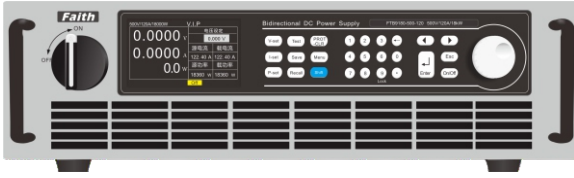


FTB9000 series

Wide range high power bidirectional programmable DC power supply



Features

- Unit range:
 - Voltage: 0 ~ 2250V,
 - Current: 0 ~ $\pm 4500\text{A}$,
 - Power: 0 ~ $\pm 180\text{kW}$;
- Main-slave parallel expansion power up to 1.8MW;
- Voltage accuracy: $0.02\%+0.02\%\text{F.S.}$;
- Current accuracy: $0.1\%+0.1\%\text{F.S.}$;
- Power factor 0.99, the overall efficiency is higher than 93%;
- Feedback load function, feedback efficiency up to 95%;
- Two-way energy transfer, seamless cross-quadrant switching;
- Automatic line loss compensation;
- With constant voltage, constant current, constant power, constant resistance function;
- CV/CC priority mode;
- Voltage/current slope can be set;
- With voltage output slow up, slow down function;
- With charge, discharge function;
- With sequence and waveform functions, can achieve such as automotive electronic test voltage waveform, user-defined and other complex voltage, current waveform;
- With battery simulator function (optional);
- Standard feature rich "Faithtech power product demonstration platform" software, with basic solar photovoltaic cell simulation function;
- Optional feature-rich "Faithtech Solar PV Matrix Simulation Software" (optional);
- Over voltage, over current, over power, over temperature, under voltage, power off and other comprehensive protection functions;
- High voltage isolation digital, analog, monitoring, control interface;
- Equipped with a variety of communication interfaces: LAN, USB, optional RS485, CAN or GPIB;
- Communication protocol support SCPI, MODBUS, CAN-OPEN (optional) protocol;
- Provide communication programming manual, SDK development kit and demonstration host computer;
- TFT color LCD screen, Chinese, English and Chinese menu interface;
- Intelligent fan control;
- 3U/18kW high power density, standard 19-inch rack design.

Summary

FTB9000 series products are a wide range of high power bidirectional programmable DC power supply with both DC power supply and feedback load function. It can not only realize the function of Source, but also feed the absorbed energy back to the power grid as a feedback load to realize the bidirectional flow of energy.

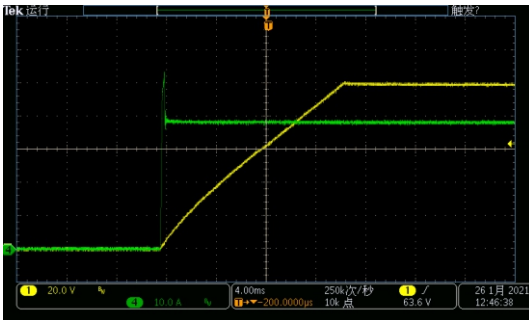
FTB9000 series adopts full digital control, high operation precision, fast response, wide output adjustment range, programmable output function, can realize the source and load dual quadrant seamless switching, at the same time with rich test functions and simple human-computer interaction interface, in automotive electronics, energy storage, fuel cell and other high-power test scenarios have a wide range of applications.

Application fields

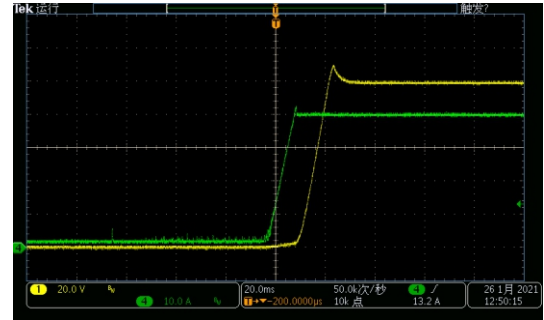
- Energy testing:
 - Energy Storage converters (PCS),
 - Microgrid equipment production,
 - Inverter production, development,
 - Solar arrays, wind power generation applications;
- Automotive production testing:
 - Automotive motors,
 - Automotive electronics,
 - Two-way DC/DC converter;
- Other tests:
 - Power semiconductor components,
 - Development of server power supply,++ UPS,
 - Avionics,
 - Consumer electronics;

CV and CC are preferred

When the power output is connected to the inductive or capacitive load, the output current or voltage will overshoot to a certain extent, which will trigger the protection of the device under test, or even damage the device under test. FTB9000 series with CV, CC output priority function to effectively inhibit the output overshoot and the impact.



