

Faith

Power Electronics Testing Instrument Manufacturer

Products Introduction

2023Edition



About Faithtech Co., Ltd

Founded in 2002, with a registered capital of 17,000,000 RMB.

A professional power Electronics Testing Instrument Manufacturer

Original design, original manufacturer

A Shenzhen Hi-Tech Corporation, employ

Strong R&D Capability

More than 40% staff are R&D engineers

R&D expenditure exceeds 10% of annual sales each year

Core products

Programmable DC Electronic Load

Programmable DC Power Supply

FTM8000 Automatic Data acquisition system

Multi-channel Battery cell bipolar simulation

Automotive power environment waveform simulating









FT68200A/E系列超大功率电子负载
(6kW-600kW)
FT68200A/E series mega-power electronic load
(6kW-600kW)



FT6800 系列超大功率电子负载
(2.6kW-52kW)
FT6800 series mega-power electronic load
(2.6kW-52kW)



FT6300A 系列中小功率电子负载
(150W-1800W)
FT6300A series medium-power DC electronic load
(150W-1800W)

电子负载 DC Electronic load



FT6200A系列小功率电子负载
(150W/300W)
FT6200A series low-power DC electronic load
(150W/300W)



FT63200A系列中小功率电子负载
(1.2-3kW)
FT63200A series medium-power DC electronic load
(1.2kW~3kW)



FT6400N&FT6800N 超低电压大电流直流电子负载
(0.2V@1200A)
FT6400N & FT6800N ultra low voltage high current DC electronic load
(0.2V@1200A)

Faith Single Channel DC Load

New items

Price

FT62XX



150W-300W

FT63XX



150W-600W

FT64XX



1.2/2.0/3.0KW

FT68XX



2.6-52KW

FT682XX



6-60KW

FT82XX



30-500KW

FT63200



600W-3000W

KW

Load Features :

Static test:

Constant Current (CC),
Constant Voltage (CV),
Constant Resistance (CR),
Constant Power (CP),
* CV+CC, CP+CC, CR+CC test modes.

Dynamic test:

Set high/low level, T1/T2 etc.. to test the response and stability of the power supplies.

Sequence:

A list of user programmable steps which the load performs. It is useful for simulating power supply unit (PSU) real applications and testing of the PSU stability.

Short circuit:

The load is short-circuited, so as to test the short circuit characteristic and protection function of the PSU.

** Complex test modes apply to FT68200A series load only.*

Load Features :

Battery test:

Including inner resistance and capacity test, it is implemented through DC-R and true discharge process.

OCP/OPP test:

Automatically finds the protection point of the PSU.

Automatic test:

Plug and unplug the product only, the load will perform all the test process and report PASS/FAIL automatically, this greatly improves test efficiency.

Shortcut Recall:

Press the numeric key to recall preset parameter, just one press only.

** Load features are for reference, the specific load model may have some of these features, but lack of a few of them.*

Low-power single channel DC Loads

	FT6200 series	FT6300 series	FT6400 series
Power	150W/300W	150W/300W/600W/	1200W/2000W/3000W
Voltage	150V/500V	120V/500V	150V/600V
Form factor	1/2 2U	1/2 3U	3U
Application	low- and medium-power switching power supplies, power electronic components, adapters, 3C batteries and chargers, etc		electromechanical tools, switching power supplies, power battery pack, etc.
Remote interface	RS232	RS232	LAN, RS232

High-power single channel DC Loads

	FT6800 series	FT68200 series
Power	2.6KW...52KW	6K...60KW
Voltage	40V/120V/500V/800V/1000V/1200V	150V/600V/1200V
Application	electromechanical tools, telecom power supply, DC charging module, power battery pack, fuel cell, energy storage, on board chargers (OBC) etc..	DC charging module, power battery pack, fuel cell, energy storage, on board chargers (OBC) etc..
Characteristic	40 V model provides ultra-high current loading at ultra-low voltage, which is ideal for fuel cell applications test etc.	high performance, high power density
Remote interface	LAN/RS232/USB	LAN/RS232/USB/RS485

FT68200A/E Series High-power programmable DC Load 6KW~60KW

Main features :

Voltage Accuracy (0.025%+0.025%F.S.);

Current Accuracy (0.05%+0.05%F.S.);

500kHz sampling speed, 50kHz dynamic current;

