn-in cabinet,Burn-in room,automatic burn-in testing system
- Battery discharge burn-in testing

卓越功能 Outstanding functions

1. 通道独立控制
2. 效率85%以上
3. 支持Von设定
4. CC、CV、CR、CP负载模式
5. 输出EMC处理
6. 电网谐波校正
7. CC模式可通道并联
8. 工业级RS485通讯 RS485
9. 电源功率因素校正
10. 输入、输出电气隔离
11. 180-264VAC宽电压输出
12. 电压远端采集功能、电压测量精度
13. 高频软开关技术，整机体积小，效率高
14. 安规要求设计，符合信息技术设备安全标准
15. DD+DA节能负载与逆变器组合设计一体机
16. 输出短路保护、过流保护、过压保护、孤岛保护、输入过欠压保护等功能

1. Channel take independent control
2. Efficiency is more than 85%
3. Support Von setting
4. CC / CV / CR / CP load mode
5. Output take EMC progress
6. Harmonic correction of power harmonic
7. Support parallel connection of channel under CC load mode
8. RS485 Communication Structure is industrial grade
9. Correction of power factor
10. Electrical isolation of input and output power
11. Width range of output voltage 180v-264v
12. Remote acquirement of voltage with high measurement precision
13. High-frequency soft switching technology, with small size, high efficiency
14. Safety requirements designed to meet the safety standards of informa-tiontechnology equipment
15. DD+DA Energy-saving load module and inverter combination design
16. With the functions of output short circuit protection, over-current protection, over-voltage protection, islanding protection, input over-voltage/under-voltage protection

性能参数 Performance parameters

型号Model	CP8601	CP8602	CP8603
输入电压范围 Input voltage range	3~60V	10~120V	3~60V
输入电流范围 Input current range	0.5~60A	0.5~60A	0.5~120A
通道数量 Channel number	4CH隔离 4CH isolated	4CH隔离 4CH isolated	4CH隔离 4CH isolated
单通道功率 Single channel power	800W	800W	1600W
拉载模式 Pull mode	CC/CV/CR/CP/LED	CC/CV/CR/CP/LED	CC/CV/CR/CP/LED
电压控制精度 Votage comtrol precision	±(1%+0.2%FS)	±(1%+0.2%FS)	±(1%+0.2%FS)
电压回读精度 Voltage accuoacy	±(1%+0.2%FS)	±(1%+0.2%FS)	±(1%+0.2%FS)
输出电压范围 Range of output voltage	180～264VAC	180～264VAC	180～264VAC
输出额定电压 Rated output voltage	220VAC/50Hz	220VAC/50Hz	220VAC/50Hz
输出并网电流 Output grid current	13A Max.	13A Max.	29A Max.
通信方式 Way of communication	RS-485	RS-485	RS-485
输入/输出隔离 Input/output isolation	Y	Y	Y
配对并网逆变器 Paired grid-connected inverters	一体机 One machine	一体机 One machine	一体机 One machine

程控隔离型AC-DC双向源载模块

Programmable isolated AC-DC two-way source load module

应用范围 Scope of application

- 独立的老化台车，老化架，老化房
- 电池的充放电测试
- Independent Burn-in trolley, Burn-in rack, Burn-in room
- Battery charge and discharge test

卓越功能 Outstanding functions

1. AC-DC 双向变换，既可以做电源，也可以做回馈负载，一机多用
2. 软开关技术，转换效率高，最高效率达到 95%
3. 集成 PFC 功能，功率因数高，THD 小，电网友好型设备
4. 插框式结构，便于安装维护
5. 支持源 CC、CV 模式，负载 CC、CV、CP、CR 模式
6. CV 模式下，支持源载自动切换
7. 完善的保护功能，过流、过压、过载、过温、欠压、短路、风扇故障等保护功能
8. 全隔离 RS485 通讯、CAN 通讯
9. 全数字控制，数字监控型电子负载
10. 坚固的壳体结构和优良的散热系统
11. 高品质高性价比

1. AC-DC two-way conversion, it can be used as a power supply or as a feedback load, one machine for multiple purposes
2. Soft switching technology, high conversion efficiency, the highest efficiency reaches 95%
3. Integrated PFC function, high power factor, low THD, grid-friendly equipment
4. Plug-in frame structure, easy to install and maintain
5. Support source CC, CV mode, load CC, CV, CP, CR mode
6. In CV mode, support automatic switching between source and load
7. Complete protection functions, such as over current, over voltage, over-load, over temperature, under voltage, short circuit, fan failure, etc.
8. Fully isolated RS485 communication, CAN communication
9. Fully digital control, digital monitoring electronic load
10. Robust shell structure and excellent heat dissipation system
11. High quality and cost-effective

性能参数 Performance parameters

型号Model	CP8801	CP8802
通道数量 Number of channels	单通道隔离型 Single channel isolation type	双通道隔离型 Two-channel isolation type
DC电压 DC voltage	200-750V	200-1000V
DC电流 DC current	0~50A	0.5~20A/CH
DC最大功率 DC maximum power	20kW	4kW/CH
DC电压解析度 DC voltage resolution	100mV	100mV
DC电流解析度 DC current resolution	10mA	10mA
AC电压 AC voltage	304-485V	180-240V
AC电流 AC current	0~38A	0~40A
AC频率 AC frequency	47-63Hz	47-63Hz
AC冲击电流 AC impulse current	100Aac	100Aac
AC输入功率 AC input power	22kW	8kW

CP8701 隔离型双向 DC-DC电源

CP8702 电池测试双向 DC-DC电源

程控双向DC-DC模组
Programmable two-way DC-DC module

应用范围 Scope of application

- DC-DC 电源老化测试
- 电池充电、放电老化测试
- 电池检验测试
- DC-DC power Burn-in test
- Battery charging and discharging Burn-in test
- Battery inspection test

卓越功能 Outstanding functions

1. 绿色、环保、节能；一物多用，双向变换，节约材料，同时测试多个产品，提高生产效率；多个电池包同时老化，能量在电池包中直接相互转换，效率非常高,整机效率最高达 >93%
2. 电压、电流范围宽，RS485 或CAN通讯程序控制，用户可以根据自己电池特性实现灵活控制充电放电
3. 支持 充电 CC(恒流)、CV(恒压)、CP（恒功率），放电 CC(恒流)、CR（恒电阻），作为源载还可以实现 LED 工作模式
4. 24 位 AD 工业级高精度采样及 DSP 芯片快速高精度控制
5. 具有过温保护、过流保护、过压保护、过功率保护
6. 全数字控制，数字监控型源载
7. 坚固的壳体结构和优良的散热系统
8. 高品质高性价比

1. Green, environmentally friendly, energy-saving; one thing is multi-purpose, two-way conversion, saving materials, testing multiple products at the same time, improving production efficiency; multiple battery packs are burn-in at the same time, energy is directly converted into each other in the battery pack, the efficiency is very high, the whole machine The highest efficiency is >93%
2. Wide range of voltage and current, RS485 or CAN communication program control, users can realize flexible control of charging and discharging according to their own battery characteristics
3. Support charging CC (constant current), CV (constant voltage), CP (constant power), discharging CC (constant current), CR (constant resistance), as the source load can also realize the LED working mode
4. 24-bit AD industrial-grade high-precision sampling and DSP chip fast and high-precision control
5. With over temperature protection, over current protection, over voltage protection, over power protection
6. Full digital control, digital monitoring source load
7. Rugged shell structure and excellent heat dissipation system
8. High quality and cost-effective

性能参数 Performance parameters

型号Model	CP8701	CP8702
通道数量 Number of channels	1	1
DC1侧电压 DC1 side voltage	10~80V	0~120V
DC1侧电流 DC1 side current	0.1-100A	0.1-30A
DC1侧功率 DC1 side power	5kW	3kW
DC2侧电压 DC2 side voltage	10-80V	130-150V
DC2侧电流 DC2 side current	0.1-100A	≦25A
DC电压解析度 DC voltage resolution	10mV	1mV
DC电流解析度 DC current resolution	10mA	1mA
电压读值精度 Voltage reading accuracy	±(0.05%+0.02%FS)	±(0.05%+0.02%FS)
电流读值精度 Current reading accuracy	±(0.1%+0.02%FS)	±(0.05%+0.02%FS)
温度采集范围 Temperature collection range	——	-40℃-150℃
温度读值精度 Temperature reading accuracy	——	1%
工作模式 Operating mode	CCC/CCV/CCP/DCC/DCP/DCR	CCC/CCV/CCP/DCC/DCP/DCR

CP2102 12CH非隔离串联型
电压采集卡

CP2108 8CH(串联)隔离型带快充协议
电压采集卡

CP2118 8CH(串联)隔离型带快充协议
电压采集卡

CP2148 48CH(串联)隔离型带快充协议
电压采集卡

数据采集与快充时序控制模块CP2100系列
Voltage acquisition and fast charge time sequence control module CP2100

应用范围 Scope of application

- 各种直流电源适配器串联老化系统中的电压采集
- 手机充电器串联老化系统中的电压采集、快充模式中的升压、降压控制

- Voltage acquisition in series burn-in system of various DC power adapters
- Voltage acquisition in series burn-in system of mobile phone charger, boost and buck control in fast charge mode

卓越功能 Outstanding functions

1. 多通道电压信号量测、手机充电器和移动电源快充协议时序的模拟及产生
2. 采用光电隔离的 RS485 通信接口，每条通信总线可连接最多 63 个模块
3. 单个模块内含最多 8 个独立通道，采用光电隔离通讯
4. 每个通道的电压量测和快充时序的产生皆由独立的 MCU 完成，真正实现无触点扫描、高速采样
5. 同时支持多种快充协议时序
6. 对被测产品的 PASS/FAIL 判断信号输出

1. Multi-channel voltage signal measurement, simulation and generation of mobile charger and portable power source
2. RS485 communication interface, each communication bus can connect up to 63 modules
3. Each module contains up to 8 independent channels, using optical isolation communication
4. Each channel's voltage measurement and fast charge timing are generated by an independent MCU, non-contact scanning, high-speed sampling
5. Support multiple quick charge protocol
6. PASS/FAIL signal output

性能参数 Performance parameters

型号Model		CP2102	CP2108	CP2115	CP2117	CP2118	CP2119	CP2148
通道数量 Quantity of channel		12CH	8CH (串联) 8CH (Tandem)	4CH	8CH	8CH (串联) 8CH (Tandem)	8CH	48CH (串联) 48CH (Tandem)
快充协议时序模拟功能 Time series simulation		Not supported	QC2.0, QC3.0, Hisilicon	Not supported	QC2.0,QC3.0, QC4.0,PD2.0, PD3.0	AFC,QC2.0, QC3.0,FCP, SCP_B,PD2.0/3.0 PPS,SCP_A	QC2.0, QC3.0, QC4.0 PD2.0,PD3.0 FCP,SCP	Not supported
电压测量 Voltage measurement	量程 Mesduring range	1-500V	2-100V	2-100V	2-100V	2-100V	0-30V	0-200V
	解析度 Resolution	10mV	10mV	10mV	10mV	10mV	10mV	10mV
	精度 Precision	±(1%+0.1%FS)	±(1%+0.1%FS)	±(2%+0.1%FS)	±(1%+0.1%FS)	±(1%+0.1%FS)	±(1%+0.1%FS)	±(1%+0.1%FS)

8通道双向移动电源充放电模块CP2127
8-channel two-way mobile power charging and discharging module CP2127

应用范围 Scope of application

- 移动电源、蓄电池类产品
- Mobile power, battery products

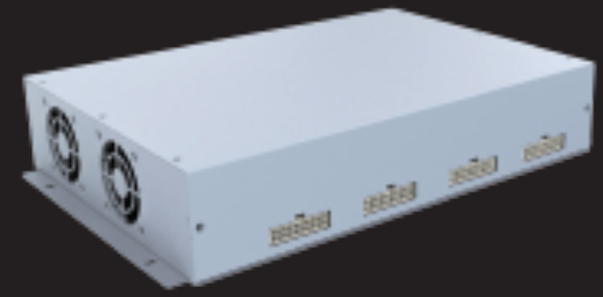
卓越功能 Outstanding functions

1. 采用光电隔离的 RS485 通信接口，每条通信总线最多可连接 127 个模块
2. 每个模块内含 8 个非隔离双向模块（共参考地），1 个主通讯模块
3. 支持 QC2.0、QC3.0、QC4.0、PD2.0、PD3.0 等多种协议
4. 该产品需配合本公司双向逆变器（PA220D12161）一同使用

1. Using photoelectric isolation RS485 communication interface, each communication bus can connect up to 127 modules
2. Each module contains 8 non-isolated two-way modules (total reference ground) and 1 main communication module
3. Support QC2.0, QC3.0, QC4.0, PD2.0, PD3.0 and other protocols.
4. This product needs to be used with our company's two-way inverter (PA220D12161)

性能参数 Performance parameters

型号Model	CP2127	
	充电 Recharge	放电 Discharge
通道数量 Number of channels	8	
低压侧电压范围 Low voltage side voltage range	2-20Vdc	4-20Vdc
低压侧电流范围 Low-voltage side current range	0.1-5A/CH	0.1-5A/CH
低压侧最大功率 Maximum power of low voltage side	100W/CH	100W/CH
电压解析度 Voltage resolution	10mV	10mV
电流解析度 Current resolution	10mA	10mA
电压读值精度 Voltage reading accuracy	±(1%+0.2%FS)	±(1%+0.2%FS)
电流读值精度 Current reading accuracy	±(2%+0.2%FS)	±(2%+0.2%FS)
高压侧电压 High voltage side voltage	24Vdc	26Vdc
高压侧电流 High voltage side current	40A(max)	40A(max)
工作模式 Operating mode	CV/CC/CP	CC/CR/CP
快充协议时序模拟功能 Fast charge protocol timing simulation function	QC2.0、QC3.0、QC4.0、PD2.0、PD3.0	
工作温度 Operating temperature	0°C-45°C	
储存温度 Storage temperature	0°C-85°C	
冷却方式 Cooling method	强制风冷 Forced air cooling	



4通道AC电子负载CP8401
4-channel AC electronic load CP8401

应用范围 Scope of application

- 独立的老化台车，老化架，老化房
- 各类交流输出设备的放电老化测试（兼容正弦波，方波）
- 车载逆变器AC输出节能老化

- Independent burn-in trolley, Burn-in rack, Burn-in room
- Discharge burn-in test of various AC output equipment (compatible with sine wave and square wave)
- Energy-saving and burn-in of AC output of vehicle inverter

卓越功能 Outstanding functions

1. 独立的负载单元，支持多组不同输出电源的老化测试
2. 采用低压供电系统，提高安全性
3. 过温保护、过流保护、过压保护、过功率保护
4. 最高达 92% 的转换效率
5. 高精度
6. 输出并联在直流电源上，使直流电源需要供电电流大幅降低
7. 全隔离 RS485 通讯
8. 坚固的壳体结构和优良的散热系统
9. 高品质高性价比
10. 缓慢调节功率，不易让客户产品电流过充保护

1. Independent load unit, supporting burn-in test of multiple groups of different output power supplies
2. Use low-voltage power supply system to improve safety
3. Over temperature protection, over current protection, over voltage protection, over power protection
4. Up to 92% conversion efficiency
5. High precision
6. The output is connected in parallel to the DC power supply, which greatly reduces the power supply current required by the DC power supply
7. Fully isolated RS485 communication
8. Rugged shell structure and excellent heat dissipation system
9. High quality and cost-effective
10. Slowly adjust the power, it is not easy to make the customer's product current overcharge protection

性能参数 Performance parameters

型号Model		CP8401			
项目 Project	通道 Channel	CH1	CH2	CH3	CH1
输入电压 Input voltage	Min	85V	85V	85V	85V
	Max	260V	260V	260V	260V
输入电流 Input Current	Min	0.1A	0.1A	0.1A	0.1A
	Max	5A	5A	5A	5A
输入功率 Input power		550W	550W	550W	550W
电压解析度 Voltage resolution		15mV	15mV	15mV	15mV
电流解析度 Current resolution		10mA	10mA	10mA	10mA
电压读值精度 Voltage reading accuracy		±(1%+0.2%FS)			
电流读值精度 Current reading accuracy		±(1%+0.2%FS)			
电压负载精度 Voltage load accuracy		±(1%+0.2%FS)			
电流负载精度 Current load accuracy		±(1%+0.2%FS)			

隔离型LED电源电子负载/节能型老化系统
Isolated LED power supply electronic load/energy-saving Burn-in system

应用范围 Scope of application

- LED驱动电源
- LED drive power

卓越功能 Outstanding functions

1. 软件设置负载参数，实时监控电压、电流、功率等
2. CC、CV、CR、CP、LED五种负载模式
3. 任意负载模式下的通道并联，满足产品功率扩展
4. 低电压到高电压、低电流到高电流等电源老化
5. 内置超温与烟雾报警自动保护装置
6. 可编辑开关时序，负载变换功能
7. 配合电源老化监控软件使用
8. 多种DC转接板接口可满足不同输出接口产品需求
9. 产品区多种层板结构可选，满足不同产品更方便操作
10. 交流电参数测量模组，测试电源输入特性（选配）
11. 电压自动切换功能（选配）
12. 产品区温度监控功能（选配）
13. PWM调光及两组逻辑控制信号功能（选配）
14. 节能与非节能多种模块型号可选配
15. 节能转换效率85%以上