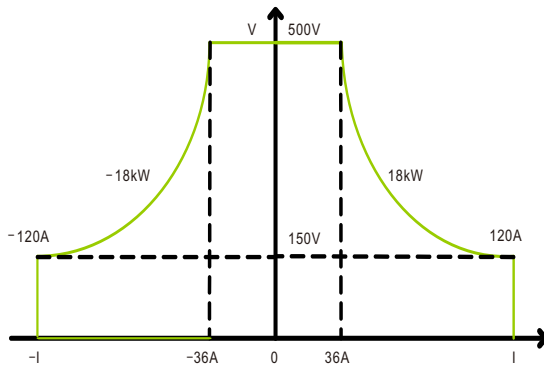
CV priority
(high speed build voltage, current overshoot)



CC priority
(high speed build current, voltage overshoot)

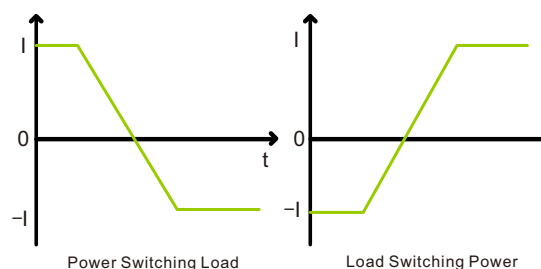
Double quadrant, wide range

FTB9000 series products have dual quadrant working characteristics, can be used as DC power output energy, and can be used as feedback load to absorb energy. At the same time, FTB9000 has a wide working range, with more than 3 times the wide range of output range, one power supply can cover more applications, saving costs for users.



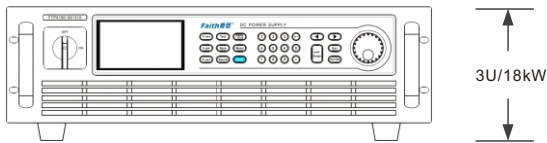
Seamless switching of two-way current

When the conventional DC power supply and load switch between positive and negative current, a short step will be generated at 0A, resulting in discontinuous current commutation. FTB9000 not only has the dual-quadrant working ability, but also has the high-speed current switching ability, which can realize the seamless connection of positive and negative current switching, effectively avoid voltage or current overshooting, and is widely used in the test of motor, battery pack, BMS and energy storage system.



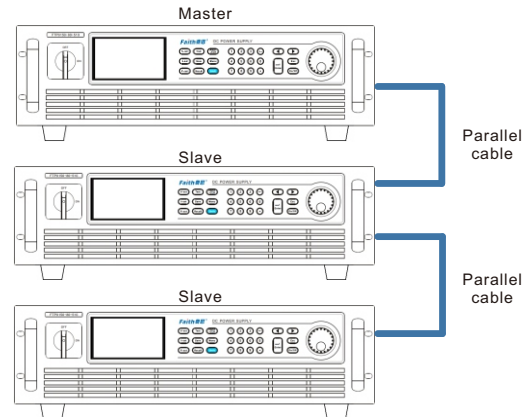
3U/18kW high power density

The FTB9000 series provides a high power density of 3U/18kW, with accurate output, fast response and low ripple noise. The wide range of voltage 80V ~ 2250V and current 25A ~ 4500A is suitable for every test and verification link from design to production process.



Master/slave parallel function

FTB9000 series power supplies support the parallel operation of 10 power supplies of the same model, so that users can achieve greater power expansion. When the parallel operation, the host automatically displays the parameters, and the slave automatically copies the set parameters of the host to achieve automatic current sharing.



Photovoltaic array simulation function

FTB9000 series comes standard with feature-rich "Faith Power Demonstration Platform" with basic PV function for testing PV inverters. With the host computer demonstration platform, more test functions can be realized, such as dynamic MPPT, typical weather data, custom light/temperature change curve and so on. For more complex PV test functions, you can choose the Fiesta Solar PV Matrix simulation software.



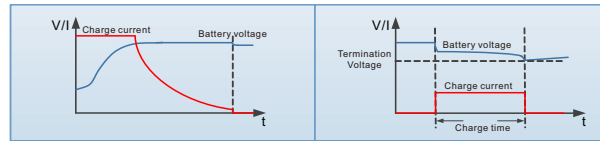
Computer graphical operation software

A host computer software platform with the function of virtual instrument can be provided, which can remotely and real-time set test data, read test data, generate images, export reports, print reports, etc., and realize multi-functional test synchronously, so as to facilitate test use.