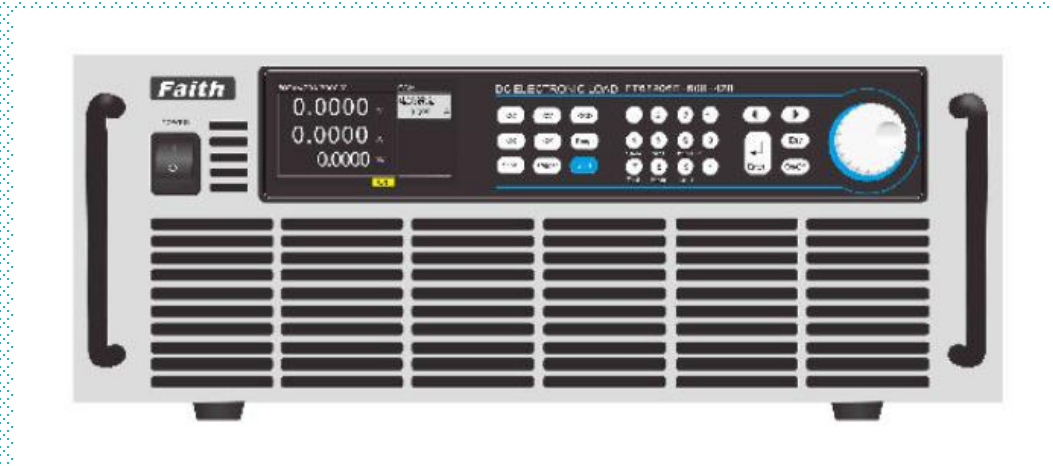
30kHz dynamic SWEEP;

CC, CV, CR, CP, CCD, CV+CC, CR+CC, CP+CC;

Standard RS232, RS485, LAN, USB (serial);

Instantaneous overpower (2X rated power) loading;

Time measurement, with a resolution of 0.1 millisecond.



FT63200 Series Medium-power DC E-load 600W~3000W

Main Features :

High power density design, the whole machine can achieve 3kW / 2U;

Single power: 600W~3000W, the maximum power can be extended to 30kW;

Voltage level: 150V, 600V, 1200V;

High precision, voltage accuracy is (0.025%+0.025%F.S.); current precision is (0.05%+0.05%F.S.);

.CC, CV, CR, CP, CRD, CPD, CV + CC, CR + CC, CP + CC operation mode

New items



FT8200 High-power Regenerative Load

Main features:

- Energy feedback to power grid at 92% efficiency;
- Voltage customizable 24V...800V;
- Power customizable 30KW...500KW;
- CC, CW functions;
- TFT touch screen, displays parameters in real time;
- Remote control interfaces: RS485, LAN, USB;
- Output pure sinewave, low THD;
- High precision, high stability.



Faith Multi-channel DC Loads

FT66100 series



Advantage:

1. 8-inch color LCD display
2. Max 6-CH

FT61XX series



Advantage:

1. High power density design
FT6100 3U 12CH
FT6110 3U 4 & 8 CH
2. * Time measurement, ripple test, SWEEP
3. Able to form a load system of max. 240-CH

* For FT6110R series load only.



Faith Multi-channel DC Loads

	FT66100 series	FT6100 series	FT6110 A/R series
Power per channel	300W/600W	45W/150W/300W/600W	150W/300W/
Voltage	80V/500V	60V/500V	150V/500V
Size	3U	3U	3U
Application	Chargers, power adapters, LED drive source, switching power supplies etc.	Automotive wire harness test, 3C batteries and chargers	3C batteries and chargers
Remote interface	RS232 Support SCPI	LAN, RS485 Support ModBus	LAN, RS485 Support ModBus
Unique feature	Large 8-inch TFT display Max 6 channels	high price to performance ratio	high price to performance ratio 500 kHz sampling, ripple test



FTP9000系列宽范围大功率可编程直流电源
(5kW~1800kW)

FTP9000 series wide range high-power programmable DC power supply
(5kW~1800kW)



FTG系列组合式超大功率可编程直流电源
(4kW -600kW)

FTG series stackable mega-power programmable DC power supply
(4kW~600kW)



FTP3000系列宽范围小功率可编程直流电源
(900W~1500W)

FTP3000 series wide range low-power programmable DC power supply (900W~1500W)



FTL系列高精度中小功率可编程直流电源
(90W~1.5kW)

FTL series high precision medium and low-power programmable DC power supply (90W~1.5kW)



FTGK 系列组合式超大功率可编程直流电源
(30 ~ 1800kW)

FTGK series combined super power programmable DC power supply
(30 ~ 1800kW)



FTP系列宽范围可编程直流电源
(2kW ~6.5kW)