1. Set various load parameters and real-time monitor for parameters such as voltage, current and power by computer software
2. Be of five kinds of load modes such as CC, CV, CR, CP and LED
3. Support parallel connection of channels under any load modes and meet power extension of products
4. Support power cc from low voltage to high voltage and from low current to large current
5. Be of built-in over-temperature and smoke-alarming automatic protection device
6. Be of editable switch sequence and load conversion function
7. Cooperate with monitoring software of power burn-in, for application
8. Interface of multiple DC adapter plates can meet the demands for different output interface products
9. Be of optional multiple laminate structures at products zone and meet the requirements for more convenient operation of different products
10. Be of AC parameters measurement module and testing power input characteristics (optional)
11. Be of automatic voltage switching function (optional)
12. Be of temperature monitoring function at products zone (optional)
13. Be of PWM dimming function and two groups of logic control signal function(optional)
14. The model of E-load model can be selected.
15. Energy saving conversion efficiency over 85%

性能参数 Performance parameters

型号Model	CP-3003	CP-3004	CP-3005	CP-3001	CP-3002
单通道功率 Power of single channel	40W/CH	100W/CH	125W/CH	250W~400W	600W
负载通道数量 Quantity of load channels	240CH	192CH	192CH	96CH	96CH
负载电压范围 Scope of load voltage	2-450V			8-420V	
负载电流范围 Scope of load current	0.05-10A/CH	0.05-5A/CH	0.05-10A/CH	0.5-12A/CH	0.5-12A/CH
负载精度 Load precision	±（1%+0.1FS）				
产品区层数 Number for plies of product zone	6				
产品区层高 Height for plies of product zone(mm)	170				
产品区宽度 Width of products zone(mm)	380				
负载模块选型 Load Model	电子负载型 Electronic load type	电子负载型 Electronic load type	电子负载型 Electronic load type	节能型 Energy Saving	节能型 Energy Saving
负载模式 Load Mode	CC/CV		CC+CV+CR+CP+LED Mode		
产品区控温 Temperature control of products zone	产品区温控式：常温~60°C Temperature control type of products zone: normal temperature-60°C				
台车结构材质 Structure material of trolley	冷轧板精细加工制成 Elaborately processed and produced with cold-rolled sheet				
主控方式 Mode of main control	电脑监控型电源老化监控软件 Monitoring software for burn-in of computer-monitoring type power				
被测电源输入方式 Input mode of UUT	万用插座/音箱线夹/客户定制 Multi-purpose socket/speaker wire clip/custom design				
被测电源接口方式 Interface mode of UUT	多种规格转接治具板先择/客户定制 Connecting fixture boards (with various specifications) for first choice/custom design				
外型尺寸（L*W*H） External dimension（L*W*H）	2050*1200*1900/客户定制 2050*1200*1900/custom design				

充电器/适配器电源节能老化系统
Energy saving Burn-in test system of Charger/Adapter

应用范围 Scope of application

- 充电器、电源适配器、无线充等电源
- Power sources such as chargers, power adapters, wireless charging, etc

卓越功能 Outstanding functions

1. 软件设置负载参数，实时监控电压、电流、功率等参数
2. CC负载模式
3. CC负载模式下可通道并联，满足产品功率扩展
4. 内置超温与烟雾报警自动保护装置
5. 可编辑开关时序，负载变换功能
6. 配合电源老化监控软件使用
7. 多种DC转接板接口可满足不同输出接口产品需求
8. 产品区多种层板结构可选，满足不同产品更方便操作
9. 交流电参数测量模组，测试电源输入特性（选配）
10. 电压自动切换功能（选配）
11. 产品区温度监控功能（选配）
12. 节能转换效率85%以上

1. Set various load parameters and real-time monitor for parameters such as voltage, current and power by computer software
2. Be of CC load modes
3. Support parallel channel connection under CC load mode and meet the requirements for power extension of products
4. Be of built-in over-temperature and smoke-alarming automatic protection device
5. Be of editable switch sequence and load conversion function
6. Cooperate with monitoring software of power burn-in, for application
7. Interface of multiple DC adapter plates can meet the demands for different output interface products
8. Be of optional multiple laminate structures at products zone and meet the requirements for more convenient operation of different products
9. Be of AC parameters measurement module and testing power input characteristics(optional)
10. Be of automatic voltage switching function (optional)
11. Be of temperature monitoring function at products zone (optional)
12. Efficiency of energy saving conversion over 85%

性能参数 Performance parameters

型号Model	CP-3006	CP-3008	CP-3009	CP-3010
单通道功率 Power of single channel	200W/CH	150W/CH	100W/192CH	65W/CH
负载通道数量 Quantity of load channels	192CH	192CH	192CH	192CH
负载电压范围 Scope of load voltage	2-100V			
负载电流范围 Scope of load current	0.2-10A/CH			
负载精度 Load precision	±（1%+0.1%FS）			
产品区层数 Number for plies of product zone	单面 Single side	单面6层 Single side	单面6层 Single side	单面6层 Single side
产品区层高 Height for plies of product zone(mm)	170			
产品区宽度 Width of products zone(mm)	串联CC模式 340 Series CC mode 340			
负载模块选型 Load Model	节能型 Energy Saving			
负载模式 Load Mode	CC+CV Mode			
产品区控温 Temperature control of products zone	产品区温控式：常温~60°C Temperature control type of products zone: normal temperature-60°C			
台车结构材质 Structure material of trolley	冷轧板精细加工制成 Elaborately processed and produced with cold-rolled sheet			
主控方式 Mode of main control	电脑监控型电源老化监控软件 Monitoring software for burn-in of computer-monitoring type power			
被测电源输入方式 Input mode of UUT	万用插座/音箱线夹/客户定制 Multi-purpose socket/speaker wire clip/custom design			
被测电源接口方式 Interface mode of UUT	多种规格转接治具板先择/客户定制 Connecting fixture boards (with various specifications) for first choice/custom design			
可定制快充功能 Customizable fast charge function	QC、PO、FCP、SCP、PPS等 QC, PO, FCP, SCP, PPS, etc.			
外型尺寸 External dimension(L*W*H)	2050*880*1900/客户定制 2050*880*1900/custom design			

移动电源老化系统
Portable Charger Burn-in Testing System

应用范围 Scope of application

- 适用于移动电源、充电宝
- Suitable for mobile power bank

卓越功能 Outstanding functions

1. 软件设置负载参数，实时监控电压、电流、功率等参数
2. 可监控移动电源充电电压、电流、功率等充电状态
3. CC、CV负载模式
4. CC负载模式下可通道并联，满足产品功率扩展
5. 内置超温与烟雾报警自动保护装置
6. 可编辑开关时序，负载变换功能
7. 配合电源老化监控软件使用
8. 多种DC转接板接口可满足不同输出接口产品需求
9. 产品区多种层板结构可选，满足不同产品更方便操作
10. 交流电参数测量模组，测试电源输入特性（选配）
11. 电压自动切换功能（选配）
12. 产品区温度监控功能（选配）

1. Software sets load parameters, real-time monitoring of voltage, current, power and other parameters
2. It can monitor the charging status of mobile power, such as charging voltage, current and power
3. CC, CV load mode
4. Channels can be connected in parallel under CC load mode to meet product power expansion
5. Built-in over-temperature and smoke alarm automatic protection
6. Editable switching timing, load conversion function
7. Use with power burn-in monitoring software
8. A variety of DC adapter board interface can meet the needs of different output interface products
9. Multiple laminate structure options in the product area to meet different products more convenient operation
10. AC parameter measurement module, test power input characteristics (optional)
11. Automatic voltage switching (optional)
12. Product area temperature monitoring function (optional)

性能参数 Performance parameters

型号Model	CP-3011	CP-3012	CP-3013	CP-3014
单通道功率 Power of single channel	65W/CH	65W/CH	65W/CH	100W/CH
负载通道数量 Quantity of load channels	192CH	240CH	384CH	240CH
负载电压范围 Scope of load voltage	2-100V			3-20V
负载电流范围 Scope of load current	0.05-5A/CH			0.5-5A/CH
负载精度 Load precision	±（1%+0.1%FS）			±（1%+0.1%FS）
产品区层数 Number for plies of product zone	单面6 Single side			单面6 Single side
产品区层高 Height for plies of product zone(mm)	170			170
产品区宽度 Width of products zone(mm)	340			340
充放模式 Charge and discharge mode	无 No			CC+CV Mode
负载模式 Load Mode	CC+CV Mode			CC+CV Mode
产品区控温 Temperature control of products zone	产品区温控式：常温~60°C Temperature control type of products zone: normal temperature-60°C			
台车结构材质 Structure material of trolley	冷轧板精细加工制成 Elaborately processed and produced with cold-rolled sheet			
主控方式 Mode of main control	电脑监控型电源老化监控软件 Monitoring software for burn-in of computer-monitoring type power			
被测电源输入方式 Input mode of UUT	万用插座/音箱线夹/客户定制 Multi-purpose socket/speaker wire clip/custom design			
被测电源接口方式 Interface mode of UUT	多种规格转接治具板先择/客户定制 Connecting fixture boards (with various specifications) for first choice/custom design			
可定制快充功能 Customizable fast charge function	QC、PO、FCP、SCP、PPS等 QC, PO, FCP, SCP, PPS, etc.			
外型尺寸 External dimension(L*W*H)	2050*880*1900/客户定制 2050*880*1900/custom design			

电动工具充电器老化系统
Electric tools Charger Burn-in testing System

应用范围 Scope of application

- 适用于电动工具充电器、扫地机充电器
- Suitable for electric tools charger,sweeper charger

卓越功能 Outstanding functions

1. 软件设置负载参数，实时监控电压、电流、功率等参数
2. 可监控充电器电压、电流、功率等充电状态
3. CC、CV、CR、CP、LED五种负载模式
4. 任意负载模式下可通道并联，满足产品功率扩展
5. 内置超温与烟雾报警自动保护装置
6. 可编辑开关时序，负载变换功能
7. 配合电源老化监控软件使用
8. 多种DC转接板接口可满足不同输出接口产品需求
9. 产品区多种层板结构可选，满足不同产品更方便操作
10. 交流电参数测量模组，测试电源输入特性（选配）
11. 电压自动切换功能（选配）
12. 产品区温度监控功能（选配）
13. 节能与非节能多种模块型号可选配
14. 节能转换效率85%以上

1. Software sets load parameters, real-time monitoring of voltage, current, power and other parameters
2. It can monitor the charger's voltage, current, power and other charge status
3. CC, CV, CR, CP, LED five load modes
4. Channels can be connected in parallel in any load mode to meet product power expansion
5. Built-in over-temperature and smoke alarm automatic protection device
6. Editable switching timing, load conversion function
7. Use with power burn-in monitoring software
8. A variety of DC adapter board interface can meet the needs of different output interface products
9. Multiple laminate structure options in the product area to meet different products more convenient operation
10. AC parameter measurement module, test power input characteristics (optional)
11. Automatic voltage switching (optional)
12. Product area temperature monitoring function (optional)
13. Energy-saving and non-energy-saving multiple module models are optional
14. More than 85% energy-saving conversion efficiency

性能参数 Performance parameters

型号Model	CP-3040	CP-3041	CP-3042	CP-3043
单通道功率 Power of single channel	200W/CH	100W/CH	100W/CH	100W/CH
负载通道数量 Quantity of load channels	192CH	240CH	96CH	192CH
负载电压范围 Scope of load voltage	3-60V	3-60V	2-450V	2-450V
负载电流范围 Scope of load current	0.2-15A/CH	0.2-15A/CH	0.05-10A/CH	0.05-10A/CH
负载精度 Load precision	±(1%+0.%1FS)			
产品区层数 Number for plies of product zone	单面6 Single side	双面12 Double side	单面6 Single side	单面6 Single side
产品区层高 Height for plies of product zone(mm)	170			
产品区宽度 Width of products zone(mm)	340			
负载模块选型 Load Model	节能型 Energy Saving	节能型 Energy Saving	电子负载型 Electronic load type	电子负载型 Electronic load type
负载模式 Load Mode	CC/CV		CC+CV+CR+CP+LED Mode	
产品区控温 Temperature control of products zone	产品区温控式：常温~60°C Temperature control type of products zone: normal temperature-60°C			
台车结构材质 Structure material of trolley	冷轧板精细加工制成 Elaborately processed and produced with cold-rolled sheet			
主控方式 Mode of main control	电脑监控型电源老化监控软件 Monitoring software for burn-in of computer-monitoring type power			
被测电源输入方式 Input mode of UUT	万用插座/音箱线夹/客户定制 Multi-purpose socket/speaker wire clip/custom design			
被测电源接口方式 Interface mode of UUT	多种规格转接治具板先择/客户定制 Connecting fixture boards (with various specifications) for first choice/custom design			
外型尺寸 External dimension(L*W*H)	2050*1200*1900/客户定制 2050*1200*1900/custom design		2050*800*1900/客户定制 2050*800*1900/custom design	

TV电源老化系统
TV board Burn-in testing system

应用范围 Scope of application

- 适用于TV电源老化、显示器电源
- Suitable for the burn-in testing of TV Board/Display power supply

卓越功能 Outstanding functions

1. 软件设置负载参数，实时监控电压、电流、功率等参数
2. List负载模式，动态负载模式
3. 可编辑开关时序，负载变换功能
4. 配合电源老化监控软件使用
5. CC、CV、CR、CP、LED五种负载模式
6. 任意负载模式下的通道并联，满足产品功率扩展
7. 低电压到高电压、低电流到高电流等电源老化
8. 内置超温与烟雾报警自动保护装置
9. 多种DC转接板接口可满足不同输出接口产品需求
10. 产品区多种层板结构可选，满足不同产品更方便操作
11. 交流电参数测量模组，测试电源输入特性（选配）
12. 电压自动切换功能（选配）
13. 产品区温度监控功能（选配）
14. PWM调光功能（选配）
15. 2路可扩展逻辑信号输出（选配）
16. 节能与非节能多种模块型号可选配
17. 节能转换效率85%以上

1. Set various load parameters and real-time monitor for parameters such as voltage, current and power by computer software
2. Be of list load mode and dynamic load mode
3. Be of editable switch sequence and load conversion function
4. Cooperate with monitoring software of power burn-in, for application
5. Be of five kinds of load modes such as CC, CV, CR, CP and LED
6. Support parallel connection of channels under any load modes and meet power extension of products
7. Support power burn-in from low voltage to high voltage and from low current to large current
8. Be of built-in over-temperature and smoke-alarming automatic protection device
9. Interface of multiple DC adapter plates can meet the demands for different output interface products
10. Be of optional multiple laminate structures at products zone and meet the requirements for more convenient operation of different products
11. Be of AC parameters measurement module and testing power input characteristics (optional)
12. Be of automatic voltage switching function (optional)
13. Be of temperature monitoring function at products zone (optional)
14. Be of PWM dimming function (optional)
15. 2 ways extension logic signal output (optional)
16. The model of E-load model can be selected
17. Efficiency of energy saving conversion over 85%

性能参数 Performance parameters

型号Model	CP-3016	CP-3018	CP-3017	CP-3019
单通道功率 Power of single channel	125W/CH	125W/CH	100W/CH	100W/CH
负载通道数量 Quantity of load channels	192CH	240CH	192CH	240CH
负载电压范围 Scope of load voltage	2-450V			
负载电流范围 Scope of load current	0.5-10A/CH			
负载精度 Load precision	±(1%+0.1%FS)			
产品区层数 Number for plies of product zone	4			
产品区层高 Height for plies of product zone(mm)	260			
产品区宽度 Width of products zone(mm)	300			
负载模块选型 Load Model	电子负载型 Electronic load type			
负载模式 Load Mode	CC+CV+CR+CP+LED Mode			
产品区控温 Temperature control of products zone	产品区温控式：常温~60°C Temperature control type of products zone: normal temperature-60°C			
台车结构材质 Structure material of trolley	冷轧板精细加工制成 Elaborately processed and produced with cold-rolled sheet			
主控方式 Mode of main control	电脑监控型电源老化监控软件 Monitoring software for burn-in of computer-monitoring type power			
被测电源输入方式 Input mode of UUT	万用插座/音箱线夹/客户定制 Multi-purpose socket/speaker wire clip/custom design			
被测电源接口方式 Interface mode of UUT	多种规格转接治具板先择/客户定制 Connecting fixture boards (with various specifications) for first choice/custom design			
外型尺寸 External dimension(L*W*H)	2050*880*1900/客户定制 2050*880*1900/custom design			

工业电源节能型老化系统
Industrial power supply energy-saving Burn-in testing system

应用范围 Scope of application

- 适用于适配器、工业电源、LED电源、服务器电源、通信电源以及SSN、NPS类电源等老化
- Suitable for burn-in of adapters, industrial power supplies, LED power supplies, server power supplies, communication power supplies, and SSN and NPS power supplies