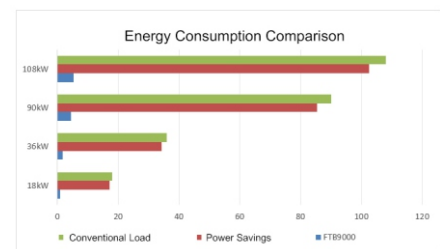
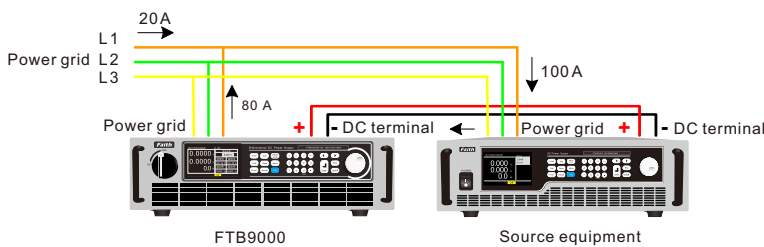
Battery charge/discharge test

Due to its unique bidirectional design, FTB9000 series has charge/discharge test function, which is suitable for various kinds of batteries and energy storage equipment charge/discharge test.



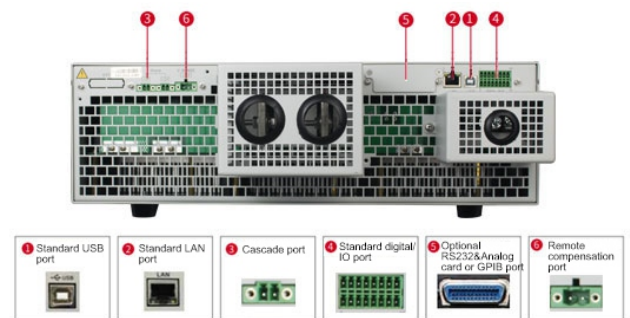
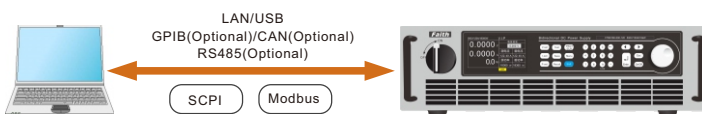
Feedback load function

FTB9000 series products have the feedback load function, which can return the energy of the equipment under test to the factory Intranet for direct use, rather than dissipate it as heat. Its energy feedback conversion efficiency is as high as 95%, which can not only greatly reduce the cost of electricity for users, but also avoid the use of air conditioning and other refrigeration systems and reduce noise.



Multi-interface and Multi-protocol

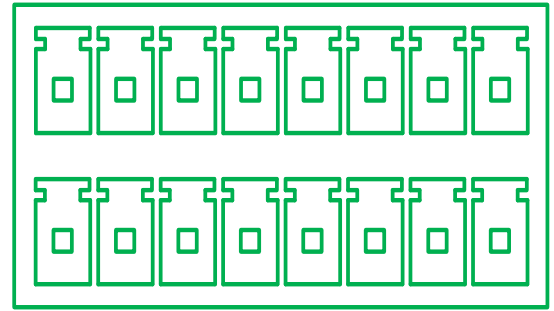
The FTB9000 series is equipped with a variety of communication interfaces, and supports both SCPI and Modbus communication protocols. Users can configure in the menu according to their needs, which makes the system integration more flexible.



Composite signal port (optional)

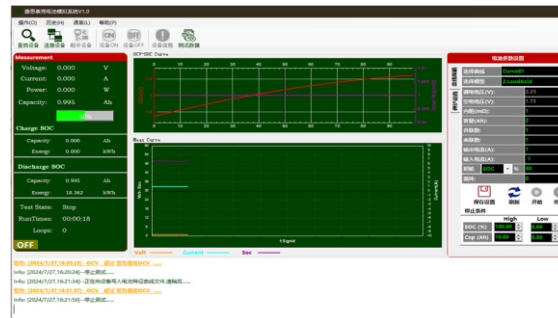
FTB9000 series optional composite signal port, which has the following functions:

- READY power supply working status indicator;
- Output mode indication;
- Compound external control;
- Voltage and current output monitoring;
- Voltage, current, power programming control;
- Master, slave communication, etc.