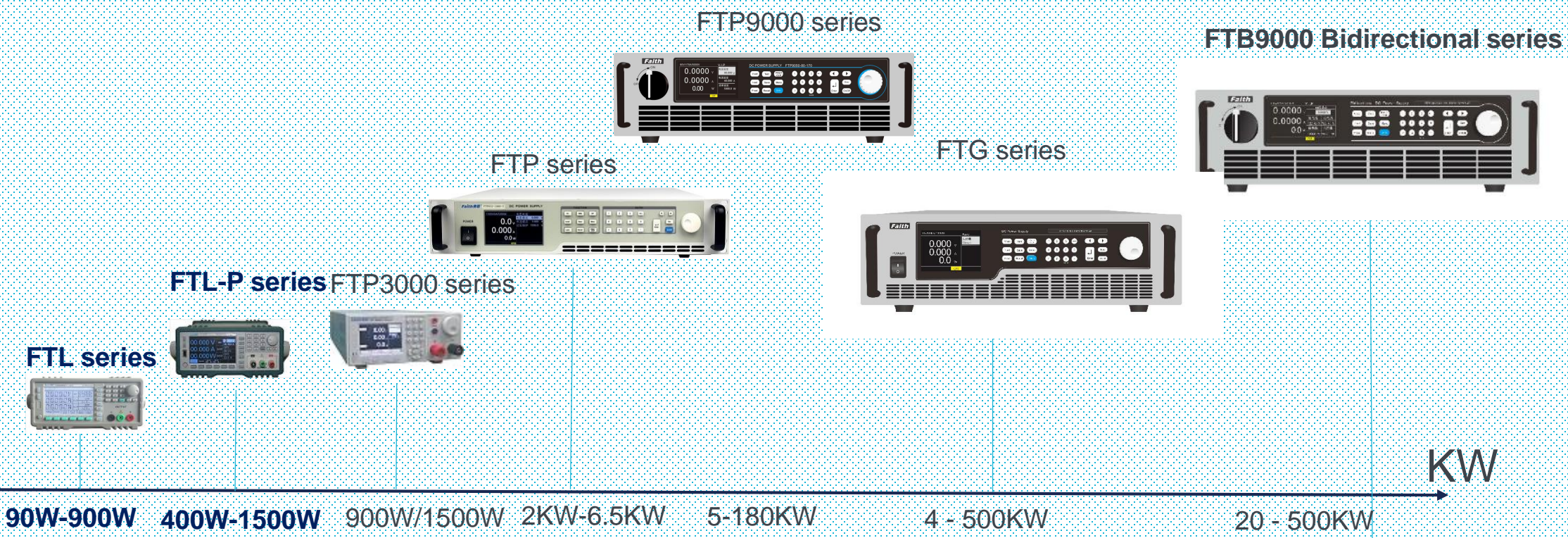
FTP series wide range programmable DC power supply
(2kW~6.5kW)

测控电源

Programmable DC power supply for test, measurement and control

Faith DC Power Supply Series

RMB



FTL Portable DC Power Supply 100W~180W

- Features
 - 100W/180W
 - Universal 100-240VAC, 47~63Hz input
 - Totally digital controlled
 - High resolution at full scale
 - Low ripple noise
 - Minimum dimension
 - High brightness display

Advantages :

very small size, Portable, can be put in bag for outside use,
wide voltage and current output



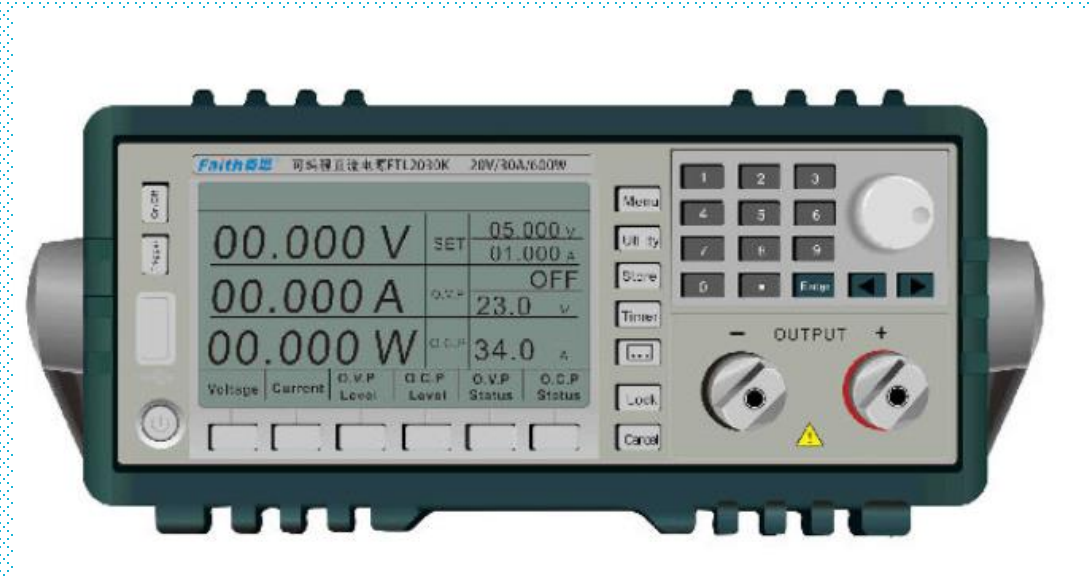
FTL Linear DC Power Supply 90W~1500W

- Features

- 4.3-inch LCD
- 5-digits display
- 0.01% regulation, 1mVrms ripple noise
- 90-900W power range