卓越功能 Outstanding functions

1. 软件设置负载参数，实时监控电压、电流、功率等参数
2. CC、CV、CR负载模式
3. CC负载模式下可通道并联，满足产品功率扩展
4. 内置超温与烟雾报警自动保护装置
5. 可编辑开关时序，负载变换功能
6. 节能转换效率85%以上
7. 配合电源老化监控软件使用
8. 多种DC转接板接口可满足不同输出接口产品需求
9. 产品区多种层板结构可选，满足不同产品更方便操作
10. 交流电参数测量模组，测试电源输入特性（选配）
11. 电压自动切换功能（选配）
12. 产品区温度监控功能（选配）
13. 节能与非节能多种模块型号可选配
14. 节能转换效率85%以上

1. Set various load parameters and real-time monitor for parameters such as voltage, current and power by computer software
2. Be of CC 、CV、CR load modes
3. Support parallel channel connection under CC load mode and meet the requirements for power extension of products
4. Be of built-in over-temperature and smoke-alarming automatic protection device
5. Be of editable switch sequence and load conversion function
6. Energy conversion efficiency of is more than 85%
7. Cooperate with monitoring software of power burn-in, for application
8. Interface of multiple DC adapter plates can meet the demands for different output interface products
9. Be of optional multiple laminate structures at products zone and meet the requirements for more convenient operation of different products
10. Be of AC parameters measurement module and testing power input characteristics (optional)
11. Be of automatic voltage switching function (optional)
12. Be of temperature monitoring function at products zone (optional)
13. E-load model can be select,energy saving or Non-energy saving
14. Efficiency of energy saving conversion over 85%

性能参数 Performance parameters

型号Model	CP-3021	CP-3022	CP-3023	CP-3033	CP-3034	CP-3035
单通道功率 Power of single channel	3200W/CH	800W/CH	200W/CH	400W/CH	1600W/CH	2000W/CH
负载通道数量 Quantity of load channels	24CH	48CH	96CH	96CH	36CH	36CH
负载电压范围 Scope of load voltage	3-60V/10-120V	3-60V/10-120V	10-400V	3-60V	3-60V	10-100V
负载电流范围 Scope of load current	100A/CH	100A/CH	0.5-10A/CH	0.5-40A/CH	0.5-120A/CH	0.5-80A/CH
负载精度 Load precision	±(2%+0.5%FS)					
产品区层数 Number for plies of product zone	6					
产品区层高 Height for plies of product zone(mm)	170					
产品区宽度 Width of products zone(mm)	340	340	340	340	600	600
负载模块选型 Load Model	节能负载模块 Energy saving load module					
负载模式 Load Mode	CC+CV+CR Mode					
产品区控温 Temperature control of products zone	产品区温控式：常温~60°C Temperature control tyep of products zone: normal temperature-60°C					
台车结构材质 Structure material of trolley	冷轧板精细加工制成 Elaborately processed and produced with cold-rolled sheet					
主控方式 Mode of main control	电脑监控型电源老化监控软件 Monitoring software for burn-in of computermonitoring type power					
被测电源输入方式 Input mode of UUT	万用插座/音箱线夹/客户定制 Multi-purpose socket/speaker wire clip/custom design					
被测电源接口方式 Interface mode of UUT	多种规格转治具板先择/客户定制 Connecting fixture boards(with various specifications)for first choice/custom design					
外型尺寸 External dimension(L*W*H)	2050*1000*1900/客户定制 2050*1000*1900/custom design			2050*1280*1900/客户定制 2050*1280*1900/custom design		

LED灯具/家电控制板老化系统
LED lamp/Home appliance control board Burn-in testing system

应用范围 Scope of application

- 适用于LED灯具实验室可靠性老化测试
- 适用于家电类控制板老化测试

- Apply on LED lamp’ s reliability burn-in test
- Apply on home appliance control board’ s burn-in test

卓越功能 Outstanding functions

1. 每通道电参数进行实时监控，记录灯具的测试参数
2. 测试灯具闪烁、开关电源异音等
3. 内置多组输出变压器，选择不同电压范围进行测试
4. 电脑监控软件功能强大可监控18个台
5. 具有耐热试验、高低压冲击测试、开关试验、寿命试验等
6. 配置各种不同的灯型灯座，满足各种不同LED灯具的老化测试
7. 内置超温与烟雾报警自动保护装置
8. 可编辑开关时序功能
9. 配合灯具老化监控软件使用
10. 产品层板为抽屉式，更方便操作
11. 交流电参数测量模组，测试电源输入特性
12. 电压自动切换功能（选配）
13. 产品区温度监控功能（选配）

1. Conduct real-time monitor for electrical parameters of each product and record test parameters of each lamp
2. Conduct screening for defective products such as lamp flicker and abnormal sound of switching power
3. Be of built-in multiple output transformers and choose different voltage scopes for test
4. Be of strong functional computer monitoring software, and can monitor free upgrade of 18 trolleys
5. Be of heat resistance test, high and low voltage impact test, switch test and life test
6. Equip with various models of lamp holders and meet burn-in tests of various LED lamps
7. Be of built-in over-temperature and smoke-alarming automatic protection device
8. Be of editable switch sequence function
9. Cooperate burn-in monitoring software of lamp, for application
10. Be of drawer type product laminates, which are with convenient for operation
11. Be of AC parameters measurement module and testing power input characteristics
12. Be of automatic voltage switching function (optional)
13. Be of temperature monitoring function at products zone (optional)

性能参数 Performance parameters

型号Model	CP-3024	CP-3025
适用灯型 Applicable lamp mdel	球泡灯、射灯、筒灯、T8灯管等 The bubble lamp, spotlight, tube lamp, T8 modulator tube	家电类控制板 Home Appliance Control Board
老化数量 Burn-in number	160CH或定制 160CH/custom design	192CH或定制 192CH/custom design
电压范围 Voltage scope	85-264V	110V/220V
输入特性测试 Input characteristics test	有 Yes	有 Yes
耐热试验 Heat resistance test	有 Yes	无 No
高低压冲击测试 High and low voltage impcat test	有 Yes	无 No
开关试验 Switch test	有 Yes	有 Yes
电压切换功能 Voltage swtching function	有 Yes	有 Yes
保护功能 Protection function	有 Yes	有 Yes
产品区温控 Temperature control of products zone	产品区温控式：常温~60°C Temperature control type of products zone: normal temperature-60°C	
台车结构材质 Structure material of trolley	冷轧板精细加工制成 Elaborately processed and produced with cold-rolled sheet	
主控方式 Mode of main control	电脑监控型电源老化监控软件 Monitoring software for burn-in of computer-monitoring type power	
被测灯具输入方式 Input mode of tested lamps	万用插座/音箱线夹/客户定制 Multi-purpose socket/speaker wire clip/custom design	
外型尺寸（L*W*H） Extemal dimension(L*W*H)	2050*880*1900/客户定制 2050*880*1900/custom design	

电池充放电老化测试柜
Battery charge and discharge Burn-in test cabinet

应用范围 Scope of application

- 主要应用于包括锂离子电池、铅酸电池、镉镍电池、镍氢电池等电池生产或实验中的寿命老化测试(Circle Life Testing)和质量控制
- 支持的试验内容：电池循环寿命试验、电池容量试验、电池充电特性试验、电池放电特性试验、电池荷电保持能力试验、电池充放电效率试验、电池过充、过放速率承受能力试验等

- Mainly used in battery production or experiments including lithium-ion batteries, lead-acid batteries, cadmium-nickel batteries, nickel-hydrogen batteries and other battery life testing (Circle Life Testing) and quality control
- Supported test content: battery cycle life test, battery capacity test, battery charge characteristic test, battery discharge characteristic test, battery charge retention test, battery charge and discharge efficiency test, battery overcharge, overdischarge rate endurance test, etc

卓越功能 Outstanding functions

1. 能量回馈(直流母线效率≥90%)：能量回馈型，充放电双向都是节能的，能节约大量耗电开支，同时节约大量能耗热量所产生的空调电费开支
2.CCCV 充电：充电过程 CCCV 无隙过度，无任何的电压电流冲击。可有效防止电池因尖峰电流出现热量集中导致极耳脱粉或微短路产生孤岛效应或过冲现象引起 PCB 的保护动作和二次保护动作
3. 测试工步可分段设置记录条件，实行智能数据管理记录

1. Energy feedback (DC bus efficiency ≥90%): Energy feedback type, both charging and discharging are energy-saving, which can save a lot of electricity consumption and at the same time save a lot of energy consumption and heat generated by air conditioning electricity expenses
2. CCCV charging: There is no excessive gap between CCCV during charging, and no voltage and current impact. It can effectively prevent the battery from being concentrated due to the peak current caused by the heat concentration of the tabs, or the islanding effect or overshoot caused by the micro-short circuit causing the PCB protection action and the secondary protection action
3. Recording conditions can be set in sections for test steps, and intelligent data management records can be implemented

性能参数 Performance parameters

型号Model		CP60V50A	CP100V40A
通道数量 Number of channels		1-12通道(选配) 1-12 channels (optional)	12-48通道(选配) 12-48 channels (optional)
充放电模式 Charge and discharge mode		CC/CV	CC/CV
单通道充电 Single channel charging	输出电压范围 Output voltage range	10-100V	无 NO
	输出电流范围 Output current range	0-30A	无 NO
单通道放电 Single channel discharge	输入电压范围 Input voltage range	10-100V	10-100V
	输入电流范围 Input current range	0-30A	0-30A
单通道功率 Single channel power		3000W	3000W
电压控制精度 Voltage control accuracy		1%	1%
电流控制精度 Current control accuracy		1%	1%
输入供电方式 Input power supply mode		三相380V Three-phase 380V	三相380V Three-phase 380V
机柜尺寸(W*D*H) Cabinet size (W*D*H)		2050*1200*1900/客户定制 2050*1200*1900/custom design	600*800*1980mm/客户定制 600*800*1980mm/custom design
重量 Weight		≤350kg	

储能电源老化柜
Energy storage power Burn-in cabinet

卓越功能 Outstanding functions

1. 充电控制系统
软件控制程控电源，自由设定电压给储能电源充电

2. 充电监控系统
软件可监控程控电源给储能电源充电过程中的电压、电流并计算出充电电量

3. AC 放电监控系统
监控储能电源 AC 输出放电时电压电流参数规格

4. AC 转 DC 系统
通过监控到 AC 输出的参数自动计算设置后端 DC 负载的拉载值

5. 快充诱骗功能
支持 QC/PD 快充功能

6. DC 放电监控系统
监控储能电源 DC 输出放电时电压电流参数规格

7. 充放电容量的计算
可支持容量的范围判定，比如设置截止放电容量到达设定值时可停止老化或执行下一个项目

8. 多种负载组合拉载
支持多种负载组合配置老化柜

1. Charge Control System
Software control program-controlled power supply, freely set voltage to charge energy storage power supply

2. Charge monitoring system
The software can monitor the voltage and current in the process of charging the energy storage power supply by the program-controlled power supply and calculate the charging power

3. AC discharge monitoring system
Monitor the voltage and current parameter specifications when the AC output of the energy storage power supply is discharged

4. AC to DC system
By monitoring the AC output parameters, the load value of the back-end DC load is automatically calculated and set

5. Fast charge deception function
Support QC/PD fast charge function

6. DC discharge monitoring system
Monitor the voltage and current parameter specifications when the DC output of the energy storage power supply is discharged

7. Calculation of charge and discharge capacity
The capacity range can be judged, for example, when the cut-off discharge capacity reaches the set value, the burn-in can be stopped or the next project can be executed

8. Multiple load combinations
Support multiple load combinations to configure the burn-in cabinet

性能参数 Performance parameters

老化柜体结构及老化数量规划 Aging cabinet structure and aging quantity planning	台车尺寸(mm) Trolley size (mm)	L2050*W880*H2050mm（单个老化柜尺寸） L2050*W880*H2050mm (size of a single aging cabinet)
	台车层数 Number of trolley layers	4层，产品区深度400mm，(每层12个老化位) 4 layers, product area depth 400mm, (12 aging positions per layer)
	台车层高 Trolley height	350mm
	台车结构材质/外观色 Trolley structure material/ appearance color	2.0mm厚冷轧板，电脑白 2.0mm thick cold rolled sheet, computer white
	负载区散热方式 Load area cooling method	顶部涡轮排风机上排式（便于环温控制） Top turbine exhaust fan top row type (easy to control the ambient temperature)
	层间绝缘及防静电方式 Layer insulation and anti-static method	表面带散热孔的环氧绝缘板 Epoxy insulation board with heat dissipation holes on the surface
	整体老化房结构 Overall aging room structure	采用移动式老化分体柜；外型美观大方，同时方便移动组合 Adopt mobile aging split cabinet; beautiful appearance and easy to move and combine
能源回收型模组配置、被测电源功率及老化数量介绍 Introduction to energy recovery module configuration, power of the tested power supply and aging quantity	能源回收模组控制方式 Energy recovery module control method	RS485通讯方式，上位机RS232通讯方式 RS485 communication mode, upper computer RS232 communication mode
	安装能耗模组型号 Install energy consumption module model	CP8118
	安装能耗模组型数量 Number of installed energy consumption modules	每层8台8CH型模组,整个老化柜需安装32台 8 sets of 8CH modules per layer, 32 sets of aging cabinet need to be installed
	安装能源回收模组型号 Install energy recovery module model	CP8506 +CP5302（规格详见说明） CP8506 +CP5302 (see instructions for specifications)
	能源回收模组隔离方式 Energy recovery module isolation method	电子负载模块通道采用光电隔离（通讯及供电隔离） Electronic load module channel adopts photoelectric isolation (communication and power supply isolation)
	安装能源回收模组数量 Number of installed energy recovery modules	每层4台8CH能源回收型模组,整个老化柜需安装8台,安装5KW单相并网逆变模组6台 4 sets of 8CH energy recovery modules per floor, 8 sets of the entire aging cabinet need to be installed, 6 sets of 5KW single-phase grid-connected inverter modules are installed
	能源回收模组设计架构 Energy recovery module design framework	无继电器，长寿命式设计方案（自主知识产权） No relay, long-life design scheme (independent intellectual property rights)
	整柜老化产品数量 Number of aging products in the whole cabinet	单个柜老化8路DC输出（50W/100V/5A)AC输出(220V/500W)以下储能电源32台 Single cabinet aging 8 DC output (50W/100V/5A) AC output (220V/500W) below 32 energy storage power supplies
电源老化柜电控、温控装置介绍 Introduction of electric control and temperature control device for power aging cabinet	接线方式 Wiring	客户指定接口;输入端口为品字插座 Customer specified interface; input port is pin socket
	面板功能键 Panel function keys	输入交流电压显示、启动开关，急停开关 Input AC voltage display, start switch, emergency stop switch
	台车配电、控制方式 Trolley power distribution and control mode	380V三相五线配电；电脑监控及自动电控 380V three-phase five-wire power distribution; computer monitoring and automatic electric control
	台车配电功率 Trolley power distribution	单台老化柜500W*32台/0.85≒20KW，被测电源效率按85%计算 A single aging cabinet 500W*32 sets/0.85≒20KW, the measured power efficiency is calculated at 85%
	控制方式 Way to control	电控含手动/自动切换,老化时由电脑实时监控,电控柜可扩展AC电压自动切换功能 The electric control includes manual/automatic switching, and it is monitored by the computer in real time when it is aging. The electric control cabinet can expand the automatic switching function of AC voltage
	安全保护 Safety protection	设备接地保护,漏电开关保护,烟雾报警自动断电保护等 Equipment grounding protection, leakage switch protection, smoke alarm automatic power-off protection, etc.
系统主要功能介绍 Introduction to the main functions of the system	适用储能电源 LED电源、充电器、工控电源、显示类电源、医疗电源等等电源老化 Suitable for energy storage power supply LED power supply, charger, industrial control power supply, display power supply, medical power supply, etc.	
	免费配置自主开发电源老化专用监控软件，具有自主知识产权无法律风险 Free configuration of self-developed special monitoring software for power aging, with independent intellectual property rights and no legal risks	
	用可编程电子负载模块监测输出端电压,电流及功率等参数 Use programmable electronic load module to monitor output terminal voltage, current and power parameters	
	老化专用监控软件享有终免费升级服务，扩容性功能强大节省设备重复投资 Dedicated monitoring software for aging enjoys free final upgrade service, powerful expansion function, saving repeated investment in equipment	
	老化参数，时间设置 ,ON/OFF 时序编辑（被测产品开关机试验），支持电压自动切换，负载变换等功能可程式（老化参数可在固定时间段自动切换） Aging parameters, time setting, ON/OFF sequence editing (test of the product being tested on and off), support for automatic voltage switching, load conversion and other functions can be programmed (aging parameters can be automatically switched in a fixed time period)	
	被测电源老化结束自动定时关闭电源功能，方便无人值守 The function of automatically turning off the power at the end of the aging of the tested power supply is convenient for unattended	
	电脑自动显示被测电源产品好坏，视窗多台车便于集中管理，节省操作人员提高生产效率 The computer automatically displays the quality of the tested power supply product, and multiple windows in the window are convenient for centralized management, which saves operators and improves production efficiency	
	电脑可存储被测电源老化数据报表，被测电源过程参数便于追朔;另外具有条码码扫描,支持MES系统上传 The computer can store the aging data report of the tested power supply, the process parameters of the tested power supply are easy to trace; in addition, it has barcode scanning and supports MES system upload	
	RS232转RS485采用光电隔离转换器，提升通讯可靠度及可防止雷击损坏设备 RS232 to RS485 adopts photoelectric isolation converter to improve communication reliability and prevent lightning damage to equipment	
	每台电脑可同时监控18台设备，(每串口可连从机63台，每台电脑最多支持18个串口) Each computer can monitor 18 devices at the same time, (each serial port can connect to 63 slaves, and each computer supports up to 18 serial ports)	
	电源老化监控软件内置帮助文档，方便即时解决操作疑问 The power aging monitoring software has a built-in help file, which is convenient for solving operation questions immediately	