Battery simulation function (optional)

The FTB9000 has a unique current bipolar design, which can simulate the charge and discharge characteristics of the battery for various tests. Under the battery simulation function, users can edit battery files. The battery file mainly describes the characteristic curves of the battery capacity, open circuit voltage and internal resistance of the battery. After the battery simulation function is turned on, it will absorb current (charge) or output current (discharge) according to the external load, and adjust the output voltage to make the output voltage conform to the characteristic curve specified in the file.



Faithtech Solar PV Matrix Simulation Software (optional)

Faithtech Solar PV Matrix simulation software is a photovoltaic test software supporting Faithtech power supply series. It adopts simple and intuitive graphical interface to present users with intuitive and friendly man-machine interface. Users can easily use the software to output, measure and display the maximum power tracking status and numerical records of photovoltaic inverters in real time. The software built-in EN50530, Sandia and other 5 kinds of regulatory test procedures, can simulate the solar panel under different parameters of the series parallel test, as well as cloud cover and other tests; It is convenient for users to test the static and dynamic MPPT efficiency of photovoltaic inverters.



Ordering information

* Higher power specifications are not listed.

Voltage	Model	Current	Power	Dimension	Voltage	Model	Current	Power	Dimension
80V	FTB9050-80-150	150A	5kW	3U	300V	FTB9060-300-75	75A	6kW	3U
	FTB9100-80-300	300A	10kW	3U		FTB9120-300-150	150A	12kW	3U
	FTB9150-80-450	450A	15kW	3U		FTB9180-300-225	225A	18kW	3U
	FTB9300-80-900	900A	30kW	6U		FTB9360-300-450	450A	36kW	6U
	FTB9450-80-1350	1350A	45kW	16U		FTB9540-300-675	675A	54kW	16U
	FTB9600-80-1800	1800A	60kW	16U		FTB9720-300-900	900A	72kW	16U
	FTB9750-80-2250	2250A	75kW	22U		FTB9900-300-1125	1125A	90kW	22U
Voltage	Model	Current	Power	Dimension	Voltage	Model	Current	Power	Dimension
500V	FTB9060-500-40	40A	6kW	3U	800V	FTB9060-800-25	25A	6kW	3U
	FTB9120-500-80	80A	12kW	3U		FTB9120-800-50	50A	12kW	3U
	FTB9180-500-120	120A	18kW	3U		FTB9180-800-75	75A	18kW	3U
	FTB9360-500-240	240A	36kW	6U		FTB9360-800-150	150A	36kW	6U
	FTB9540-500-360	360A	54kW	16U		FTB9540-800-225	225A	54kW	16U
	FTB9720-500-480	480A	72kW	16U		FTB9720-800-300	300A	72kW	16U
	FTB9900-500-600	600A	90kW	22U		FTB9900-800-375	375A	90kW	22U
Voltage	Model	Current	Power	Dimension	Voltage	Model	Current	Power	Dimension
1000V	FTB9120-1000-40	40A	12kW	3U	1500V	FTB9120-1500-25	25A	12kW	3U
	FTB9180-1000-75	75A	18kW	3U		FTB9180-1500-40	40A	18kW	3U
	FTB9240-1000-80	80A	24kW	6U		FTB9240-1500-50	50A	24kW	6U
	FTB9360-1000-150	150A	36kW	6U		FTB9360-1500-80	80A	36kW	6U
	FTB9540-1000-225	225A	54kW	16U		FTB9540-1500-120	120A	54kW	16U
	FTB9720-1000-300	300A	72kW	16U		FTB9720-1500-160	160A	72kW	16U
	FTB9900-1000-375	375A	90kW	22U		FTB9900-1500-200	200A	90kW	22U
Voltage	Model	Current	Power	Dimension	Voltage	Model	Current	Power	Dimension
2250V	FTB9180-2250-25	25A	18kW	3U	2250V	FTB9720-2250-100	100A	72kW	16U
	FTB9360-2250-50	50A	36kW	6U		FTB9900-2250-125	125A	90kW	22U
	FTB9540-2250-75	75A	54kW	16U		FTB91080-2250-150	150A	108kW	22U