- Advantages

- High performance at an affordable price



FTL-P Series Wide Output Range DC Source 400W/850W/1500W

- Features
 - 4.3-inch TFT color LCD
 - 300 groups of setups for save and recall
 - High precision high resolution 1mV/1mA
 - 400W/850W/1500W, 0-80V/0-35V
- Advantages
 - High performance at an affordable price



FTL triple channel DC power supply

- Features

- 2U half-rack instrument delivers up to 540 W of power with low ripple and noise, or 180 W per channel;
- Capability to do series or parallel, or tracking among the channels;
- Linear type high resolution, high precision (1mV/1mA), high stability DC power supply;
- Monitor the voltage and current output in real time for all channels;

- All channels are individually controllable;

- Advantages

- High performance at an affordable price



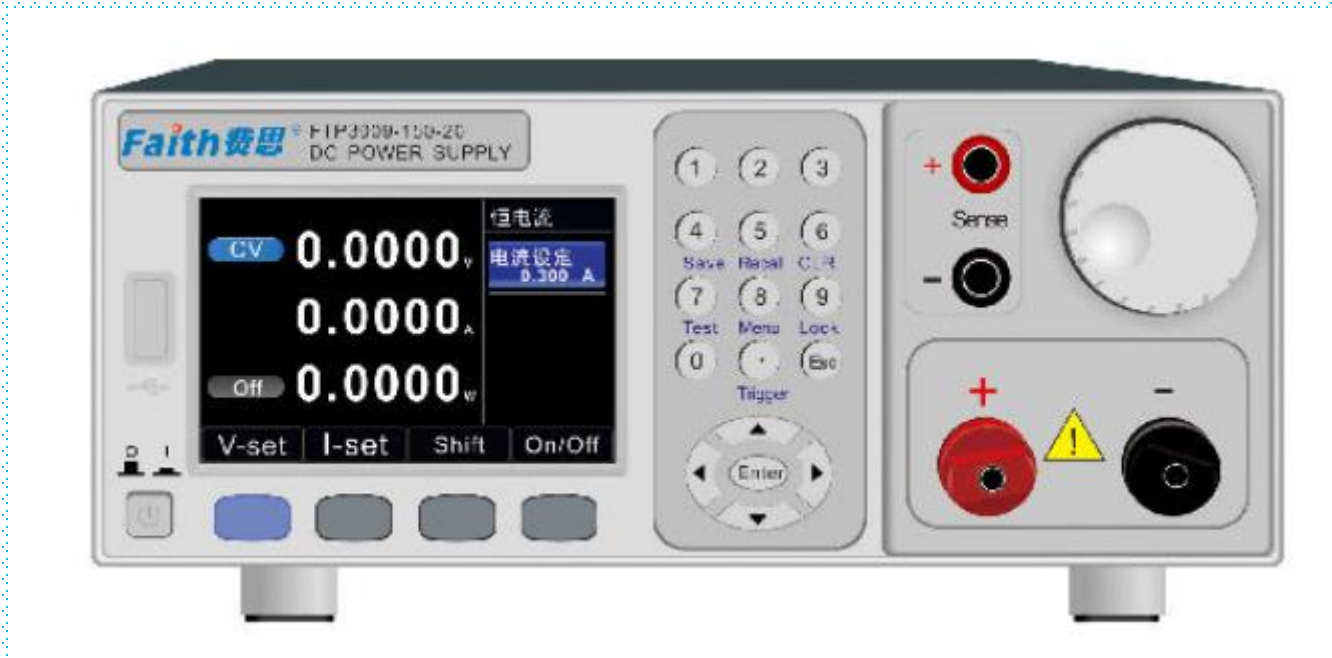
FTP3000 series Wide Output Range DC Power Supply 900W/1500W

- Features

- 900W/1500W, 40V...600V
- 24-bit ADC measurement
- Power factor greater than 0.98
- Low ripple noise, voltage remote sense
- Variable inner resistance

- Application

- Lab test, on board equipments test, solar inverter test, DC/DC converter and inverter test, engine start test, electronics product life test, etc.