新能源OBC水冷老化系统
New energy OBC water cooling Burn-in system

应用范围 Scope of application

- 适用于混合动力车、电动汽车、电动大巴车、新能源汽车DC-DC变换器等老化测试
- Apply to burn-in test of hybrid car, electric vehicles, electric buses, new energy vehicles and DC-DC converters

卓越功能 Outstanding functions

1. CC、CV 两种负载模式，可以混合搭配使用，CC 模式可通道并联满足大功率扩展
2. 节能转换效率 85% 以上
3. 支持 Von 启动电压设定，有效控制过充或过放现象
4. 支持 PASS/FAIL 信号输出 LED 灯指示，信号可外接控制下位机
5. 通道可独立控制，输入输出电气隔离，操作安全
6. 具有电压远端采集功能，电压测量精准
7. 高频软开关技术，超温自启变频高速风扇散热
8. 具有过压、过流、过功率、过温、反极性等多项保护功能

1. CC, CV two kinds of load mode, can be mixed with the use of CC model can be used in parallel to meet the expansion of large power
2. Energy saving conversion efficiency of more than 85%
3. Supports Von starting voltage setting, effective control over charge or over discharge phenomenon
4. Support PASS/FAIL signal output LED lamp indication, signal can be connected to control the next bit machine
5. Channel can be independently controlled, input and output electrical isolation, operation safety
6. With the voltage remote collection function, voltage measurement precision
7. High frequency soft switching technology, ultra high speed variable frequency Fan
8. With over voltage, over current, over power, over temperature, reverse polarity and so on a number of protection functions

性能参数 Performance parameters

型号Model		CP-3036	CP-3037
负载范围 Load range	低压 Low pressure	3-60V	3-60V
		1A-240A 3.2kW	1A-240A 3.2kW
	高压 High pressure	200-1000V	200-750V
		1A-20A 8kW	1A-25A 20kW
负载精度 Load precision		±(2%+0.5%FS)	
产品区层高 Height for plies of product zone(mm)		400mm	
产品区宽高 Width of product zone(mm)		600mm	
负载模块选型 Load model		节能负载模块 Energy saving load module	
负载模式 Load mode		CC+CV Mode	
产品区温控 Temperature control of products zone		产品区温控式：常温~60°C Temperature control type of products zone: normal temperature-60°C	
水冷温度 Water cooling temperature		5°C-85°C	
台车结构材质 Structure material of trolley		冷轧板精细加工制成 Elaborately processed and produced with cold-rolled sheet	
主控方式 Mode of main control		电脑监控型电源老化监控软件 Monitoring software for burn-in of computer-monitoring type power	
被测电源输入方式 Input mode of UUT		万用插座/音箱线夹/客户定制专用插座 Multi-purpose socket/speaker wire clip/Customized special socket	
被测电源j接口方式 Interface mode of UUT		多种规格转接治具板先择/客户定制专用插座 Connecting fixture boards (with various specifications) for first choice/Customized special socket	
外型尺寸(L*W*H) External dimension(L*W*H)		2150*1500*2000/客户定制 2150*1500*2000/custom design	

02

定制电源老化测试系统

CUSTOMIZED
POWER BURN-IN TEST SYSTEM

5G通信电源老化测试系统
5G communication power Burn-in testing system

应用范围 Scope of application

- 主要应用于满足 5G 通信能源低压三相 4KW 和单相 6KW 产品老化需求，并且兼容 2KW 及能源板件电源产品的老化测试，满足产品的出厂测试要求。单套老化测试系统包含老化柜产品柜体（含温控、配电、监控等）、老化配电柜体、负载系统等
- It is mainly used to meet the burn-in requirements of 5G communication energy low-voltage three-phase 4KW and single-phase 6KW products, and is compatible with the burn-in test of 2KW and energy board power products to meet the factory test requirements. A single set of burn-in test system includes burn-in cabinet product cabinet (including temperature)

性能参数 Performance parameters

项目Project	规格需求Specification requirements
参考尺寸(D*W*H) Reference Size	D1000mm*W600mm*H1700mm
老化测试容量 Burn-in test capacity	1200W/CH、60CH
额定工作电压 Rated working voltage	交流：380VAC/三相+10%/-15% AC：380VAC/Three-phase+10%/-15%
额定绝缘电压 Rated insulation voltage	690VAC
额定频率 Rated frequency	50Hz
额定工作电流 Rated working current	输入：360A Input:360A
工作温度 Operating temperature	5℃-45℃
输出通道规格 Output channel specifications	380VAC/三相 60A 380VAC/Three-phase 60A
保护功能 Protective function	支持烟感、过温、同时支持三色灯显示状态 Support smoke sense, over temperature, and three-color light display status at the same time
监控速率 Monitoring rate	机柜内数字采集信息的刷新间隔时间需要小于1S The refresh interval of digitally collected information in the cabinet needs to be less than 1S
烟雾传感器类型 Smoke sensor type	置顶安装型烟感，常闭点工作 Overhead installation type smoke sense, normally closed point work
阻燃等级 Flammability rating	柜体所有材料均需满足99-V0等级 All materials of the cabinet must meet the 99-V0 rating
配电部件温升 Temperature rise of power distribution components	符合IEC 60947-1 有关温升的规定，且温升值不超过组件相应的标准要求 Complies with the provisions of IEC 60947-1 on temperature rise, and the temperature rise value does not exceed the corresponding standard requirements of the component
漏电保护 Leakage Protection	机柜的电源输入必须与设备用电匹配的漏电保护功能，交流侧需安装30mA的漏电保护空开 The power input of the cabinet must match the power leakage protection function of the equipment. The AC side needs to be installed with a 30mA leakage protection circuit breaker
监控、指示要求 Monitoring / instruction requirementsc	配置19寸液晶显示器，配置键盘鼠标等交互部件，采用电脑进行下位机监控 Equipped with 19-inch LCD display, keyboard and mouse and other interactive components, using a computer to monitor the lower computer 人机界面用于显示柜体内 PLC 的采集温度、控制状态、系统状态，风扇的运行状态、DD&DA 设备状态、柜体的输入交流电等信息 DD&DA 状态查询、设定由测试监控板进行监控 The man-machine interface is used to display the PLC collection temperature, control status, system status, fan running status, DD & DA equipment status, cabinet input AC power and other information in the cabinet. DD & DA status query and setting are monitored by the test monitoring board

EC风机老化测试系统
EC fan Burn-in testing system

应用范围 Scope of application

- 主要应用于温控EC风机驱动模块的老化测试
- Mainly used in burn-in test of temperature-controlled EC fan drive module

性能参数 Performance parameters

项目Project		规格需求Specification requirements
技术要求 Skills requirement	老化柜尺寸(mm) Burn-in cabinet size(mm)	L2400*W1200*H1600
	额定工作电压(V) Rated working voltage	460Vac
	额定绝缘电压(V) Rated insulation voltage	690Vac
	额定频率(Hz) Rated frequency	50Hz
	额定工作电流(A) Rated working current	8.3A
	工频耐受电压1分钟(V) Power frequency withstand voltage for 1 minute	2500Vac
	交流输入规格 AC input specifications	460Vac/8.3A
	交流输出规格 AC output specifications	364Vac/8.35Amax
	温升 Temperature rise	符合 IEC 947-1 有关温升的规定，且温升值不超过组件相应的标准要求 Complies with the provisions of IEC 947-1 on temperature rise, and the temperature rise value does not exceed thecorre-sponding standard requirements of the component
	总开关 Master switch	4路 100A 4way 100A
	输入开关 Input switch	24路 16A 24way 16A
	输出开关 Output switch	24路 16A 24way 16A
	IP等级 IP rating	IP20
	噪声 Noise	<70分贝（距离设备1米处测量） <70dB (measured at a distance of 1m from the device)
结构要求 Structural requirements	外形尺寸 max(mm) Dimension (mm)	2400(W)*1200(D)*1600(H)
	老化槽位布局要求 Burn-in slot layout requirements	3层、每层8个老化槽位柜底部需预留40CM安装电感(40*16*30 长*宽*高) (cm) The bottom of the cabinet with 3 layers and 8 aging slots on each floor needs to be reserved for 40CM installation inductance (40 * 16 * 30 length * width * height) (cm)
	对接方式 Docking method	连接器支持600VAC,16A硬连接 Connector supports 600VAC, 16A hard connection
	机柜门 Cabinet door	双开门 Double door
	维护方式 Maintenance method	前后维护 Before and after maintenance
监控、指示 Monitor and indicate	监控要求 Monitoring requirements	1. 电气接口：RS485通信，共24路，每路接口相互隔离 Electrical interface: RS485 communication, a total of 24 channels, each interface is isolated from each other 2. 通信距离：6m Communication distance: 6m 3. 工作方式：异步半双工 Working mode: asynchronous half-duplex 4. 光电隔离：隔离电压2.5KVrms Photoelectric isolation: isolation voltage 2.5KVrms 5.参数设置：RS485波特率：9.6-115.2Kbps Parameter setting: RS485 baud rate: 9.6-115.2Kbps 6.监控参数：每槽位电源ON/OFF控制，电压、电流设置与回读，温度、告警信息回读。 Monitoring parameters: power on / off control of each slot, voltage and current settings and readback, temperature and alarm information readback.
	安全要求 Safety requirements	1. 关键部件短路、过流场景下的能量分析 Energy analysis of key components in short-circuit and over-current scenarios 2. 具备过温、冒烟场景下的能量分析 With energy analysis in over-temperature and smoking scenes 3. 控制电路具备漏电保护功能 The control circuit has a leakage protection function
	面板指示 Panel instructionsv	各槽位指示灯 Each slot indicator

车载BMS高温老化测试系统
Car BMS high temperature Burn-in testing system

应用范围 Scope of application

- 本设备主要应用于车载电机控制器BMS单板的高温老化测试
- This equipment is mainly used for high temperature burn-in test of BMS board of vehicle motor controller

性能参数 Performance parameters

项目Project		规格需求Specification requirements
技术要求 Skills requirement	老化柜尺寸(mm) Burn-in cabinet size(mm)	L1600*W1100*H1600
	额定工作电压(V) Rated working voltage	380Vac
	额定绝缘电压(V) Rated insulation voltage	690Vac
	额定频率(Hz) Rated frequency	50Hz
	额定工作电流(A) Rated working current	32A
	工频耐受电压1分钟(V) Power frequency withstand voltage for 1 minute	2500Vac
	UUT 输入规格 UUT input specifications	12VDC/5Amax*36通道 12VDC/5Amax*36passageway
	UUT 输出规格 UUT output specifications	静态老化，不带负载 Static burn-in without load
	老化工位数量 Number of burn-in stations	36个（6层*6个，分层控制） 36 (6 layers * 6, hierarchical control)
	老化温度要求 Burn-in temperature requirements	产品区（50℃~85℃）可设，±3℃精准控制 Product area (50 ℃ ~ 85 ℃) can be set, ± 3 ℃ precise control
	温升 Temperature rise	要求在15min内从室温到85°C的温升要求，当内部高温时，老化柜表面温度低于35°C Requires a temperature rise from room temperature to 85 ° C within 15 minutes. When the internal temperature is high,the surface temperature of the burn-in cabinet is below 35 °
	散热排风 Temperature rise	循环风控制，热风禁止直接排放到车间环境 Circulation air control, hot air is prohibited to be discharged directly to the workshop environment
	总开关 Master switch	1路32A
	支路开关 Branch switch	6路10A/30mA/3P or 1P
	噪声 Noise	<70分贝（距离设备1米处测量） <70dB (measured at a distance of 1m from the device)
结构要求 Structural requirements	外形尺寸 max(mm) Dimension(mm)	1600(W)*1100(D)*1600(H)
	进出线方式 In and out line	支持下进下出 Support next in and next out
	安装方式 Installation method	落地安装 Floor installation
	老化槽位布局要求 Burn-in slot layout requirements	6层、每层6个老化（3前3后）槽位；每层单独上电控制 6 layers, 6 aging (3 before 3) slots per layer; each layer is individually powered on
	对接方式 Docking method	电缆软连接 Cable flexible connection
	机柜门 Cabinet door	前后双开门 Front and rear double doors
	维护方式 Maintenance method	前后左右维护 Front, back, left and right maintenance
监控、指示 Monitor and indicate	监控要求 Monitoring requirements	触摸屏显示各槽位上电状态及传感器状态 Touch screen displays the power-on state and sensor state of each slot
	安全要求 Safety requirements	1. 具备电源，产品等关键部件短路、过流场下的能量分析 With power supply, product and other key components short-circuit, over-current field energy analysis 2. 具备过温、冒烟、漏液场景下的能量分析 With energy analysis under over-temperature, smoke and liquid leakage scenarios 3. 控制电路具备漏电保护功能 The control circuit has a leakage protection function 4. 具备接地故障、漏电故障检测和动作能力 Possess the ability to detect and operate ground faults and leakage faults 5. PLC控制，实时监控老化柜状态 PLC control, real-time monitoring of aging cabinet status
	面板指示 Panel instructionsv	各槽位状态指示灯 Status indicator of each slot

大功率适配器老化测试系统
High-power adapter Burn-in testing system

应用范围 Scope of application

- 本老化测试系统主要应用各种交流-直流适配器的老化
- This burn-in testing system mainly applies the burn-in of various AC-DC adapters

性能参数 Performance parameters

项目Project			规格需求Specification requirements
通用要求 common enquiries	老化柜尺寸(mm) Burn-in cabinet size		L2600*W1320*H1980，逆变柜可独立外置 L2600 * W1320 * H1980, the inverter cabinet can be installed independently
	容量 Capacity	老化产品最大回馈功率 Maximum feedback power of burn-in products	54KW@1000A
		满负荷回馈效率 Full load feedback efficiency	>85%
		满负荷最大耗电 Maximum power consumption at full load	<15KW
		通道数量 Number of channels	共6层，每层设置1500W的通道12个 A total of 6 floors, each with 12 channels of 1500W
		负载数量 Number of loads	共6层，每层12个负载,共72个负载CP8503 A total of 6 layers, 12 loads per layer, a total of 72 loads CP8503
	单通道最小带载电流 Single channel minimum load current		≤0.5A
	每层内部墙体可使用空间 Available space on each floor of internal wall		长≥1.8m、深≥0.5m Length ≥1.8m, depth ≥0.5m
	设备使用环境 Equipment use environment		温度-10~55°C，湿度0~95% Temperature -10 ~ 55 °C, humidity 0 ~ 95%
输入要求 Input requirements	输入电压 Input voltage		DC-48 供电（-48V 电压范围 38.5~72V，且输入存在反复通断，建议电能回馈到 AC 三相电） Each layer is DC-48 power supply (-48V voltage range 38.5 ~ 72V, and there are repeated on and off input, it is recommended that the energy be fed back to AC three-phase power)
	开关控制 Switch control		每层都配有接触器（1个接触器通流无法满足，每3个工位一个接触器），通过远程通过接触器控制单层模块上下电，接触器最大功率通流条件下 200ms 周期反复吸合断开 10000 次不能失效 Each layer is equipped with a contactor (1 contactor can not meet the flow, one contactor every 3 stations), the single-layer module is controlled by the remote through the contactor to power on and off, the contactor repeats 200ms cycle under the maximum power flow It can't be invalid after 10000 disconnection
	输入线缆 Input cable		满功率运行时，不能超线缆通流要求，线缆选型需要满足105°C及以上高温要求 When running at full power, the cable flow requirement cannot be exceeded, and the cable selection needs to meet the high temperature requirements of 105 °C and above
	输入端子 Input terminal		输入侧铜排走线，铜排保证满负荷时通流，单个被测模块最大输入电流50A The input side copper wire is routed, the copper wire guarantees the current flow at full load, the maximum input current of a single tested module is 50A
	辅助源 Auxiliary source		每层提供12个输出电压12V电流2A以上的辅助源接口，辅助源相互隔离，为监控板和华为风扇供电，辅助源不会因每层的输入接触器断开掉电 Each layer provides 12 auxiliary source interfaces with an output voltage of 12V and a current of 2A or more. The auxiliary sources are isolated from each other to supply power to the monitoring board and Huawei fans.The auxiliary source will not be powered down by the input contactor of each layer
输出要求 Output requirements	输出电压 Output voltage		3~60Vdc
	负载模式 load mode		CC
	输出电流 Output cuurent		1500W@120A，电流设精度±3%，最小拉载电流0.5A，每个通道可以独立控制负载电流大小，负载CC模式设置最小步进0.1A 1500W @ 120A, the current setting accuracy is ± 3%, the minimum load current is 0.5A, each channel can independently control the load current, and the load CC mode is set to a minimum step of 0.1A
	输出电压上报 Output voltage report		误差小于+/-0.2V Error is less than +/- 0.2V
	输出插座 Output socket		每个测试槽位需要配有对接线端子，每个工位配8个输出端子（正负），端子通流≥20A Each test slot needs to be equipped with a pair of terminals, each station is equipped with 8 output terminals (positive and negative), the terminal flow ≥20A
温 度 Temperature	老化柜内部工作温度范围为室温 ~70 度，升温到 70 度的时间不大于 30min，工作温度范围内每个温度可长期工作。每两层一个温度控制区，每个控制区温度单独控制，温度偏差为 +/-3 度 The internal working temperature range of the aging cabinet is room temperature ~ 70 degrees, and the time for heating up to 70 degrees is not more than 30min. Each temperature within the working temperature range can work for a long time. There is a temperature control zone on every two floors, the temperature of each control zone is controlled separately, and the temperature deviation is +/- 3 degrees		

