

Product

IT6000B Regenerative Power System



ONE Button Switch
Power Supply And Electronic Load In ONE



IT6000B Regenerative Power System

APPLICATIONS

- High power battery
- High speed testing
- Automotive electronics
- Aerospace
- Green energy
- Industrial manufacturing

Your Power Testing Solution



IT6000 Series

Regenerative Power System

From the perspective of improving customer experience, ITECH launches a new incorporated product--IT6000B series. IT6000B integrates bidirectional power supply and regenerative electronic load into one 3U unit. It is also a very powerful one. Only a button is needed to switch between the bidirectional power supply and the regenerative electronic load. It can be used not only as a stand-alone powerful bidirectional power supply, as a source to provide power; but also as an independent regenerative electronic load, to absorb the consumed energy and feedback cleanly to the grid. IT6000B offers standard two-quadrants functionality.

IT6000B provides 7 voltage ranges, up to 2250V, supports master-slave parallel with current distribution up to 1152kW. Built-in waveform generator supports generating arbitrary waveforms, and imports LIST files for waveforms via USB interface. IT6000B is the combination of reliability, high efficient setting, safe and multiple measurement functions.

IT6000B is a family of bi-directional, regenerative power system with excellent performance, extensively used in aspects of high power battery, automotive electronics, green energy, high speed testing etc.

| Features

- Bi-directional device – power supply and electronic load in one
- One button switch between source and sink on panel
- Stand-alone power up to 144kW, expandable in parallel up to 1.152MW
- Voltage output ratings: 0-2250V
- Current output ratings: 0-2040A
- High power density design provides 18kW in 3U space
- Bi-directional energy transmission, seamless switching across two quadrants
- Support CC/CV loop speed and priority setting
- Built-in voltage curves comply with DIN 40839, ISO-16750-2/ISO21848 automotive standards
- High efficient energy recovery
- Support solar panel I-V curves simulation
- Built-in waveform generator, support generating arbitrary waveforms
- Adjustable output impedance
- Complete protection, support OVP, $\pm$ OCP, $\pm$ OPP, OTP, voltage transient drop protection and anti-islanding protection
- Built-in USB/CAN/LAN/digital IO interface, Optional GPIB/Analog&RS232
- Support data saving and the shortest interval of sampling is 10 μ s

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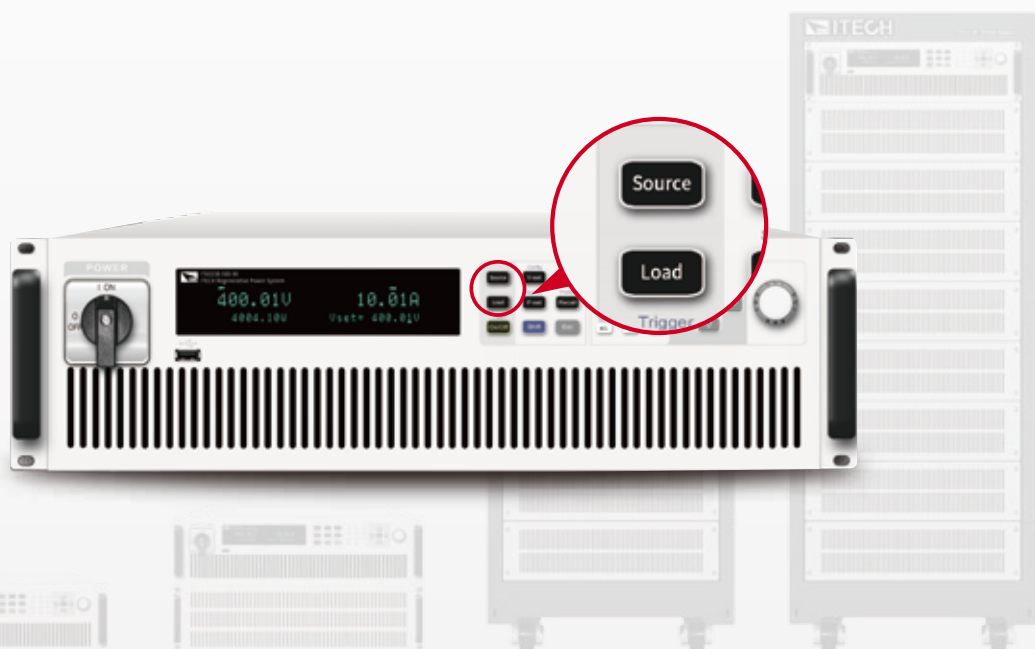
IT6000B Regenerative Power System