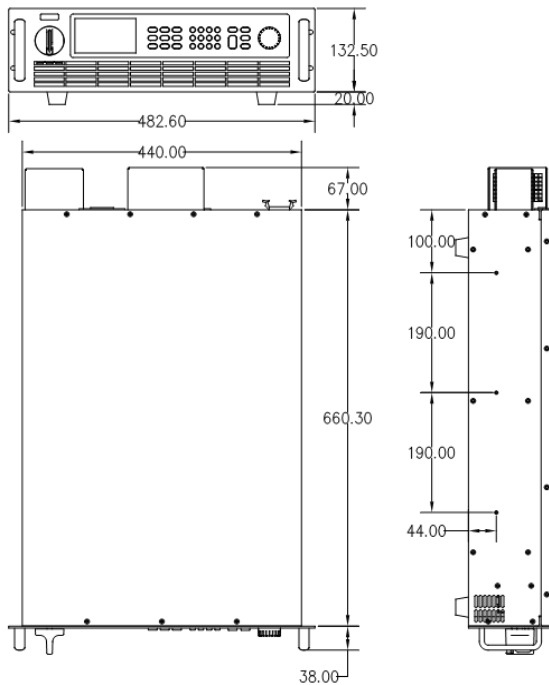
Optional information

Name	Model or specification	Note
GPiB interface	FTB9001B	One of three options, installation prior to factory shipment
CAN+485 interface	FTB9001C	
RS232 interface	FTB9001R	
Composite signal port	FTB9001F	Installation prior to factory shipment
Faithetch solar PV matrix simulation software V1.0	FT-SAS	
Faithtech battery simulation software V1.0	FT-BSS	

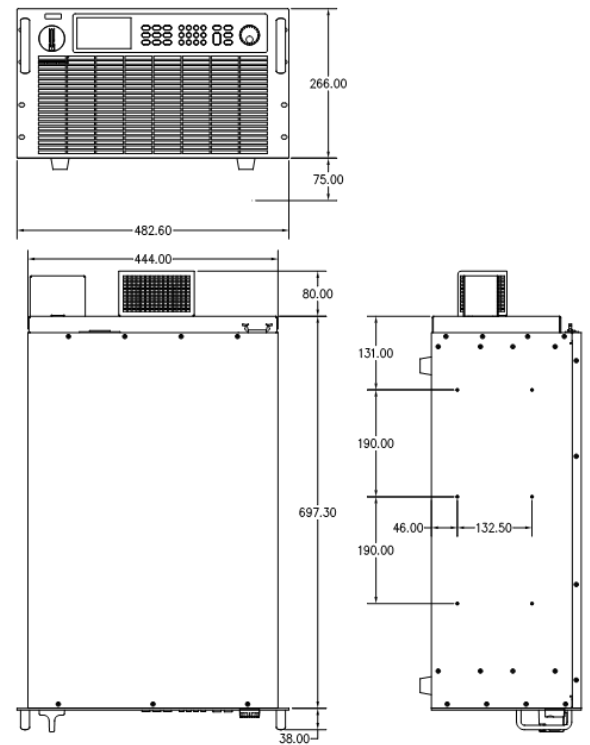
*Optional test cables and other optional parts, the relevant specifications and models are detailed in the "Optional Accessories" section of this manual.

Dimensions drawing

The FTB9000 series products have a standard 19-inch chassis and can be installed in a standard cabinet.



Dimensions for 5kW~18kW model



Dimensions for 20kW~36kW model

General specification parameters

Items	Parameters
AC input	Three-phase input, 340VAC~480VAC, frequency: 47Hz~63Hz
Power factor	0.99(typical value)
Efficiency	> 93% (typical value)
Output voltage	0~rated value(maximum rating 2250V, menu setting, digital or coded knob inputs)
Output current	0~rated value(maximum rating 10000A, menu setting, digital or coded knob inputs)
Output power	0~rated value(maximum rating 180kW, menu setting, digital or coded knob inputs)
Voltage measurement accuracy	0.02%+0.02%F.S.
Accuracy of current measurement	0.1%+0.1%F.S.
Voltage and current monitoring	Voltage/current monitor output voltage: DC 0~5V
Display interface	4.3-inch TFT color LCD screen, supporting simplified Chinese, traditional Chinese and English display
Operation interface	Function keys, numeric keys and knobs
Transient response	10%~90% dynamic load change, equipment voltage recovery to the rated value of 0.75% of the accuracy of the range of time required less than 2ms
Parallel operation	Support 10 sets of the same type of master and slave parallel expansion
Protection	Over-voltage, over-current, over-power, over-temperature, under-voltage, etc
Communication interface	LAN、USB serial port (optional GPIB、CAN、RS485)
Communication protocol	SCPI、MODBUS、CAN-Open protocols
Operating temperature	0°C~40°C
Storage temperature	-20°C~70°C
Use altitude	<2000m
Heat dissipation mode	Air-cooled, intelligent air control