锂电模块老化测试系统
Lithium battery module Burn-in testing system

应用范围 Scope of application

- 本设备是针对锂电模块老化测试系统
- This equipment is for lithium battery module burn-in testing system

性能参数 Performance parameters

项目 Project	规格需求Specification requirements
老化柜尺寸(mm) Burn-in cabinet size	L2600*W1320*H1980
配电柜尺寸(mm) Distribution cabinet size	L600*W1320*H1980
电气设计 Electrical design	1、进线：三相380V/68A Incoming line: three-phase 380V / 68A 2、配电：交流输出采用三相五线制，单相电压给电源模块供电，按a\b\c\a\b\c分层进行三相均衡 Power distribution: AC output adopts three-phase five-wire system, single-phase voltage supplies power to the power module, and three-phase equalization is carried out in layers according to a\b\c\a\b\c 3、控制：每个层供电输出通断可以通过监控控制 Control: the power output of each layer can be controlled by monitoring 4、包含22寸液晶显示器和键盘，LCD人交互界面等 Including 22-inch liquid crystal display and keyboard, LCD human interactive interface, etc.
	1、整体布局：老化柜内含产品区和隔离模块区，两个区域隔离。老化柜产品区共6层，每层3槽位，每层1pcsPSU，6pcs 隔离模块 Overall layout: the aging cabinet contains the product area and the isolation module area, and the two areas are isolated. There are 6 layers in the aging cabinet product area, 3 slots per layer, 1pcs PSU per layer, 6pcs isolation module 2、连接方式：采用硬连接方式，老化柜内配置固定对外接口，包括供电输出、负载输入、485信号、地址信号；被测产品通过专用老化夹具与其进行适配对接 Connection method: adopt hard connection method, and configure the fixed external interface in the aging cabinet, including power supply output, load input, 485 signal,address signal; the tested product passes the special old Adapting and docking with the fixture 3、接口端子：选用DL17　连接器母端，背板设计时，每个槽位对应两个DL17连接器。供电输出用2个0#端子，负载输入用2个0#端子，485通信信号用2个20#小信号端子，槽位地址信号（0~31）用6个20#小信号端子 Interface terminal: The female end of the DL17 connector is selected. When the backplane is designed, each slot corresponds to two DL17 connectors. 2 0 # terminals forpower supply output, 2 0 # terminals for load input,485 communication signals use 2 20 # small signal terminals, and slot address signals (0 ~ 31) use 6 20 # small signal terminals 4、风道设计：采用底部进风，顶部1个或两个风机出风方式 Air duct design: adopt air inlet at the bottom and one or two fans at the top 5、温度控制：（室温+10℃）~60℃平滑可调 Temperature control: (room temperature + 10 ℃) ~ 60 ℃, smooth and adjustable 6、热容设计：13.5kW（2.25kW*6） Heat capacity design: 13.5kW (2.25kW * 6) 7、安规设计：满足安规、防火、紧急保护功能 Safety regulation design: meet safety regulation, fire prevention and emergency protection functions
监控硬件 Monitoring hardware	1、PC：支持1个以上485串口通讯，Windows7系统，硬盘500G。配22寸显示器，鼠标键盘，无线条码枪等设备。电脑主机外壳需接地 PC: support more than one 485 serial communication, Windows 7 system, hard disk 500G. Equipped with 22-inch monitor, mouse and keyboard, wireless barcode gun and other equipment. The shell of the computer host needs to be grounded 2、总监控：1路上行485与PC通信，4路下行485与电源模块、隔离模块、动力环境和被测产品共4类监控子系统通信 General monitoring: 1-way 485 communicates with PC, 4-way downlink 485 communicates with 4 types of monitoring subsystems including power module, isolation module, power environment and tested product 3、PSU监控：通过485串口通讯对每个电源模块进行监控，485工具板实现老化柜485到PSU CAN的转换，电源模块背板CAN地址可以离线设置 PSU monitoring: monitor each power supply module through 485 serial communication, 485 tool board realizes the conversion of aging cabinet 485 to PSU CAN, the CAN address of the power module backplane can be Offline settings 4、负载隔离模块监控：通过485串口通讯对每个隔离模块进行监控，485工具板实现老化柜485到CAN的转换，背板CAN地址可以离线设置 Load isolation module monitoring: monitor each isolation module through 485 serial communication, 485 tool board realizes the conversion of aging cabinet 485 to CAN, and the CAN address of the backplane can be offline Settings 5、动力环境监控：每层供电、风扇开关单独可控，每个槽位提供一组电压（0~100V）、电流（0~100A）、温度、烟感采样信息 Power environment monitoring: each layer of power supply, fan switch can be individually controlled, each slot provides a set of voltage (0 ~ 100V), current (0 ~ 100A), temperature, smoke sensing sampling information
监控软件 Monitoring softwa	1、485接收上位机命令，再通过CAN对电源模块进行相应监控 485 receives the command from the host computer, and then monitors the power module through CAN accordingly 2、485接口满足协议，实现输出电压、限流设置命令，实现输出电压、电流、告警状态等信息查询命令 The 485 interface meets the protocol, realizes the output voltage and current limit setting commands, and realizes the output voltage, current, alarm status and other information query commands 3、485接收上位机命令，对各个监控单元进行监控，实现各路开关通断设置命令，实现电压、电流、温度、烟感状态等信息查询命令 485 receives the commands from the host computer, monitors each monitoring unit, realizes the on and off setting commands of each switch, and realizes the information query commands such as voltage, current, temperature, smoke status, etc. 4、通过4个下行485接口管理控制电源模块监控、负载隔离模块监控、老化柜动力环境监控和待测产品监控，通过1个上行485接口与PC完成监控信息交互 Manage and control power module monitoring, load isolation module monitoring, aging cabinet power environment monitoring and product under test monitoring through 4 downstream 485 interfaces, and PC through 1 upstream 485 interface Complete monitoring information interaction 5、能实时自动处理下行柜体设备异常（温度、电压、电流等异常），参数调整、控制重启复位，并记录告警 It can automatically handle the abnormality of the downstream cabinet equipment (temperature, voltage, current, etc.) in real time, parameter adjustment, control restart and reset, and record alarms
整机保护、告警、以及控制技术要求 Machine protection, alarm, and control technical requirements	机柜烟感、过温保护 Cabinet smoke, over temperature protection
	机柜散热：单负载柜产品区具备6KW热量散热能力 Cabinet heat dissipation: single load cabinet product area has 6KW heat dissipation capacity
	漏电防护：电源输入与设备用电匹配的漏电保护功能，交流侧安装30mA的漏电保护空开 Leakage protection: a leakage protection function that matches the power input to the power consumption of the device, and a 30mA leakage protection circuit breaker is installed on the AC side

整流器老化测试系统
Rectifier Burn-in testing system

应用范围 Scope of application

- 本设备适用于整流器老化测试
- This equipment is suitable for rectifier burn-in test

性能参数 Performance parameters

项目 Project	规格需求Specification requirements
老化柜尺寸(mm) Burn-in cabinet size	L1820*W1050*H1980
控制柜尺寸(mm) Control cabinet size	W600*D1050*H1980
电气设计 Electrical design	1、进线：三相380V/100A Incoming line: three-phase 380V / 100A 2、配电：交流输出采用三相五线制，单相电压给产品供电，按a\b\c\a\b\c分层进行三相均衡 Power distribution: AC output adopts three-phase five-wire system, single-phase voltage supplies power to the product, and three-phase equalization is carried out in layers according to a\b\c\a\b\c 3、控制：每个层供电输出通断可以通过监控控制 Control: the power output of each layer can be controlled by monitoring 4、包含19寸液晶显示器和键盘，LCD人交互界面等 Including 19-inch liquid crystal display and keyboard, LCD human interactive interface, etc.
	1、整体布局：老化柜主要为产品区共9层，每层8槽位 Overall layout: the aging cabinet is mainly composed of 9 layers in the product area, with 8 slots per layer 2、连接方式：采用硬连接方式，老化柜内配置固定对外接口，包括供电输出、负载输入、485信号、地址信号；被测产品通过专用老化夹具与其进行适配对接 Connection method: adopt hard connection method, and configure the fixed external interface in the aging cabinet, including power supply output, load input, 485 signal,address signal; the tested product passes the special old Adapting and docking with the fixture 3、接口端子：选用DL37型镀金连接器母端 Interface terminal: select female end of DL37 gold-plated connector 4、风道设计：采用底部进风，顶部1个或两个风机出风方式 Air duct design: adopt air inlet at the bottom and one or two fans at the top 5、温度控制：（室温+10℃）~60℃平滑可调 Temperature control: (room temperature + 10 ℃) ~ 60 ℃, smooth and adjustable 6、热容设计：9kW Heat capacity design: 9kW 7、安规设计：满足安规、防火、紧急保护功能 Safety regulation design: meet safety regulation, fire prevention and emergency protection functions
监控硬件 Monitoring hardware	1、PC：支持 1 个以上 485 串口通讯，Windows7 系统，硬盘 500G。配 22 寸显示器，鼠标键盘，无线条码枪等设备。电脑主机外壳需接地。 PC: support more than one 485 serial communication, Windows 7 system, hard disk 500G. Equipped with 22-inch monitor, mouse and keyboard, wireless barcode gun and other equipment. The shell of the computer host needs to be grounded 2、监控对象： Monitoring object A. 所有槽位电压、电流信息 Voltage and current information of all slots B. 所有负载模块设定值、状态值信息 Set value and status value information of all load modules C. 控制器 /PLC 的温度设定值、开关量设定值、状态值信息 Device / PLC temperature setting value, switching value setting value, status value information D. 风扇控制板转速信息 Fan control board speed information E. 漏电流信息 Leakage current information F. 烟雾报警器状态 Smoke alarm status G. 所有温度传感器采样值 Sampled values of all temperature sensors
监控软件 Monitoring softw	1、操作界面：电脑+终端软件（终端监控用于监控老化柜，监控界面集成SMU界面，用于监控模块状态） Operation interface: computer + terminal software (terminal monitoring is used to monitor the aging cabinet, and the monitoring interface integrates the SMU interface to monitor the status of the module) 2、上位机与监控系统通讯方式为485网口 The communication mode between the host computer and the monitoring system is 485 network port 3、设置、监控柜内环境温度 Set and monitor the ambient temperature in the cabinet 4、SMU监控各被老化模块状态 SMU monitors the status of each aging module 5、老化总时间设置：0-9999H(考虑到长期老化实验需求)电脑终端软件调设置 Total aging time setting: 0-9999H (considering long-term burn-in experiment needs) computer terminal software adjustment setting 6、支持分层槽位输出电压判断范围单元独设置(支持一个机柜对多个型号规格相近的同时老化) Support the unit setting of the output voltage judgment range of the layered slot (support a cabinet to age at the same time for multiple models with similar specifications) 7、设置控制模块输入电源ON/OFF，支持各种ON/OFF开关控制组合，并有CYCLE设置，各机柜不同时序 Set the input power ON / OFF of the control module, support various ON / OFF switch control combinations, and have CYCLE settings, different timings for each cabinet 8、权限控制，分3级权限用以管理老化程式 Permission control, divided into 3 levels of permissions to manage the aging program 9、老化载板ID识别 ID identification of aging carrier board
整机保护、告警、以及控制技术要求 Machine protection, alarm, and control technical requirements	机柜烟感、过温保护 Cabinet smoke, over temperature protection
	产品区具备9KW热量散热能力 The product area has a heat dissipation capacity of 9KW
	机柜的电源输入必须与设备用电匹配的漏电保护功能，交流侧需安装30mA的漏电保护空开 Leakage protection: a leakage protection function that matches the power input to the power consumption of the device, and a 30mA leakage protection circuit breaker is installed on the AC side

多样组合，灵活搭配，满足不同的需求
Diverse combination and flexble match to meet the different needs.

单元组合老化系统，分期投入，满足多品种小批量需求
Unit combination burn-in test system,take staging bring in mode,meet the multi-species and the small batch needs.

智能监控型老化房系统

Intelligent computer monitoring Burn-in testing system

应用范围 Scope of application

- 应用于各类电源包含 LED 照明电源（隔离，非隔离 LED 电源）、LED 背光电源（多通道输出电源）、适配器、充电器、工业电源、电视 TV 电源、显示器电源等固定老化房老化检测制程

- Apply to all types of power supply including LED lighting power (isolated, non-isolated LED power supply), LED backlight power supply (multi-channel output power supply), adapters, chargers, industrial power supply, TV power supply, monitor power and other fixed burn-in room burn-in test process

卓越功能 Outstanding functions

1. 老化柜可灵活搭配，多样组合
2. 可选择电子负载模组，满足不同产品老化测试
3. 可编程开关 ON/OFF 时序，负载变换，电压切换等功能
4. 自动恒温控制，超温，烟感报警并切断输入电源
5. 软件实时监控电压、电流、功率等参数，电保存数据，生成图表查阅
6. DC 转接板接口可满足不同输出接口产品需求
7. 产品区多种层板结构可选，满足不同产品更方便操作
8. 节能与非节能多种模块型号可选配
9. 节能转换效率 85% 以上

1. The burn-in cabinet can take flexible and diverse combination
2. Optional electronic load modules to meet different product burn-in testing
3. With the function :Programmable switch ,on/off timing,load changing,voltage changing,etc
4. Automatic temperature control, over-temperature, smoke alarm and cut off the input power
5. Real-time monitoring the voltage,current,power and other parameters,saving data, generate graphs for reference
6. Diversified DC adapter plate interface to meet different selection of products
7. Diversification laminates designed to meet different products burn-in test,easy to take operation
8. E-load model can be select,energy saving or Non-energy saving
9. Efficiency of energy saving conversion over 85%

CP3900C

CP3900

电气自动控制柜CP3900系列
Electrical automatic control cabinet CP3900

应用范围 Scope of application

- 应用于电源老化测试、灯具老化测试，老化房以及自动化制程等电气自动控制
- It is applicable to power supply burn-in test, lamp burn-in test, burn-in room, automatic control etc.