Application

01 Renewable Energy		Solar Charger		Micro Inverter	Battery Pack	PV Inverter
02 Automotive	Automotive Motors		Car Charger	Automotive Electronics		Bidirectional DC/DC Converter
03 High-speed testing	Telecom	Power semiconductor components	Military electronics		LED products	Avionics
04 High-power testing		UPS	Electric motor/generator	Consumer products	Electro plating/welding	ATE systems

One button switch between source and load

IT6000B innovatively incorporate two devices in one: a bidirectional power supply and a regenerative electronic load. The devices offer the functional button on panel for easy two-quadrants operation, either as a bidirectional programmable DC power supply or as a DC electronic load with recovery function. It reduces the space, cost and efforts on DUT for separate units.

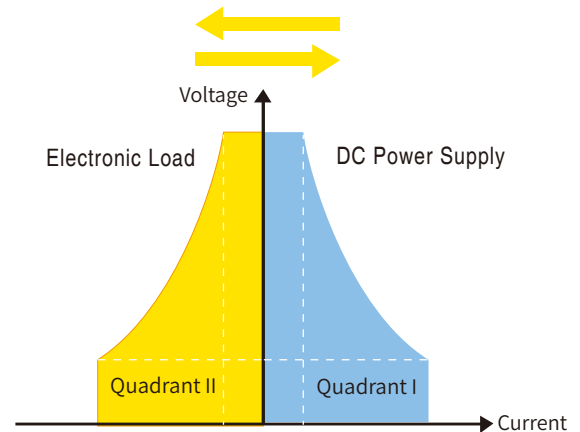


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IT6000B Regenerative Power System

Bi-directional energy, seamless switching

The IT6000B Series combines bi-directional power supply and regenerative load function in one. Unlike traditional power supplies and E-loads, for which there will be short transitions and incontinuity in the middle of positive and negative current switching, IT6000B is a standard high-speed bidirectional power supply. It can switch seamlessly between source and sink mode fast and continuously, which avoids voltage or current overshoot effectively. It can be applied to battery test, cell packaging equipment test, battery protection board test, etc.



High energy regenerative efficiency

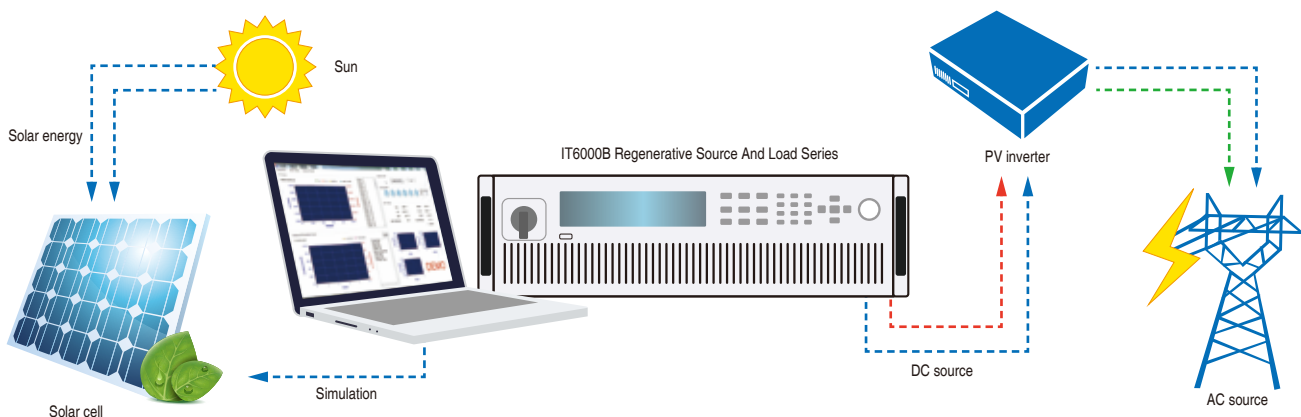
The IT6000B series has a unique function of energy regenerative that can regenerate electrical energy and then directly use it in the plant instead of consuming it in the form of heat. Its regeneration efficiency can reach up to 95%, which not only greatly reduces the user's electricity cost, but also avoids the use of air conditioning or expensive cooling systems.

Most of the conventional electronic loads are energy-consuming loads. In addition to the high cost of electricity, large amounts of carbon dioxide, sulfur dioxide, nitrogen oxides and other greenhouse gases or harmful gases are generated during power generation, which is harmful to the environment. IT6000B can avoid any of these by its regenerative function.