FTP Wide Output Range DC Power Supply 2KW/3.2KW/6.5KW

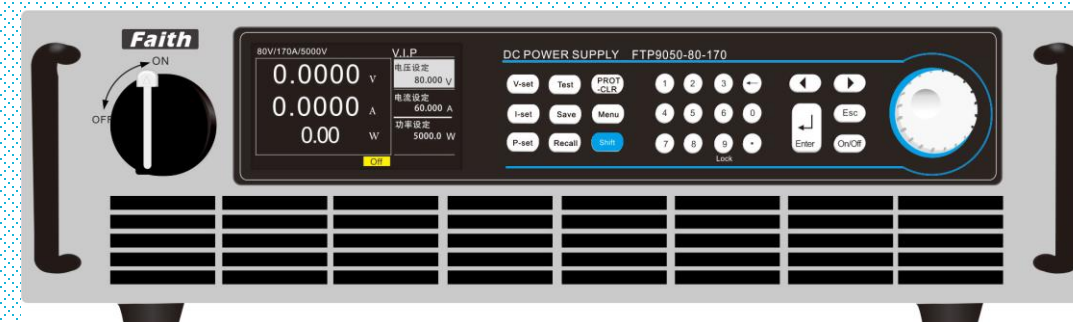
- Features
 - 2KW/3.2KW/6.5KW
 - 16-bit ADC/DAC measurement & control
 - Adjustable slew rate, 1ms transient response
 - PFC control: input power factor > 0.98
- Application
 - ATE system integration, lab test, on board device test, solar inverter test, DC/DC converter and inverter test, automotive electronics test, engine start test, superconductor test, motor test, voltage/current sensor calibration, laser device test, etc.



FTP9000 Wide Output Range DC Power Supply 5KW~180KW

• Features

- 5KW...180KW (parallel up to 1.8MW)
- 0...2250 V, 0...3060 A output range
- 500KHz sampling rate, 16-bit resolution
- PFC control, Input power factor > 0.99
- Constant power output
- Adjustable slew rate
- CV-to-CC or CC-to-CV foldback, OVP/OCP/OPP/OTP protections
- Variable inner resistance, Voltage Ramp output
- Voltage remote sense



FTH High Performance DC Power Supply 4KW~15KW

- Features

- 5K/10K/15KW (Parallel up to 75KW)
- 3U 15KW high power density
- 0.01% source effect, 0.02% load effect
- Fast response, up to 40V/ms or 150A/ms
- Adjustable slew rate
- Standard analog interface

- Application

- On board device test, UPS test, DC/DC converter and inverter test, engine start test, automotive electronics test, high-power laser device test, etc.



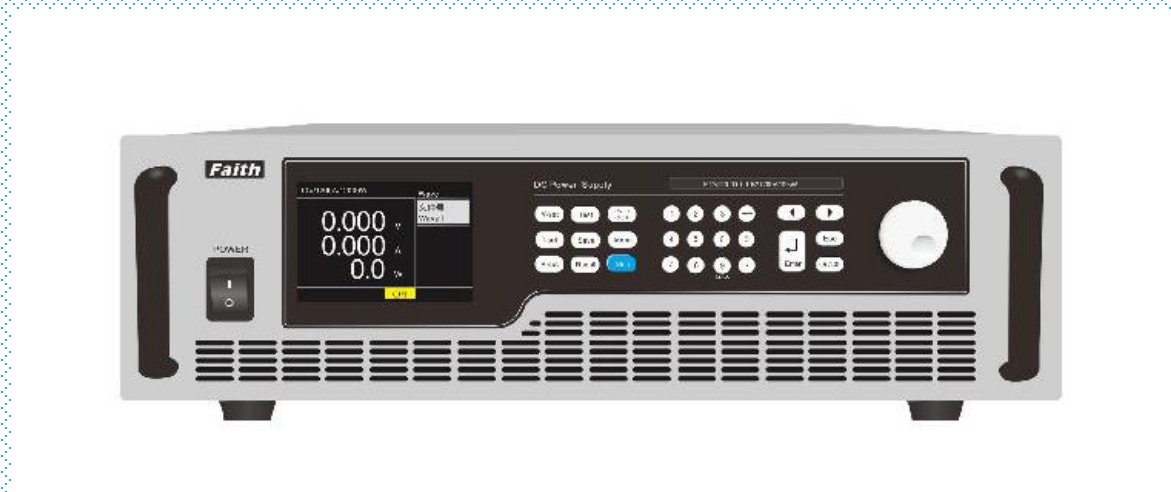
FTG High-power DC power Supply 4KW~600KW

- Features

- Standalone power 4 kW...500 kW
- 0.01% source effect, 0.02% load effect
- 10 V, 15 V, 20 V...1500 V output voltage full span
- Up to 12000 A output current
- User programmable sequence

- Application

- UPS test, energy storage battery test, high-power laser test, material test, superconductor test, current sensor test, etc.



FTD High-power Bidirectional DC Power Supply

- Features
 - Four quadrant operation, with regenerative capability
 - PFC control, Input power factor > 0.99
 - 99% power regenerate, low feedback pollution, THD $< 3\%$ at 50/60Hz
 - CV, CC, CP output modes
 - TFT touch screen operation, multiple communication interfaces
- Application
 - DC motor test, DC motor driver test etc.