卓越功能 Outstanding functions

1. 多种输入电压自动切换控制
2. 高端电脑工业主机，显示器
3. 监控界面不同颜色区分视觉系统
4. 符合人体工学设计，操作方便
5. 可同时监控 18 台老化设备，分页面选择
6. 品牌电控器件，电气安全防护，操作安全

1. Automatic switching control for multiple input voltage
2. High-end industrial computer with high resolution LCD
3. Monitoring interface with colorful content
4. Ergonomic design and easy operation
5. Monitors up to 18 burn-in cabinets at the same time.
6. Famous brand electrical controls, electrical safety protection and operation safety

性能参数 Performance parameters

型号 Model	外观尺寸 Dimension	电压组数 Voltage Count	控制数量 Control Count	变压器功率 Power Transformer
CP-3900/C	1000*850*2300	5	10	200KVA
CP-3901	880*880*1900	2	1	30KVA
CP-3902	880*880*1900	4	1	30KVA
CP-3903	880*880*1900	6	1	30KVA
CP-3904	880*880*1900	2	2	60KVA
CP-3905	880*880*1900	4	2	60KVA
CP-3906	880*880*1900	6	2	60KVA
CP-3907	880*880*1900	2	4	120KVA
CP-3908	880*880*1900	4	4	120KVA
CP-3909	880*880*1900	6	4	120KVA
CP-3910	1200*880*1900	2	8	250KVA
CP-3911	1200*880*1900	4	8	250KVA
CP-3912	1200*880*1900	6	8	250KVA
CP-3913	880*880*1900	4	4	60KVA
CP-3914/C	880*880*1900	2	1	30KVA
CP-3915/C	880*880*1900	4	1	30KVA
CP-3916/C	880*880*1900	6	1	30KVA
CP-3917/C	880*880*1900	2	2	60KVA
CP-3918/C	880*880*1900	4	2	60KVA
CP-3919/C	880*880*1900	6	2	60KVA
CP-3920/C	880*880*1900	2	4	120KVA
CP-3921/C	880*880*1900	4	4	120KVA
CP-3922/C	880*880*1900	6	4	120KVA
CP-3923/C	1200*880*1900	2	8	250KVA
CP-3924/C	1200*880*1900	4	8	250KVA
CP-3925/C	1200*880*1900	6	8	250KVA
CP-3926/C	880*880*1900	4	4	60KVA
CP-3927/C	880*880*1900	4	4	60KVA

可编程直流可调电源
Programmable DC adjustable power supply

应用范围 Scope of application

- 电力、工控、通信、科研、铁路、汽车、船舶、蓄电池充电、航空航天、表面处理、电化学、新能源、电容器、电机、污水处理、电子产品生产检测、LED 照明、加热、地质勘探、医疗设备（MRI）、半导体设备（MOCVD）、真空镀膜设备等行业。用于产品测试和老化，另外，科研单位、军工电子研究所、航空电器、有色金属等单位，使用此电源进行高精度高强度电源供应下的科研工作

- DC stabilized current power supply used for power supply, industrial control system, communication, scientific research, railway, automotive, marine, battery charging, aerospace, surface treatment, electrochemistry, new energy, capacitors, motors, sewage treatment, electronic product production testing, LED Lighting, heating, geological exploration, medical equipment (MRI), semi-conductor equipment (MOCVD), vacuum coating equipment and other industries. Used for product testing and burn-in, in addition, scientific research units, military electronics research institutes, aviation electrical appliances, non-ferrous metals and other units use this power supply for scientific research under high-precision and high-intensity status

卓越功能 Outstanding functions

1. 软件设置输出参数，实时监控电压、电流、功率等参数
2. 可监控直流电源输出电压、电流、功率等充电状态
3. CC、CV 负载模式
4. CC 负载模式下可通道并联，满足产品功率扩展
5. 内置超温、过流及过压自动保护装置
6. 可编辑输出电压、输出电流、启动时间及其它多种变换功能
7. 带 4.3 寸触摸屏，更方便使用及操作
8. 多种 DC 转接板接口可满足不同输出接口产品需求
9. 多种通信方式，RS 485,RS 232,CAN BUS，满足不同客户及产品需求，可直接与电脑进行连接，更方便操作

1. Output parameters was set by the software and to monitor voltage, current, power and other parameters in real time
2. It can monitor the DC power supply output voltage, current, power and other charging status
3. CC, CV load mode
4. Parallel connection of channels in CC load mode to meet product power expansion
5. Built-in over-temperature, over-current and over-voltage automatic protection device
6. Editable output voltage, output current, start-up time and many other conversion functions
7. With 4.3 inch touch screen, it is more convenient to use and operate
8. Variety of DC fixture board interface to meet the needs of different output terminals
9. Variety of communication methods, RS 485, RS 232, CAN BUS, to meet the needs of different customers and products, can be directly connected to the computer, more convenient to operate

性能参数 Performance parameters

型号Model		CP-610X	CP-611X	CP-612X	CP-613X	CP-614X
输入特性 Input characteristics	输入电压 Input voltage	220/380Vac				
	输入电流（单相三线） Input Current (Single-phase three-wire)	15A/30A/45A	15A/30A/45A	45A	45A	45A
	输入电流（三相五线） Input current (three-phase five-wire)	15A/30A/30A	15A/30A/30A	30A	30A	30A
	输入PF值 Enter PF value	0.99				
	输入THDI Enter THDI	3%				
输出特性 Output characteristics	电压范围 Voltage range	3~60Vdc	10~100Vdc	3~120Vdc	5~180Vdc	10~300Vdc
	电流范围 Current range	50/100/150	30/60/90A	50A	50A	30A
	输出功率 Output Power	3/6/9kW	3/6/9kW	6kW	9kW	9kW
	转换效率（max） Conversion efficiency (max)	93%				
CV模式特性 CV mode characteristics	电源效应 Power effect	1%+0.02%FS				
	负载效应 Load effect	1%+0.02%FS				
	纹波噪音 Ripple noise	1%+0.02%FS				
	设置精度 Setting accuracy	1%+0.02%FS				
	设置分辨率 Set resolution	0.1V				
CC模式特性 CC mode features	电源效应 Power effect	2%+0.02%FS				
	负载效应 Load effect	2%+0.02%FS				
	纹波噪音 Ripple noise	2%+0.02%FS				
	设置精度 Setting accuracy	2%+0.02%FS				
	设置分辨率 Set resolution	0.1A				
显示特性 Display characteristics	显示界面 UI	触摸屏 Touch screen				
	显示分辨率 Display resolution	0.01V（电压）、0.01A（电流） 0.01V (voltage), 0.01A (current)				
	显示精度 Display accuracy	1%+0.02%FS				

03

自动老化测试设备篇

AUTOMATIC BURN-IN TEST EQUIPMENT

自动老化测试设备系列
Automatic Burn-in test equipment series

应用范围 Scope of application

- 适用于各类充电器，适配器等电源产品的在线自动测试以及自动老化
- Suitable for online automatic testing and automatic burn-in of various chargers, adapters and other power products

卓越功能 Outstanding functions

1. 采用全自动作业方式，每小时产能 > 1500PCS
2. 全自动作业方式，相对人工作业更加稳定可靠
3. 具备自动高压测试、ATE 测试、老化测试等等
4. 单元式设计，可根据用户需要进行具体配置
5. 节省劳动力，减轻劳动强度
6. 产品老化与测试一体化，无需周转，提升自动化程度
7. 多个测试站整合，节省空间，老化过程实时监控，设备具有异常报警停机等功能
8. 老化测试接口独立，为贵司后续的维护节约成本，稳定品质
9. 使用节能负载回收效率达 80% 以上，同时节省老化测试用电，减少负载散热用电，降低主电配置用电
10. 通用性极强，DC 带线或不带线产品都可适用，操作简单方便使用大量机械手或移载机取代人工，效率高，为贵司提升高达 50% 的生产效率

1. Automatic operation mode, per hour capacity more than 1500 PCS
2. Automatic operation mode,more stable and reliable
3. Automatic high pressure test, ATE test, burn-in test
4. Unit design, specific configuration can according to customer needs
5. Save labor, reduce labor intensity
6. Integration testing, no need to turn over, improve degree of automation
7. Multiple test station, save space, real-time monitoring, has the functions such as abnormal alarm stop
8. Burn-in test interface independent, for your follow-up maintenance,keep quality and save cost
9. Load recovery efficiency up to 80%, reduce load electricity heat, reduce the electrical waste
10. Commonality use, DC products with or without wire are applicable, the operation is simple and convenient,Using a large number of manipulator or transfer machine to replace artificial, high efficiency, for the expensive department, promote efficiency of up to 50%

性能参数 Performance parameters

一	设备基本信息 Basic information Model	设备型号 Equipment Model	CPET-AT3888S
		平均产出(UPH) Units Per Hour(UPH)	1600PCS/H或56PCS/H 1600PCS/H or 56PCS/H
		产品功率 Product Power	5W~65W/CH或1000W~3000W/CH 5W~65W/CH or 1000W~3000W/CH
		设备尺寸 Equipment Size	L=13000MM,W=2000MM,H=2700MM
		设备重量 Equipment Weight	约3000KG Around 3000kg
二	老化线相关信息 Related Information of aging line	老化房容量 Burn-in Room Capacity	3888PCS或280PCS 3888PCS or 280PCS
		老化时间 Burn-in Time	2H
		老化层数 Burn-in Ply Number	9层 9 floors
		移栽方式 Transfer mode	类似立体仓储/机械手搬运/连接器接触方式 Similar with the burn-in mode of tridimensional storage/manipulator transportation/connector contact
三	老化线温度控制系统 Burn-in Line Temperature Control system	冷却循环方式 Cooling Circulation Mode	风冷：风机+变频器+风管 Forced air cooling:fan+frequency convertwe+air duct
		控制范围及精度 Control Scope and Precision	温度控制范围：室温～60°C可调，控制精度为±5°C The temperature control scope:adjustable from room temperature to 60°C.The control precision is ±5°C
		升温速度 Temperature Rise Rate	20分钟内可升至45°C以上 Able to rise to more than 45°C in 20 minutes
四	老化线电控系统 Burn-in Line Electronic Control system	产品及负载特性 Product and Load Properties	选配 Optional
		负载特性 Load Properties	选配 Optional
		输入老化电压 Burn-in Voltage Input	最大可支持6种电压 Support up to 6 voltages
		保护及报警 Protection and Alarm	独立控制电源并加有保险及过热过载、带漏电保护开关、警示灯、紧急开关等装置 control power supply independently and added with protection and equpment including overheating and overload protection,earth leakage circuit breaker,waring light,emergency switch,etc.
		硬件需求描述 Hardware Demand Description	独立电脑主机、显示老化状态，监控输出电压、电流及功率等 Independent computer host, display burninstate, monitor output should be voltage, current,power and soon
		软体监控需求 Software Monitor Demand	根据不同的产品编写不同的老化程序、实现电压切换、冲击、开关循环，电流设定、温度设定等参数 Compile different aging programs according to different products, realize voltage switching, impact, switching cycle, current setting, temperature setting and other parameters
		老化管理需求 Burn-in Management Demand	OK 和 NG 判断监控界面直接了解到，数据可根据需要的数据格式(TXT,EXCEL)保存，方便查询及下载 The OK and NG judgment monitoring interface can directly understand that the data can be saved according to the required data format (TXT, EXCEL), which is convenient for query and download
五	测试站相关信息 Test Station Related Information	测试工序 Test Station Types	装产品+通电初测+高压+ATE+老化+ATE+取产品，自动测试老化系统，单元组合系统 Install the product + electrified initial test + high voltage +ATE+ aging +ATE+ take the product, automatic test aging system, Unit combination system
		测试方式 Test Mode	选配 Optional
		测试数据处理 Test Data Processing	选配 Optional
		测试仪器 Test Instruments	选配 Optional
		连接方式 Connection Mod	选配 Optional
六	老化&测试治具 Burn-in & Test Jig	治具尺寸 Jig Size	L500*W300*H30MM3每个载具18位或定制 L500*W300*H30MM3 18 bits per vehicle or customized
		接口方式 Interface Mode	AC:万用插座；DC:USB或常规DC母座或定制 AC: Universal socket; DC: USB or conventional DC female socket or customized
		共用性 The Commmon Usage	老化测试共用 Shared by burn-in and test
		重量 Weright	1.5KG
七	主电器控制系统 Main Electric Control System	保护装置 Protection Equipment	具有单独及分段总闸开关，有独立接地保护和漏电保护装置 Possessing independent and segmentation main switches.Having independent ground protection and electricity leakage protection devices
		电力需求 Power Demands	按实际规划 According to the actual planning
		气源需求 Air source requirements	5-8KGF/CM3

半自动老化测试设备系列
Semi-automatic Burn-in test equipment series

应用范围 Scope of application

- 适用于各类充电器，适配器等电源产品的在线自动测试以及自动老化
- Suitable for online automatic testing and automatic burn-in of various chargers, adapters and other power products

卓越功能 Outstanding functions

1. 采用全自动作业方式，每小时产能 > 1500PCS
2. 全自动作业方式，相对人工作业更加稳定可靠
3. 具备自动高压测试、ATE 测试、老化测试等等
4. 单元式设计，可根据用户需要进行具体配置
5. 节省劳动力，减轻劳动强度
6. 产品老化与测试一体化，无需周转，提升自动化程度
7. 多个测试站整合，节省空间，老化过程实时监控，设备具有异常报警停机等功能
8. 老化测试接口独立，为贵司后续的维护节约成本，稳定品质
9. 使用节能负载回收效率达 80% 以上，同时节省老化测试用电，减少负载散热用电，降低主电配置用电
10. 通用性极强，DC 带线或不带线产品都可适用，操作简单方便
11. 使用模块化移载治具取代人工放置产品，效率高，为贵司提升高达 50% 的生产效率
12. 采用 ID 号对产品的测试、老化过程进行实时跟踪，可帮助用户更快的查找和发现问题

1. Automatic operation mode, per hour capacity more than 1500 PCS
2. Automatic operation mode,more stable and reliable
3. Automatic high pressure test, ATE test, burn-in test
4. Unit design, specific configuration can according to customer needs
5. Save labor, reduce labor intensity
6. Integration testing, no need to turn over, improve degree of automation
7. Multiple test station, save space, real-time monitoring, has the functions such as abnormal alarm stop
8. Burn-in test interface independent, for your follow-up maintenance,keep quality and save cost
9. Load recovery efficiency up to 80%, reduce load electricity heat, reduce the electrical waste
10. Commonality use, DC products with or without wire are applicable, the operation is simple and convenient
11. Using a large number of manipulator or transfer machine to replace artificial, high efficiency, for the expensive department, promote efficiency of up to 50%
12.The ID number is used to track the test and aging process of the product in real time, which can help users find and find problems faster

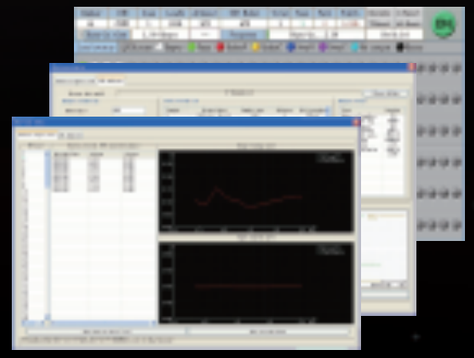
性能参数 Performance parameters

一	设备基本信息 Basic information Model	设备型号 Equipment Model	CPET-AT3200
		平均产出 (UPH) Units Per Hour(UPH)	1600PCS/H
		产品功率 Product Power	5W~40W
		设备尺寸 Equipment Size	L=5400MM,W=570MM,H=1150MM
		设备重量 Equipment Weight	约550KG Around 550kg
二	老化线相关信息 Related Information of aging line	老化房容量 Burn-in Room Capacity	单柜512PCS,整体设备可自由选配拼装 Single cabinet 512PCS, the overall equipment can be freely assembled
		老化时间 Burn-in Time	2H
		老化层数 Burn-in Ply Number	8层 8 floors
		移栽方式 Transfer mode	类似立体仓储/机械手搬运/连接器接触方式 Similar with the burn-in mode of tridimensional storage/manipulator transportation/connector contact
三	老化线温度控制系统 Burn-in Line Temperature Control system	冷却循环方式 Cooling Circulation Mode	风冷：风机+变频器+风管 Forced air cooling:fan+frequency convertwe+air duct
		控制范围及精度 Control Scope and Precision	温度控制范围：室温～60°C可调，控制精度为±5°C The temperature control scope:adjustable from room temperature to 60°C.The control precision is ±5°C
		升温速度 Temperature Rise Rate	20分钟内可升至45°C以上 Able to rise to more than 45°C in 20 minutes
四	老化线电控系统 Burn-in Line Electronic Control system	产品及负载特性 Product and Load Properties	选配 Optional
		负载特性 Load Properties	选配 Optional
		输入老化电压 Burn-in Voltage Input	最大可支持6种电压 Support up to 6 voltages
		保护及报警 Protection and Alarm	独立控制电源并加有保险及过热过载、带漏电保护开关、警示灯、紧急开关等装置 control power supply independently and added with protection and equpment including overheating and overload protection,earth leakage circuit breaker,waring light,emergency switch,etc.
		硬件需求描述 Hardware Demand Description	独立电脑主机、显示老化状态，监控输出电压、电流及功率等 Independent computer host, display burninstate, monitor output should be voltage, current,power and soon
		软体监控需求 Software Monitor Demand	根据不同的产品编写不同的老化程序、实现电压切换、冲击、开关循环，电流设定、温度设定等参数 Compile different aging programs according to different products, realize voltage switching, impact, switching cycle, current setting, temperature setting and other parameters
		老化管理需求 Burn-in Management Demand	OK 和 NG 判断监控界面直接了解到，数据可根据需要的数据格式（TXT,EXCEL）保存，方便查询及下载 The OK and NG judgment monitoring interface can directly understand that the data can be saved according to the required data format (TXT, EXCEL), which is convenient for query and download
五	测试站相关信息 Test Station Related Information	测试工序 Test Station Types	装产品+通电初测+高压+ATE+老化+ATE+取产品，自动测试老化系统，是单元组合的系统 Install the product + electrified initial test + high voltage +ATE+ aging +ATE+ take the product, automatic test aging system, is a unit combination of the system
		测试方式 Test Mode	选配 Optional
		测试数据处理 Test Data Processing	选配 Optional
		测试仪器 Test Instruments	选配 Optional
		连接方式 Connection Mod	选配 Optional
六	老化&测试治具 Burn-in & Test Jig	治具尺寸 Jig Size	L556*W320*H70（MM）每个载具16位 L556*W320*H70(mm),Each vehicle gets 16 seats
		接口方式 Interface Mode	AC:万用插座；DC:USB或常规DC母座 AC：universal socket;DC:USB or conventional DC female seat
		共用性 The Commmon Usage	老化测试共用 Shared by burn-in and test
		重量 Weright	1.5KG
七	主电器控制系统 Main Electric Control System	保护装置 Protection Equipment	具有单独及分段总闸开关，有独立接地保护和漏电保护装置 Possessing independent and segmentation main switches.Having independent ground protection and electricity leakage protection devices
		电力需求 Power Demands	按实际规划 According to the actual planning
		气源需求 Air source requirements	5-8KGF/CM3