Specification parameters-1

Parameter items		Technical parameters			
Voltage rating		80V	300V	500V	800V
Model		FTB9050-80-150	FTB9060-300-75	FTB9060-500-40	FTB9060-800-25
Power		-5~5kW	-6~6kW	-6~6kW	-6~6kW
Current		-150~150A	-75~75A	-40~40A	-25~25A
Resistance		0.02~106Ω	0.3~800Ω	0.5~2.5kΩ	1.2~6kΩ
Model		FTB9100-80-300	FTB9120-300-150	FTB9120-500-80	FTB9120-800-50
Power		-10~10kW	-12~12kW	-12~12kW	-12~12kW
Current		-300~300A	-150~150A	-80~80A	-50~50A
Resistance		0.01~50Ω	0.15~400Ω	0.25~1.25kΩ	0.6~3kΩ
Model		FTB9150-80-450	FTB9180-300-225	FTB9180-500-120	FTB9180-800-75
Power		-15~15kW	-18~18kW	-18~18kW	-18~18kW
Current		-450~450A	-225~225A	-120~120A	-75~75A
Resistance		0.006~35Ω	0.1~266Ω	0.16~833Ω	0.4~2kΩ
Model		FTB9300-80-900	FTB9360-300-450	FTB9360-500-240	FTB9360-800-150
Power		-30~30kW	-36~36kW	-36~36kW	-36~36kW
Current		-900~900A	-450~450A	-240~240A	-150~150A
Resistance		0.003~17Ω	0.05~133Ω	0.08~416Ω	0.2~1kΩ
Model		FTB9450-80-1350	FTB9540-300-675	FTB9540-500-360	FTB9540-800-215
Power		-45~45kW	-54~54kW	-54~54kW	-54~54kW
Current		-1350~1350A	-675~675A	-360~360A	-215~215A
Resistance		0.002~11Ω	0.03~88Ω	0.05~277Ω	0.1~666Ω
Model		FTB9600-80-1800	FTB9720-300-900	FTB9720-500-480	FTB9720-800-300
Power		-60~60kW	-72~72kW	-72~72kW	-72~72kW
Current		-1800~1800A	-900~900A	-480~480A	-300~300A
Resistance		0.002~8.8Ω	0.025~66Ω	0.042~208Ω	0.1~500Ω
Model		FTB9750-80-2250	FTB9900-300-1125	FTB9900-500-600	FTB9900-800-375
Power		-75~75kW	-90~90kW	-90~90kW	-90~90kW
Current		-2250~2250A	-1125~1125A	-600~600A	-375~375A
Resistance		0.002~9Ω	0.02~53Ω	0.033~166Ω	0.08~400Ω
Model		FTB9900-80-2700	FTB91080-300-1350	FTB91080-500-720	FTB91080-800-450
Power		-90~90kW	-108~108kW	-108~108kW	-108~108kW
Current		-2700~2700A	-1350~1350A	-720~720A	-450~450A
Resistance		0.001~6Ω	0.017~44Ω	0.027~138Ω	0.066~333Ω
Model		FTB91050-80-3150	FTB91260-300-1575	FTB91260-500-840	FTB91260-800-525
Power		-105~105kW	-126~126kW	-126~126kW	-126~126kW
Current		-3150~3150A	-1575~1575A	-840~840A	-525~525A
Resistance		0.001~4.4Ω	0.014~38Ω	0.024~119Ω	0.057~285Ω
Model		FTB91200-80-3600	FTB91440-300-1800	FTB91440-500-960	FTB91440-800-600
Power		-120~120kW	-144~144kW	-144~144kW	-144~144kW