FTB9000 High-power Bidirectional DC Power Supply

Features

0~108kw,0~2250v

Dual quadrant operation

seamless cross-quadrant switch

PFC control, Input power factor > 0.99

99% power regenerate, low feedback pollution,

THD < 3% at 50/60Hz

CV, CC, CP output modes

TFT color LCD screen, multiple communication interfaces

Application

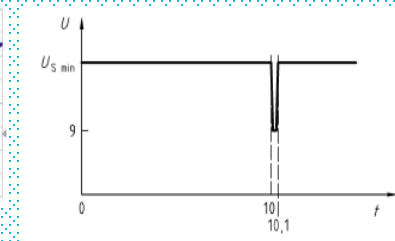
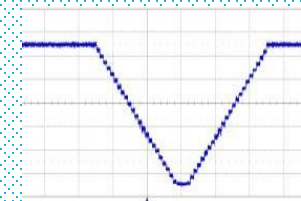
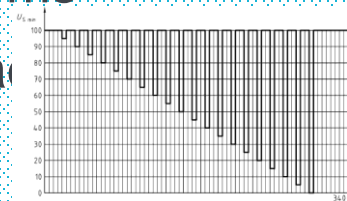
DC motor test, DC motor driver test ,Battery charge/discharge simulation testing etc.



Faith Application Case Study

1.1 Automotive power environment waveform simulating

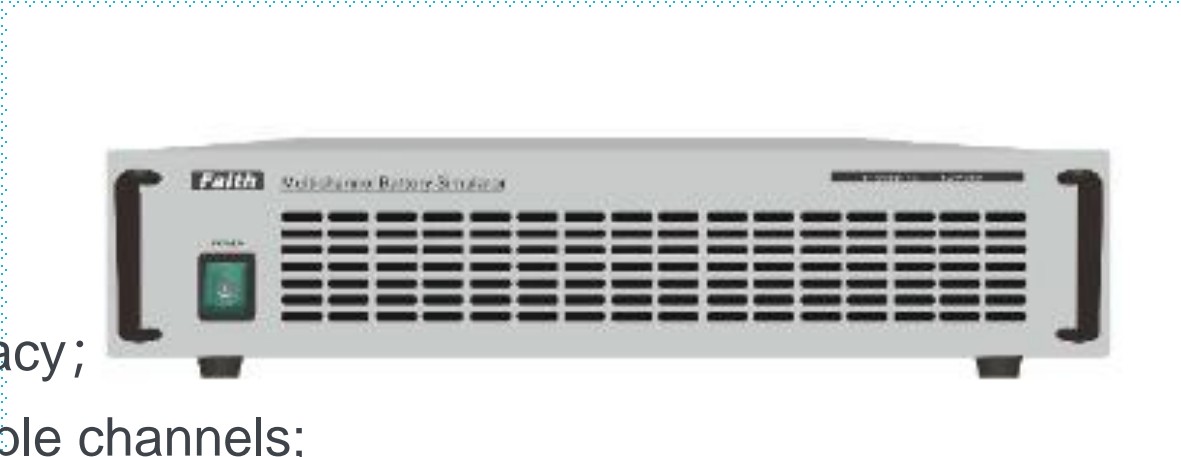
- Features
 - Conforms to following standards:
 - DIN40839、LV124、SAEJ1113-11
 - ISO16750-2、ISO21848
 - Fast response, simulate complex waveforms
 - Built-in load module, speed up the unloading
- Applications
 - On board electric or electronic devices test



Suitable PSU: FTP-C (750W-6.5KW) / FTH-C(≥5KW)

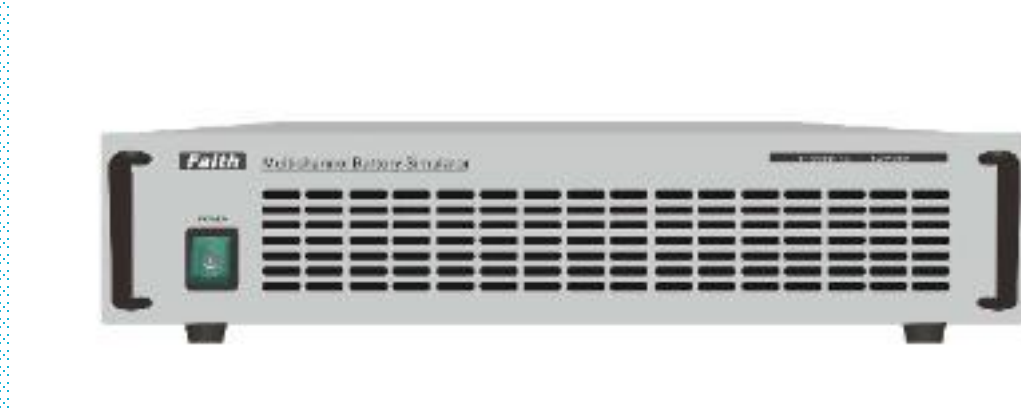
1.2 FT8340 multi-channel Bipolar battery cell simulator