04

测试仪器与测试软件篇

TESTING INSTRUMENTS
AND SOFTWARE



CP9000电源自动测试系统
CP9000 Switching Power Supply Automatic Test System

应用范围 Scope of application

- 应用于AC/DC及DC/DC的适配器、充电器、开关电源以及LED驱动电源等电源产品在线综合性能测试
- It is applicable to online comprehensive performance test for AC/DC adaptor, DC/DC adaptor,charger, switching mode power supply, LED driver etc

卓越功能 Outstanding functions

1. 开放性架构软件平台，支援含有 GPIB/RS-232 或 RS-485
2. 测试项目、测试程序、测试报告、统计分析报表等编辑功能
3. 主从式控制模式，可一次测试多台单组输出的电源供应器
4. 支援 Bar Code Reader ，测试命令编辑，帮助改善测试速度
5. 可以给任何电源供应器测试应用的测试项目编辑能力
6. 广泛的模组化硬件以提供高准确及重复量测
7. 由系统预设测试项目，可提高测试生产率
8. 图形化界面 Windows 98/NT/2000 以上的作业环境
9. 生成 Excel，保存测试数据，含生产数量，不良率，柏拉图 ,CPK 值等数据
10. 双治具左右自动切换测试功能

1. Open architecture software platform to support with GPIB/RS - 232 or RS – 485
2. Test items, test procedures, test reports, statistical analysis reports etc. Editing function
3. Master-slave control mode, a test of multiple single output power supply
4. Support Barcode Reader, test commands to edit, to help improve test speed
5. Can give any power supply test application test project editing skills
6. A wide range of modular hardware to provide high accuracy and repeatability measurements
7. By the system preset test project, can raise the productivity of the test
8. Graphical interface Windows 98 / NT / 2000 operating environment over
9. Create excel report to save test data, quantity, failure rate, CPK etc
10. Double-jig to switch left and right automatically

性能参数 Performance parameters

测试名称Test Name	测试名称Test Name	
启动 START UP	Inrush current: 0 – 83Apk (浪涌电流) Startup time: 0 to 32767msec. (开机时间) Output voltage overshoot: 0 – 500Vpk Rise time: 0 to 32767msec. (上升时间)	±1% (reading + range) ±1ms ±1% (reading + range) ±1ms
欠压 过压 UVLO(Under voltage or over voltage)	Functional test only, Pass/Fail	N/A
待机 IDLE	Standby input power: 0 – 5/25/250/1250W Standby input current: 0 – 0.1/0.5/5/25Apk Input voltage: 30 – 280V*Note 2	±0.1% (reading + range) ±0.1% (reading + range) ±0.1% (reading + range)
恒压 STANDARD CV (Constant Current and Constant Resistance load)	CC mode: 0 – 3/15 A CR mode: 0.1 – 50Ohm Input voltage: 30 – 300Vrms *Note 1 Input current: 0 – 0.1/0.5/5/25Apk Input power: 0 – 5/25/250/1250W Power factor 0 – 1.0 Output voltage 0 – 15/500Vdc Output current 0 – 3/15Adc Efficiency: 0 – 100% Ripple/Noise 200kHz: 0 – 500mV Ripple/Noise 20MHz: 0 – 500mV	±0.15% (setting + range) ±0.3% (setting + range)*Note 2 ±0.1% (reading + range) ±0.1% (reading + range) ±0.1% (reading + range) ±0.2% (reading + range) ±0.05% (reading + range) ±0.1% (reading + range) ±0.25% (reading + range) ±2% (reading + 5mV) ±2% (reading + 5mV)
恒流 STANDARD CC (Constant Voltage and Constant Resistance load)	CV mode: 0 – 15/500V CR mode: 0.1 – 50Ohm Input voltage: 30 – 300Vrms *Note 1 Input current: 0 – 0.1/0.5/5/25Apk Input power: 0 – 5/25/250/1250W Power factor 0 – 1.0 Output voltage 0 – 15/500Vdc Output current 0 – 15Adc Efficiency: 0 – 100%	±0.15% (setting + range) ±0.3% (setting + range)*Note 3 ±0.1% (reading + range) ±0.1% (reading + range) ±0.1% (reading + range) ±0.2% (reading + range) ±0.05% (reading + range) ±0.1% (reading + range) ±0.25% (reading + range)
LED 驱动 LED Driver Test (LED Load)	Input voltage: 30 – 300 Vrms *Note 1 Input current: 0 – 5/25Apk Input power: 0 – 250/1250W Power factor 0 – 1.0 Output average current reading: 0 – 15Adc Output average voltage reading: 0 – 500Vdc Output pulsed current reading (TRIAC, PWM)	±0.1% (reading + range) ±0.1% (reading + range) ±0.1% (reading + range) ±0.2% (reading + range) ±0.1% (reading + range)*Note 4 ±0.05% (reading + range)*Note 4 ±0.5% (reading + range)
短路 SHORT CIRCUIT	Input voltage: 30 – 300 Vrms *Note 1 Input current: 0 – 5/25Apk Input power: 0 – 250/1250W Power factor 0 – 1.0 Output average Current: 0 – 15Adc	±0.1% (reading + range) ±0.1% (reading + range) ±0.1% (reading + range) ±0.2% (reading + range) ±0.2% (reading + range)*Note 4
过流 OVER CURRENT	Current trip point: 0 – 3/15Adc Trip point voltage: 0 – 15/500Vdc Wait time >= 10msec. Wait time < 10msec. Voltage before trip point: 0 – 15/500Vdc Current before trip point: 0 – 3/15Adc	±0.1% (reading + range) ±0.05% (reading + range) ±0.1% (reading + range) ±0.1% (reading + range) ±0.1% (reading + range)
过压 OVER VOLTAGE	OV trip point: 0 – 500V	±0.1% (reading + range)
线性调整 LINE REGULATION	Voltage regulation: 0 – 100%	±0.1% (reading + range)
负载调整 LOAD REGULATION	Voltage regulation: 0 – 100%	±0.1% (reading + range)
平均效率 AVERAGE EFFICIENCY	Efficiency: 0 – 100%	±0.25% (reading + range)
动态负载 Dynamic load	Over shoot voltage: 0 – 15/500Vdc Under shoot voltage: 0 – 15/500Vdc	±0.05% (reading + range) ±0.05% (reading + range)
关机 POWER DOWN	Holdup time: 0 – 65535 msec. Input voltage: 30 – 300Vrms *Note 1 Output current 0 – 3/15Adc Output voltage overshoot: 0 – 500Vpk	±1ms ±0.1% (reading + range) ±0.1% (reading + range) ±1% (reading + range)
全面设定 Global Setting	Load on voltage: 0 – 500Vdc Wait time: 0 – 32767msec. Nominal output voltage: 0 – 500Vdc Nominal output current: 0 – 15Adc	±1% (reading + range) ±1ms ±1% (reading + range) ±1% (reading + range)

动力电池充放电测试系统
Power battery charge and discharge test system

应用范围 Scope of application

- 电动自行车、电动三轮车、电动滑板车、电动平衡车、低速四轮车、移动储能、自动扫地机、医疗设备、电动工具、吸尘器等电池的循环充放电老化测试

- Electric bicycles, electric tricycles, Electric scooter, electric balance vehicles, low-speed four-wheelers, mobile energy storage, automatic sweepers, medical equipment, power tools, vacuum cleaners and other batteries for cyclic charge and discharge burn-in test

卓越功能 Outstanding functions

1. 模块化设计，功率配置灵活
2. 智能友好的操作界面，实时反馈电池数据，更好呵护电池
3. 能量回馈（直流母线效率≥90%）：能量回馈型，充放电双向都是节能的，能节约大量耗电开支，同时节约大量能耗热量所产生的空调电费开支
4.CC/CV 充电：充电过程 CC/CV 无隙过度，无任何的电压电流冲击。可有效防止电池因尖峰电流出现热量集中导致极耳脱粉或微短路产生孤岛效应或过冲现象引起 PCB 的保护动作和二次保护动作
5. 测试工步可分段设置记录条件，实行智能数据管理记录

1. Modular design, flexible power configuration
2. Intelligent and friendly operation interface, real-time feedback of battery data, better care of the battery
3. Energy feedback (DC bus efficiency ⩾90%): energy feedback type, both charging and discharging are energy-saving, It can save a lot of electricity consumption and at the same time also will save heat consumption generated by air condition
4. CC/CV charging: During the charging process, CC/CV has no excessive gaps and no voltage or current impact. Effectively prevent the battery from being heat-concentrated due to peak current, causing the tabs to fall off or micro-short circuit to produce islands Effect or overshoot phenomenon causes PCB protection action and secondary protection action
5. Recording conditions can be set in sections for test steps, and intelligent data management records can be implemented

性能参数 Performance parameters

型号Model		CP-9101	CP-9102	CP-9103	CP-9104
电池通道电压 Battery channel voltage	充电电压范围 Charging voltage range	3V-100V			
	放电电压范围 Discharge voltage range	3V-100V			
	精度 Precision	±(0.05%RD+0.05%FS)			
	电压分辨率 Voltage resolution	1mV			
电池通道电流 Battery channel current	充电电流 Recharging current	30A	60A	120A	150A
	放电电流 Discharge current	30A	60A	120A	150A
	精度 Precision	±(0.05%RD+0.05%FS)			
	分辨率 Resolution	1mA			
	电流启动响应时间 Current start response time	≤10ms			
电池通道数目 Quantity of channel for battery		2CH/4CH/6CH/8CH/16CH/定制 2CH/4CH/6CH/8CH/16CH/customized			
电池通道类型 Battery channel type		通道隔离 Channel isolation			
通道工作模式 Channel working mode		充电：恒流充电CC，恒电压充电CV，恒流恒压充电CC/CV 放电：恒流放电CC，恒功放电CP Charging: constant current charging CC, constant voltage charging CV, constant current and constant voltage charging CC/CV Discharge: constant current discharge CC, constant power discharge CP			
通道测试中止条件 Channel test abort condition		时间、电压、电流、容量 Time, voltage, current, capacity			
效率 Effectiveness	充电最高效率 Highest charging efficiency	92%			
	放电最高效率 Highest discharge efficiency	91%			
交流电网 AC grid	整流电压范围 Rectified voltage range	186~264Vac/320~458Vac			
	馈网电压范围 Feeder voltage range	186~264Vac/320~458Vac			
	频率范围 Frequency Range	47~63Hz			
	PF值 PF value	0.99 (>=50% Load)			
	THDI	<=5% (>=50% Load)			
通讯方式 Communication method		RS485通讯 RS485 communication			
控制程序 Control program		支持掉电数据保护、支持因停电、手动停止、从数据文件接续测试 Support power-down data protection, support for power-off, manual stop, and continuous testing from data files			
		可设定安全保护条件，包括：电压下限、电压上限、电流下限、电流上限、电压电流趋势 Safety protection conditions can be set, including: voltage lower limit, voltage upper limit, current lower limit, current upper limit, voltage and current trends			
	循环次数 Cycles	最大9999 Max 9999			
	循环嵌套 Loop nesting	最大10层 Maximum 10 layers			
	工步时间范围 Step time range	支持h、min、S格式 Support h, min, S format			
	数据记录 Data record	时间≥1S Time≥1S			
数据展现方式 Data presentation method	循环列表 Circular list	有循环序号、充/放电容量、充/放电效率、充/放能量等 There are cycle number, charge/discharge capacity, charge/discharge efficiency, charge/discharge energy, etc			
	过程列表 Process list	有过程序号、工作模式、过程时间、容量、能量、中值电压、终止电压、终止电流等 There are program number, working mode, process time, capacity, energy, median voltage, termination voltage, termination current, etc			
	明细列表 Detailed list	有记录序号、系统时间、累计时间、电压、电流、能量、功率等 Record serial number, system time, accumulated time, voltage, current, energy, power, etc			
软件保护 Software protection		掉电数据保护、断电暂停续接、过压过放保护、过流欠流保护、容量保护、过温保护 Power-down data protection, power-off and suspend connection, over-voltage and over-discharge protection, over-current and under-current protection, capacity protection, and over-temperature protection			
硬件保护 Hardware protection		过流保护、过压保护、过温保护、接反检测功能 Over current protection, over voltage protection, over temperature protection, reverse connection detection function			
报警功能 Alarm function		硬件具有紧急情况切断开关、断电后自动关机、自动负载连接和断开等功能 The hardware has functions such as emergency cut-off switch, automatic shutdown after power failure, and automatic load connection and disconnection			
冷却方式 Cooling method		强制风冷 Forced air cooling			
使用环境 Use environment	环境温度 Ambient temperature	-20℃～40℃			
	环境湿度 Environment humidity	10%~90%RH，无结露 10%~90%RH, no condensation			
	其他 Other	避免设备受潮，避免振动，避免灰尘，禁止在爆炸性粉尘和蒸汽环境下使用 Avoid damp, vibration, dust, and use in explosive dust and steam environments			
柜体尺寸 Cabinet size		W860mm×D830mm×H2300mm			

动力电池充放电测试系统
Power battery charge and discharge test system

应用范围 Scope of application

- 电动自行车、电动三轮车、低速四轮车、电动叉车、电动托盘车、电动搬运车、电池堆高车、电动牵引车、AGV 等电池的循环充放电老化测试

- Electric bicycles, electric tricycles, low-speed four-wheelers, electric forklifts, electric pallet trucks, electric pallet trucks, battery stackers, electric tractors, AGVs and other batteries cyclic charge and discharge burn-in test

卓越功能 Outstanding functions

1. 模块化设计，功率配置灵活
2. 智能友好的操作界面，实时反馈电池数据，更好呵护电池
3. 能量回馈（直流母线效率≥90%）：能量回馈型，充放电双向都是节能的，能节约大量耗电开支，同时节约大量能耗热量所产生的空调电费开支
4.CC/CV 充电：充电过程 CC/CV 无隙过度，无任何的电压电流冲击。可有效防止电池因尖峰电流出现热量集中导致极耳脱粉或微短路产生孤岛效应或过冲现象引起 PCB 的保护动作和二次保护动作
5. 测试工步可分段设置记录条件，实行智能数据管理记录

1. Modular design, flexible power configuration
2. Intelligent and friendly operation interface, real-time feedback of battery data, better care of the battery
3. Energy feedback (DC bus efficiency ⩾90%): energy feedback type, both charging and discharging are energy-saving, It can save a lot of electricity consumption and at the same time also will save heat consumption generated by air condition
4. CC/CV charging: During the charging process, CC/CV has no excessive gaps and no voltage or current impact.Effectively prevent the battery from being heat-concentrated due to peak current, causing the tabs to fall off or micro-short circuit to produce islands Effect or overshoot phenomenon causes PCB protection action and secondary protection action
5. Recording conditions can be set in sections for test steps, and intelligent data management records can be implemented