Current		-3600~3600A	-1800~1800A	-960~960A	-600~600A
Resistance		0.001~4.4Ω	0.013~33Ω	0.021~104Ω	0.05~250Ω
Model		FTB91350-80-4050	FTB91620-300-2025	FTB91620-500-1080	FTB91620-800-675
Power		-135~135kW	-162~162kW	-162~162kW	-162~162kW
Current		-4050~4050A	-2025~2025A	-1080~1080A	-675~675A
Resistance		0.001~3.9Ω	0.011~30Ω	0.018~92Ω	0.044~222Ω
Model		FTB91500-80-4500	FTB91800-300-2250	FTB91800-500-1200	FTB91800-800-750
Power		-150~150kW	-180~180kW	-180~180kW	-180~180kW
Current		-4500~4500A	-2250~2250A	-1200~1200A	-750~750A
Resistance		0.001~3.5Ω	0.01~26Ω	0.017~83Ω	0.04~200Ω
Voltage parameters					
Programming accuracy		0.02%+0.02%F.S.	0.02%+0.02%F.S.	0.02%+0.02%F.S.	0.02%+0.02%F.S.
Measurement accuracy		0.02%+0.02%F.S.	0.02%+0.02%F.S.	0.02%+0.02%F.S.	0.02%+0.02%F.S.
Programming/measuring resolution		1mV	5mV	10mV	10mV
Linear adjustment rate		0.01%F.S.	0.01%F.S.	0.01%F.S.	0.01%F.S.
Load adjustment rate		0.02%F.S.	0.02%F.S.	0.02%F.S.	0.02%F.S.
Upward slope		10000V/s	40000V/s	40000V/s	40000V/s
Descent time	No-load	≤5s	≤5s	≤10s	≤10s
	Full load	≤30ms	≤30ms	≤30ms	≤30ms
Noise & Ripple	Peak-to-peak value(Vpp)	320mV	300mV	450mV	800mV
	rms value(Vrms)	25mV	40mV	70mV	200mV
Current parameters					
Programming accuracy		0.1%+0.1%F.S.	0.1%+0.1%F.S.	0.1%+0.1%F.S.	0.1%+0.1%F.S.
Measurement accuracy		0.1%+0.1%F.S.	0.1%+0.1%F.S.	0.1%+0.1%F.S.	0.1%+0.1%F.S.
Programming/measuring resolution		I _{max} / 2 ¹⁶	I _{max} / 2 ¹⁶	I _{max} / 2 ¹⁶	I _{max} / 2 ¹⁶
Linear adjustment rate		0.05%F.S.	0.05%F.S.	0.05%F.S.	0.05%F.S.
Load adjustment rate		0.1%F.S.	0.1%F.S.	0.1%F.S.	0.1%F.S.
Power parameter					
Programming accuracy		0.5%F.S.	0.5%F.S.	0.5%F.S.	0.5%F.S.
Measurement accuracy		0.5%F.S.	0.5%F.S.	0.5%F.S.	0.5%F.S.
Programming/measuring resolution		1W	1W	1W	1W
Resistance parameter					
Programming accuracy		1%+0.5%I.F.S.	1%+0.5%I.F.S.	1%+0.5%I.F.S.	1%+0.5%I.F.S.
Measurement accuracy		1%+0.5%I.F.S.	1%+0.5%I.F.S.	1%+0.5%I.F.S.	1%+0.5%I.F.S.
Programming/measuring resolution		0.001Ω	0.001Ω	0.001Ω	0.001Ω
Other					
Dimensions (W*H*D)		5kW~18kW: 482.6mm x 132.5mm x 765.3mm, includes output shields			
Weight		5kW、6kW≈18kg,			
		10kW、12kW≈25kg,			
		15kW、18kW≈32kg			