- Features :
 - Voltage: 0 ~ 6V/0 ~ 15V; :
 - Current: $\pm 1A/\pm 2A/\pm 3A/\pm 5A$
 - Four wire connection, high output voltage accuracy;
 - Channel isolation, can be used in series of multiple channels;
 - Standard 19-inch 2U chassis design for easy rack installation
 - Seamless switch between source and load, powerful battery characteristics simulation function
 - Unique fault simulation function, simulating battery disconnection, short circuit, reverse connection, etc



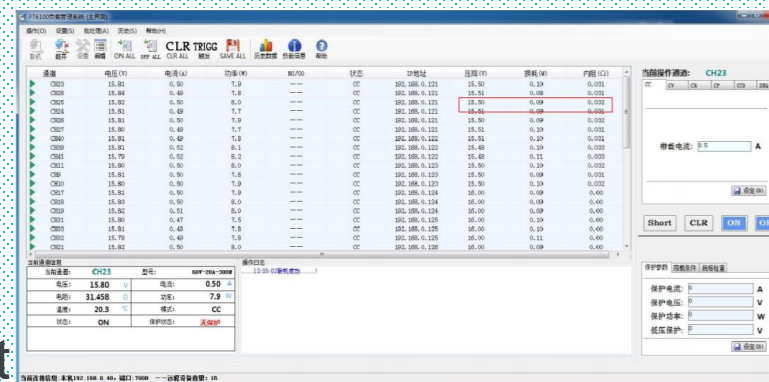
1.3 FT8330 multi-channel Battery cell simulator

- Features :
 - Voltage output: 0 ~ 6V/0 ~ 15V;;
 - Current : 0 ~ 1A/0 ~ 2A/0 ~ 3A/0 ~ 4A/0 ~ 6A;
 - Four wire connection, high output voltage accuracy;
 - The channel number of single machine can reach up to 24,
 - Isolation between each channel, can be arbitrarily parallel and series;
 - Professional testing software, supporting data reporting and data analysis;
 - Standard 19-inch 2U chassis design, which can be mounted on the rack;



1.4 Automotive Wire Harness Aging Test

- Features
 - Max. 240 channels
only ¼ sizes of conventional stand alone
 - Range: V 0-500V / A 0-240A
 - Power per channel: 150-1800W
 - Support Modbus
 - Simulate real automotive structure
- Application
 - Automotive wire harness, Central cont