性能参数 Performance parameters

型号Model		CP-9105	CP-9106	CP-9107
电池通道电压 Battery channel voltage	充电电压范围 Charging voltage range	10V-100V		
	放电电压范围 Discharge voltage range	10V-100V		
	精度 Precision	±(0.05%RD+0.05%FS)		
	电压分辨率 Voltage resolution	1mV		
电池通道电流 Battery channel current	充电电流 Recharging current	100A	200A	300A
	放电电流 Discharge current	100A	200A	300A
	精度 Precision	±(0.05%RD+0.05%FS)		
	分辨率 Resolution	1mA		
	电流启动响应时间 Current start response time	≤10ms		
电池通道数目 Quantity of channel for battery		2CH/4CH/定制 2CH/4CH/customized		
电池通道类型 Battery channel type		通道隔离 Channel isolation		
通道工作模式 Channel working mode		充电:恒流充电CC,恒电压充电CV,恒流恒压充电CC/CV 放电:恒流放电CC,恒功放电CP Charging: constant current charging CC, constant voltage charging CV, constant current and constant voltage charging CC/CV Discharge: constant current discharge CC, constant power discharge CP		
通道测试中止条件 Channel test abort condition		时间、电压、电流、容量 Time, voltage, current, capacity		
效率 Effectiveness	充电最高效率 Highest charging efficiency	93%		
	放电最高效率 Highest discharge efficiency	92%		
交流电网 AC grid	整流电压范围 Rectified voltage range	186~264Vac/320~458Vac		
	馈网电压范围 Feeder voltage range	186~264Vac/320~458Vac		
	频率范围 Frequency Range	47~63Hz		
	PF值 PF value	0.99 (>=50% Load)		
	THDI	<=5% (>=50% Load)		
通讯方式 Communication method		RS485通讯 RS485 communication		
控制程序 Control program		支持掉电数据保护、支持因停电、手动停止、从数据文件接续测试 Support power-down data protection, support for power-off, manual stop, and continuous testing from data files		
		可设定安全保护条件，包括:电压下限、电压上限、电流下限、电流上限、电压电流趋势 Safety protection conditions can be set, including: voltage lower limit, voltage upper limit, current lower limit, current upper limit, voltage and current trends		
	循环次数 Cycles	最大9999 Max 9999		
	循环嵌套 Loop nesting	最大10层 Maximum 10 layers		
	工步时间范围 Step time range	支持h、min、S格式 Support h, min, S format		
	数据记录 Data record	时间≥1S Time≥1S		
数据展现方式 Data presentation method	循环列表 Circular list	有循环序号、充/放电容量、充/放电效率、充/放能量等 There are cycle number, charge/discharge capacity, charge/discharge efficiency, charge/discharge energy, etc		
	过程列表 Process list	有过程序号、工作模式、过程时间、容量、能量、中值电压、终止电压、终止电流等 There are program number, working mode, process time, capacity, energy, median voltage, termination voltage, termination current, etc		
	明细列表 Detailed list	有记录序号、系统时间、累计时间、电压、电流、能量、功率等 Record serial number, system time, accumulated time, voltage, current, energy, power, etc		
软件保护 Software protection		掉电数据保护、断电暂停续接、过压过放保护、过流欠流保护、容量保护、过温保护 Power-down data protection, power-off and suspend connection, over-voltage and over-discharge protection, over-current and under-current protection, capacity protection, and over-temperature protection		
硬件保护 Hardware protection		过流保护、过压保护、过温保护、接反检测功能 Over current protection, over voltage protection, over temperature protection, reverse connection detection function		
报警功能 Alarm function		硬件具有紧急情况切断开关、断电后自动关机、自动负载连接和断开等功能 The hardware has functions such as emergency cut-off switch, automatic shutdown after power failure, and automatic load connection and disconnection		
冷却方式 Cooling method		强制风冷 Forced air cooling		
使用环境 Use environment	环境温度 Ambient temperature	-20℃～40℃		
	环境湿度 Environment humidity	10%~90%RH,无结露 10%~90%RH, no condensation		
	其他 Other	避免设备受潮,避免振动,避免灰尘,禁止在爆炸性粉尘和蒸汽环境下使用 Avoid damp, vibration, dust, and use in explosive dust and steam environments		
柜体尺寸 Cabinet size		W860mm×D830mm×H2050mm		

CP8212 四通道可编程直流电子负载仪

CP8212 programmable 4-channel DC electronic load meter

应用范围 Scope of application

- 用于适配器、充电器等功能测试
- LED 驱动器、LED TV 电源等功能测试
- 模块电源、工业电源、通信电源等功能测试
- AC/DC, DC/DC 电源转器的功能测试
- 移电源的放电测试

- Suitable for function tests of adapter and charger
- Function tests of LED driver and LED TV power
- Function tests of module power, industrial power and communication power
- Function tests of AC/DC and DC/DC power converter
- Discharging test of portable power

卓越功能 Outstanding functions

1. 具有 CC(恒流)、CV(恒压)、CR(恒阻)、CP(恒功率)、LED 负载模式
2. 支持在任意模式下的通道并联，满足大功率电源的测试
3. 可编程测试模式 , 支持负载特性测试
4. 支持 PASS 信号輸出 , 方便测试及扩展应用
5. 依用户设定的条件判断被测产品状态
6. 可保存设置参数 , 方便多种产品测试时快速调用

1. Be of CC (constant current), CV (constant voltage), CR (constant resistance), CP (constant power) and LED load mode
2. Support parallel connection of channels under any mode and meet large power supply test
3. Be of programmable test mode and support load characteristic test
4. Support PASS signal output and is convenient for test and extensive application
5. Judge status of tested product in accordance with conditions set by user
6. Save setting parameters, and is convenient for fast call during tests of multiple products

性能参数 Performance parameters

型号Model			CP8212	
通道数量 Quantity of channel			4	
通道并联 Parallel connection of channels			支持CC/CV/CR/CP/LED模式下的通道并联 Support parallel connection of channels under modes of CC/CV/CR/CP/LED	
每通道最大输入功率 Maximum input power of each channel			100W	
模组总最大输入功率 Total maximum input power of whole module			400W	
输入电流／通道 Input current			低电流量程:0.05-2.5A Measuring range of low current: 0.05-2.5 A	高电流量程:2.5-10A Measuring range of high current: 2.5-10 A
最小工作电压 Minimum operating voltageInput current			1V@2.5A	5V@10A
输入电压 Input voltage			低电压量程:1-50V Measuring range of low voltage: 1-50 V	高电压量程:50-450V Measuring range of high voltage: 50-450V
CC（定电流）负载模式 CC (Constant current) load mode	量程 Measurin range		0.05A-2.5A	2.5A-10A
	解析度 Resolution		1mA	10mA
	精度 Precision		± (1%+0.02%FS)	
CV（定电压）负载模式 CV(Constant current) load mode	量程 Measurin range		1V-50V	50-450V
	解析度 Resolution		0.012V	0.012V
	精度 Precision		± (1%+0.02%FS)	
CR(定点阻) 负载模式 CR(constant resistance) load mode	量程 Measurin range		0.4Ω-200Ω	200Ω-9.999KΩ
	解析度 Resolution		12bit	12bit
	精度 Precision		± (1%+0.02%FS)	
CP(定功率) 负载模式 CR(constant power) load mode	量程 Measurin range		100W	
	解析度 Resolution		50mW	
	精度 Precision		± (1%+0.02%FS)	
LED模拟负载模式 LED load simulating mode	量程 Measurin range	Vo	1V-50V	50-450V
		Io	0.05-2A	2A-10A
		Rd系数 Rd coefficient	0.001-0.999	
	解析度 Resolution	Vo	0.012V	0.12V
		Io	1mA	10mA
		Rd系数 Rd coefficient	0.001	
	精度 Precision		± (1%+0.02%FS)	
电流测量 Current measurement	量程 Measurin range		0.05-2.5A	2.5A-10A
	解析度 Resolution		1mA	10mA
	精度 Precision		± (1%+0.02%FS)	
电压测量 Voltage measurement	量程 Measurin range		1V-50V	50-450V
	解析度 Resolution		0.005V	0.05v
	精度 Precision		± (1%+0.02%FS)	
功率测量 Power measurement	量程 Measurin range		100W	
	解析度 Resolution		50mW	
	精度 Precision		± (1%+0.02%FS)	
动态测试模式 Dynamic tesing mode	周期T1&T2 Cycle T1&T2		100uS-50S	
	分辨率 Resolution		100uS	
	精度 Precision		2uS+100ppm	
	电流速度 Current speed		0.05mA-200mA/uS	0.5mA-750mA/uS
尺寸 Dimension			L355mm*W220mm*H100mm	

CP8213 四通道可编程直流灯珠负载仪
CP8213 programmable 4 channel DC lamp bead load meter

应用范围 Scope of application

- 用于适配器、充电器等功能测试
- LED 驱动器、LED TV 电源等功能测试
- 模块电源、工业电源、通信电源等功能测试
- AC/DC, DC/DC 电源转器的功能测试
- 移电源的放电测试

- Suitable for function tests of adapter and charger
- Function tests of LED driver and LED TV power
- Function tests of module power, industrial power and communication power
- Function tests of AC/DC and DC/DC power converter
- Discharging test of portable power

卓越功能 Outstanding functions

1. 具有 CC(恒流)、CV(恒压)、CR(恒阻)、CP(恒功率)、LED 负载模式
2. 支持在任意模式下的通道并联，满足大功率电源的测试
3. 可编程测试模式 , 支持负载特性测试
4. 支持 PASS 信号輸出 , 方便测试及扩展应用
5. 依用户设定的条件判断被测产品状态
6. 可保存设置参数 , 方便多种产品测试时快速调用

1. Be of CC (constant current), CV (constant voltage), CR (constant resistance), CP (constant power) and LED load mode
2. Support parallel connection of channels under any mode and meet large power supply test
3. Be of programmable test mode and support load characteristic test
4. Support PASS signal output and is convenient for test and extensive application
5. Judge status of tested product in accordance with conditions set by user
6. Save setting parameters, and is convenient for fast call during tests of multiple products

性能参数 Performance parameters

型号Model			CP8213
通道数量 Quantity of channel			4
通道并联 Parallel connection of channels			LED模式 LED mode
每通道最大输入功率 Maximum input power of each channel			75W
模组总最大输入功率 Total maximum input power of whole module			300W
输入电流／通道 Input current			0.01A-1A
最小工作电压 Minimum operating voltageInput current			3V
电压范围 Input voltage			3V-384V
CC（定电流）负载模式 CC (Constant current) load mode	量程 Measurin range		0.01A-1A
	解析度 Resolution		0.5mA
	精度 Precision		±(1%+0.1%FS)
CV（定电压）负载模式 CV(Constant current) load mode	量程 Measurin range		3V-384V
	解析度 Resolution		60mV
	精度 Precision		±(1%+0.1%FS)
CR(定点阻)负载模式 CR(constant resistance) load mode	量程 Measurin range		3Ω-9.999kΩ
	解析度 Resolution		12 bit
	精度 Precision		±(1%+0.1%FS)
CP(定功率)负载模式 CR(constant power) load mode	量程 Measurin range		75W
	解析度 Resolution		50mW
	精度 Precision		±(1%+0.1%FS)
LED模拟负载模式 LED load simulating mode	量程 Measurin range	Vo	3-384V
		Io	0.01A-1A
		Rd系数 Rd coefficient	0.001-0.999
	解析度 Resolution	Vo	0.012V
		Io	1mA
		Rd系数 Rd coefficient	0.001
	精度 Precision		±(1%+0.1%FS)
电流测量 Current measurement	量程 Measurin range		0.01A-1A
	解析度 Resolution		0.5mA
	精度 Precision		±(1%+0.1%FS)
电压测量 Voltage measurement	量程 Measurin range		3V-384V
	解析度 Resolution		60mV
	精度 Precision		±(1%+0.1%FS)
功率测量 Power measurement	量程 Measurin range		75W
	解析度 Resolution		50mW
	精度 Precision		±(1%+0.1%FS)
动态测试模式 Dynamic tesing mode	周期T1&T2 Cycle T1&T2		100uS-50S
	分辨率 Resolution		100uS
	精度 Precision		2uS+100ppm
	电流速度 Current speed		0.05mA200mA/uS
尺寸 Dimension			L391mm*W211.5mm*H145.5mm

通用集成控制与测试系统软件篇
Universal Integrated Control And Test System

通用集成控制与测试系统软件包括多个软件产品，可应用于电源老化、电源测试、自动化控制等不同场合。
Universal Integrated Control And Test System includes several software products, and can be applied to the power supply burn-in test, power supply auto test, automatic control, etc.

电源老化监控系统软件BIS7
Monitoring software of Power supply burn-in system BIS7

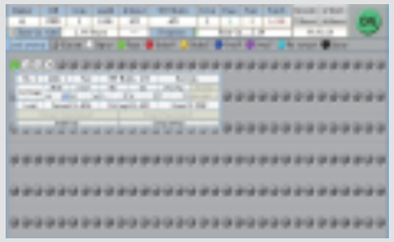
应用范围 Scope of application

- 应用于电源的生产老化制程，适用于CPET生产的所有电源老化设备
- The power supply burn-in system is applied to the burn-in testing of power supply manufacture procedure,and it is compliant with all the burn-in devices produced by CPET

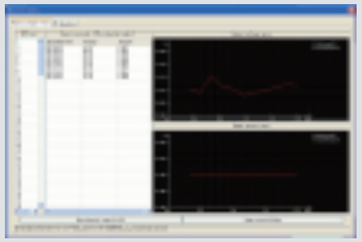
卓越功能 Outstanding functions

1. 可视化的老化参数设置界面，包括负载模式、负载值和产品规格范围、老化温度等设定，可保存设置值为文件形式，使用者可一键导入后立即开始老化
2. 实时的负载状态监视，图形化的产品 PASS/FAIL 判断显示，可监视到每一个产品的输入和输出工作状态，包括输出电流、输出电压、输入电压、输入电流、输入功率、功率因数、效率等电参数
3. 可编程的老化时序，包括输入 ON/OFF 开关时序，输入电压选择时序等
4. 老化全过程数据自动记录
5. 可实时查看产品的输入和输出特性曲线
6. 集成数据记录分析统计功能，可根据产品条码或型号等搜索历史数据记录，并有 P 管制图生成、计算 Cpk 等功能

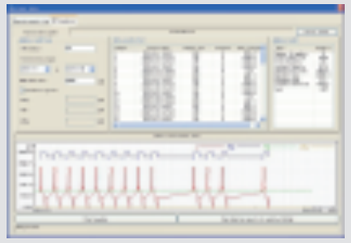
1. Visual burn-in test setting interface, includes load mode, load value, UUT specification,ambient temperture settings,etc.And the settings can be saved as a file, you can open it with one key operation and then start a burn-in task
2. Realtime load condition monitored and graphical display PASS/FAIL judgment of the power supplies, it can monitor every power supply’s input and output characteristic in the burn-in device, includes output current, output voltage,input voltage,input current,input active power,power factor,efficiency,etc
3. Programable burn-in timing,includes input ON/OFF timing,input voltage slection timing,etc
4. Burn-in test results recorded automatically during the burn-in task.
5. You can watch the input and output characteristic curve of the power supples during the burn-in task
6. Integrated with data records analysis, you can search power supplies through the barcodes or models. It can generate a P-chart and calculate the Cpk value



软件监控界面
(Interface of software monitor)



数据查看界面
(Interface of data check)



数据分析 P 管制图界面
(Interface of P control chart for data analysis)

电源自动测试系统软件ATS1
Software of power supply automatic test system ATS1

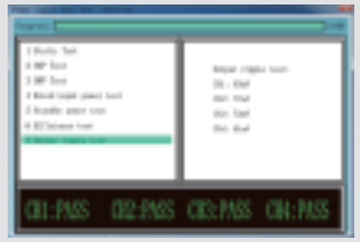
应用范围 Scope of application

- 应用于电源的生产测试制程，适用于CPET生产的所有电源测试设备
- The power supply auto test system is applied to the final testing of power supply manufacture procedure,and it is compliant with all the power supply test devices produced by CPET

卓越功能 Outstanding functions

1. 支持电源的输入和输出的电气特性测试和时序测试
2. 内置多种电源测试项目供用户自由选择，例如输出静态测试、动态测试、OCP 测试、OPP 测试、输入额定功率测试、输入待机功率测试、输出纹波测试等，让添加复杂的测试项目更加简单化
3. 可自由定义的测试流程，可根据不同的产品定义不同的测试流程
4. 支持非标测试项目定制
5. 图形化的测试界面，支持一键启动 / 停止测试
6. 测试结果自动保存到数据库
7. 集成测试结果搜索和分析功能，包括根据条码搜索、型号搜索、时间范围搜索，并可进行 SPC 统计分析

1. Support input and output electrical character testing and timing testing of the power supply
2. Built-in various testing items, such as static test, dynamic test, OCP test, OPP test, input rated power test, input standby power test, output ripple test, etc. It can make the complicated test more easier
3. You can define different testing procedure correspond to the different power supplies
4. You can define non-stantard testing item
5. Graphical testing interface, you can start/stop a test through one key
6. Test results saved in the database automatically
7. Integrated with test results search and analysis, includes barcode search, model search, time frame search and SPC analysis



软件监控界面
(Interface of software monitor)

数据查看界面
(Interface of data check)

自动化控制系统软件ACS1
Software of automatic control system ACS1

应用范围 Scope of application

- 应用于工厂的自动化生产流程，通常作为一个系统组件集成到电源老化监控系统、电源自动测试系统或其他控制测试系统中去，以实现全自动化的电源老化和测试制程
- The automation control system is applied to the automatic production progress, it usually act as a system component integrated into the power supply burn-in system , the power supply auto test system or other control&testing system, so as to realize full automation of the power supply burn-in and test process

卓越功能 Outstanding functions

1. 应用于电源老化监控系统中的自动上机、下机流程
2. 应用于电源自动测试系统中的自动上机、下机、不良品分拣流程
3. 应用于产品的自动包装、贴标等流程
4. 应用于电子产品生产中的非标零件的插件流程

1. It can be applied to install the power supply to or unstall it from the burn-in device automatically of the power supply burn-in system
2. It can be applied to install the power supply to or unstall it from the testing device and sort the defectives automatically of the power supply auto test system
3. It can be applied to all kinds of products’ s packing or label procedure
4. It can be applied to install procedure of the non-stantard plug-in components of various electrical products

自动化控制系统软件应用示意图
(The automation control system applications)