Specification parameters-2

Parameter items		Technical parameters					
Voltage rating		1000V		1500V		2250V	
Model		FTB9120-1000-40		FTB9120-1500-25		~	
Power		~12~12kW		~12~12kW		~	
Current		~40~40A		~25~25A		~	
Resistance		1~5kΩ		2. 25~11kΩ		~	
Model		FTB9180-1000-75		FTB9180-1500-40		FTB9180-2250-25	
Power		~18~18kW		~18~18kW		~18~18kW	
Current		~75~75A		~40~40A		~25~25A	
Resistance		0.52~2.6kΩ		1. 5~7. 5kΩ		3. 6~18k	
Model		FTB9360-1000-150		FTB9360-1500-80		FTB9360-2250-50	
Power		~36~36kW		~36~36kW		~36~36kW	
Current		~150~150A		~80~80A		~50~50A	
Resistance		0.26 1.3kΩ		0. 75~7. 5kΩ		1. 8~9kΩ	
Model		FTB9540-1000-225		FTB9540-1500-120		FTB9540-2250-75	
Power		~54~54kW		~54~54kW		~54~54kW	
Current		~225~225A		~120~120A		~75~75A	
Resistance		0. 17~0.88kΩ		0. 5~2. 5kΩ		1. 2~6kΩ	
Model		FTB9720-1000-300		FTB9720-1500-160		FTB9720-2250-100	
Power		~72~72kW		~72~72kW		~72~72kW	
Current		~300~300A		~160~160A		~100~100A	
Resistance		0. 13~650Ω		0. 375~1. 875kΩ		0. 9~4. 5kΩ	
Model		FTB9900-1000-375		FTB9900-1500-200		FTB9900-2250-125	
Power		~90~90kW		~90~90kW		~90~90kW	
Current		~375~375A		~200~200A		~125~125A	
Resistance		0. 11~520Ω		0. 3~1. 5kΩ		0. 72~3. 6kΩ	
Model		FTB91080-1000-450		FTB91080-1500-240		FTB91080-2250-150	
Power		~108~108kW		~108~108kW		~108~108kW	
Current		~450~450A		~240~240 A		~150~150A	
Resistance		0. 09~450Ω		0. 25~1. 25kΩ		0. 6~3kΩ	
Model		FTB91260-1000-525		FTB91260-1500-280		FTB91260-2250-175	
Power		~126~126kW		~126~126kW		~126~126kW	
Current		~525~525A		~280~280A		~175~175A	
Resistance		0. 075~375Ω		0. 214~1. 07kΩ		0. 514~2. 5kΩ	
Model		FTB91440-1000-600		FTB91440-1500-320		FTB91440-2250-200	
Power		~144~144kW		~144~144kW		~144~144kW	
Current		~600~600A		~320~320A		~200~200A	
Resistance		0. 065~325Ω		0. 188~938Ω		0. 45~2. 25kΩ	
Model		FTB91620-1000-675		FTB91620-1500-360		FTB91620-2250-225	
Power		~162~162kW		~162~162kW		~162~162kW	
Current		~675~675A		~360~360A		~225~225A	
Resistance		0. 058~290Ω		0. 167~833Ω		0. 4~2kΩ	
Model		FTB91800-1000-750		FTB91800-1500-400		FTB91800-2250-250	
Power		~180~180kW		~180~180kW		~180~180kW	
Current		~750~750A		~400~400A		~250~250A	
Resistance		0. 052~260Ω		0. 15~750Ω		0. 36~1. 8kΩ	
Voltage parameters							
Programming accuracy		0.02%+0.02%F.S.		0.02%+0.02%F.S.		0.02%+0.02%F.S.	
Measurement accuracy		0.02%+0.02%F.S.		0.02%+0.02%F.S.		0.02%+0.02%F.S.	
Programming/measuring resolution		17mV		25mV		37. 5mV	
Linear adjustment rate		0. 01%F. S.		0. 01%F. S.		0. 01%F. S.	
Load adjustment rate		0. 02%F. S.		0. 02%F. S.		0. 02%F. S.	
Upward slope		40000V/s		40000V/s		40000V/s	
Descent time	No-load	<10s		<10s		<10s	
	Full load	≤30ms		≤30ms		≤30ms	
Noise & Ripple	Peak-to-peak value (Vpp)	12kW	1600mV	-		-	
		18kW	-	2400mV		3600mV	
	RMS (Vrms)	12kW	350mV	-		-	
		18kW	-	400mV		400mV	
Current parameters							
Programming accuracy		0. 1%+0. 1% F. S.		0. 1%+0. 1% F. S.		0. 1%+0. 1% F. S.	
Measurement accuracy		0. 1%+0. 1% F. S.		0. 1%+0. 1% F. S.		0. 1%+0. 1% F. S.	
Programming/measuring resolution		Imax / 2 ¹⁶		Imax / 2 ¹⁶		Imax / 2 ¹⁶	
Linear adjustment rate		0. 05%F. S.		0. 05%F. S.		0. 05%F. S.	
Load adjustment rate		0. 05%F. S.		0. 05%F. S.		0. 05%F. S.	
Power parameters							
Programming accuracy		0. 5%F. S.		0. 5%F. S.		0. 5%F. S.	
Measurement accuracy		0. 5%F. S.		0. 5%F. S.		0. 5%F. S.	
Programming/measuring resolution		1W		1W		1W	
Resistance parameters							
Programming accuracy		1%+0. 5%I. F. S.		1%+0. 5%I. F. S.		1%+0. 5%I. F. S.	
Measurement accuracy		1%+0. 5%I. F. S.		1%+0. 5%I. F. S.		1%+0. 5%I. F. S.	
Programming/measuring resolution		0. 001Ω		0. 001Ω		0. 001Ω	
Other							
Dimensions (W*H*D)		5kW~18kW: 482. 6mm x 132. 5mm x 765.3mm, includes output shields					
Weight	5kW, 6kW≈18kg,						
	10kW, 12kW≈25kg,						
	15kW, 18kW≈32kq						