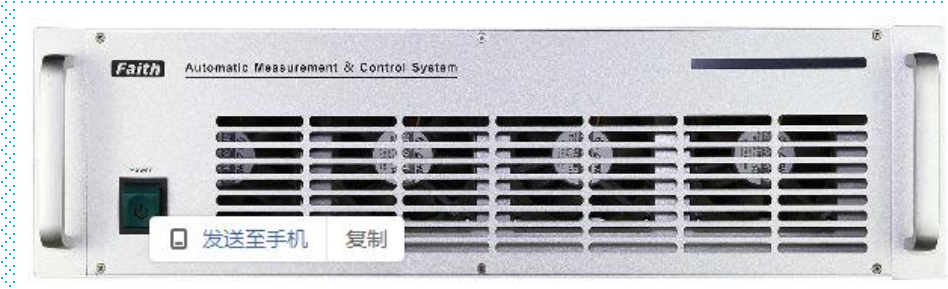
Soft panel of wire harness aging test

Suitable loads: FT61XX/FT64XX series

2.1 FTM8000 Automatic Data Acquisition and Control System

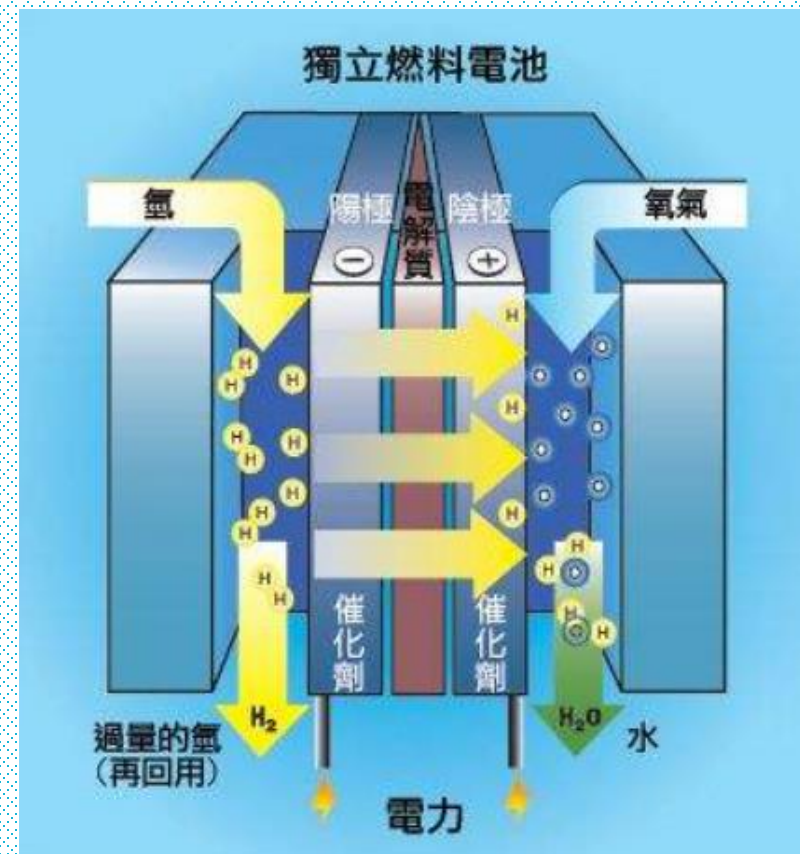
- **Features**

- 1. One main chassis can support up to 15 boards;
- 2. The internal card slot communication of the main chassis is independent Ethernet communication;
- 3. The mainboard of the main box provides DC12V power and Ethernet ports. All boards can be installed in any position.
- 4. All boards are standard modular design, unified interface, can be any combination;
- 5. The board design has a synchronization mechanism, which can configure signal synchronization between any board;
- 6. The main chassis is a standard 19 inch 3U chassis, convenient to rack;



2.2 Hydrogen Fuel Battery Test

- Features
 - Wide range loading, from 1mΩ up to 5KΩ continuous adjust
 - Wide voltage-current combinations
 - Low voltage loading, 0.6V loading current 600A
 - Adjustable slew rate, 0.1A-10,000,000A/S
 - Loading change according to slew rate, no overshoot occurred
 - No instant load or unload, it automatically changes according to slew rate till set value or unloading completed.
- Application
 - Hydrogen fuel batteries maker



Suitable load: FT682XX loads

3.1 Drones performance test

- Features
 - Full voltage span, full power span
 - Anti current backflow, protect the DUT
 - Fast response, simulate complex waveform
 - FT661XX load max. 6CH, suits 6 winged drones
- Application
 - Drones



Battery



Motor



Charger

Suitable instruments DC source: FTP FTG (anti backflow current)
DC load: FT64 / 661XX/ 682XX series

3.2 High-power Laser Device Test

- Features
 - Current precision 0.1%
 - Low Current ripple
 - High speed output waveform, no spikes or
- Application
 - High power laser devices (Cut, weld)
 - Laser weapon



Suitable instruments DC source: FTP FTG (anti backflow current -D)
DC load: FT64 / 661XX/ 68XX series

4.1 High-precision Current Sensor Test

- Features
 - 10 V, 15 V ultra-low voltage edition
 - Ultra-high-precision current control
 - High speed output waveform, no spikes or overshoot
- Application
 - Automotive high-precision current sensor test



Suitable instruments DC source: FTG (10 V, 15 V edition)
DC load: FT64XX / 68XX series

4.2 Power Semiconductor Test

- Features
 - High voltage (FTG 1500V / FTP9000 2250V)
 - User programmable sequence
 - High speed transient response (typical 1~2 ms)
- Application
 - IGBT
 - The third edition power semiconductors
 - SiC
 - GaN



Suitable instruments DC source: FTG/FTP9000 (High voltage edition)
DC load: FT64 / 682XX series

Our Key Clients

Education	Military	Automotive	Telecom	New energy	Batteries	semiconductor
 長春大學 CHANGCHUN UNIVERSITY	 中国华能集团公司 CHINA HUANENG GROUP	 TESLA	 HUAWEI	 TDK	 Panasonic 松下電器	 Schneider Electric 施耐德电气
 中山大學 SUN YAT-SEN UNIVERSITY	 中船重工	 VW	 SAMSUNG	 GE	 CATL 宁德时代	 SPEEDWOLF
 清華大學	 中国航天	 TOYOTA	 Motorola	 TOSHIBA	 SUNWODA 欣旺达	 ABB
 电子科技大学	 中国工程物理研究院 CHINA ACADEMY OF ENGINEERING PHYSICS	 BYD	 ERICSSON	 Vestas	 EVE ENERGY VERY ENDURE 亿纬锂能	 infineon
 復旦大學	 中国科学院光电研究院	 广汽 HONDA	 Qualcomm 高通	 SIEMENS energy	 BYD	 CREE
 北京航空航天大学	 SAPT	 Ford 长安福特		 TOTAL 道达尔	 SVOLT 蜂巢能源	 BOSCH 博世 科技成就生活之美

FAQ

Thank you