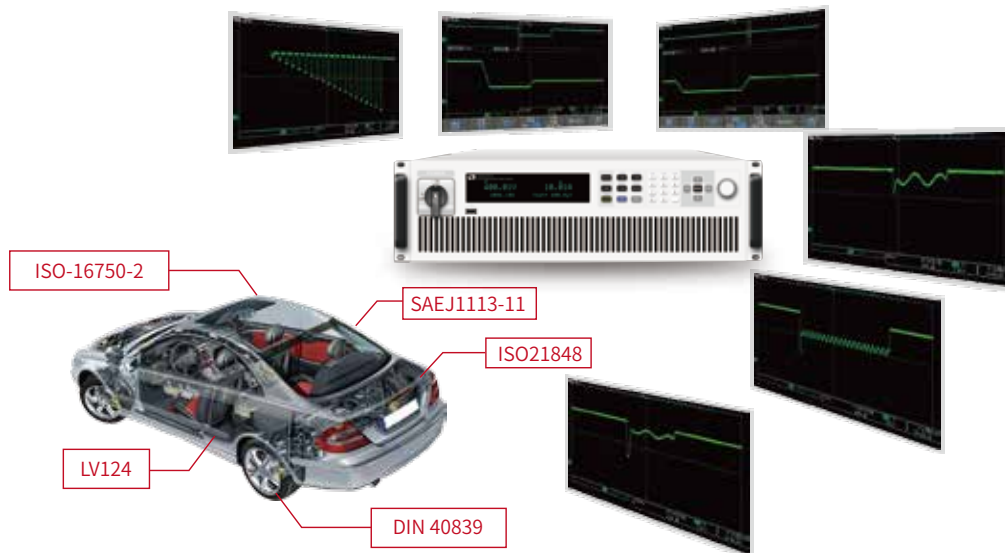
The application for solar array simulation

IT6000B optional SAS1000 solar array simulation software, users can easily use the software to output, measure, display the maximum power and track status of photovoltaic inverter in real time and record value. With the built-in EN50530 /Sandia NB/T32004/CGC/GF004 /GF035 regulatory testing procedures, it is simple for users to simulate I-V curves, test the static and dynamic MPPT performance of PV inverters and generate reports. Solar simulation power supply also provides the shadow and table mode, users can enter up to 4096 points array to edit any shielded IV curve and achieve dynamic shadow effect. Or users can store 100 I-V curves under different irradiation and temperature, set operating time and order to test the long-term MPPT of photovoltaic inverters under different climatic conditions.



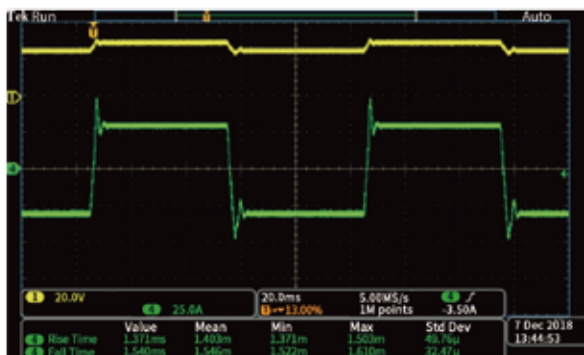
Built-in voltage curves for a variety of standard automotive voltage curves

Automotive electronics may often experience power transients during vehicle start-up and operation. To ensure that the device under test can withstand these actual transients, the tester must simulate worst-case power transient conditions during the test. According to the relevant standards of the industry, the IT6000B has built-in voltage curves for DIN40839, ISO-16750-2, SAEJ1113-11, LV124 and ISO21848 standard automotive voltage curves. Users can easily recall various waveforms directly, such as voltage drop waveform during vehicle starting up, pulse waveform and other related automotive electronics waveforms for performance tests. Available voltage grades in 12V, 24V and 48V.



CC&CV Priority

IT6000B has CC/CV priority function which is the newest concept in the industry. It can meet different application requests such as fast speed or no overshoot and make the test more flexible. Users can choose CC/CV loop response time and loop working mode to decide the output to be voltage high speed mode or current no overshoot mode. This unique function makes it suitable for the application of high power integrated circuit test, charging and discharging test, military and transient simulation test of automotive electronics etc.



CV priority

Starting up: surge current over range,
high speed voltage



CC priority

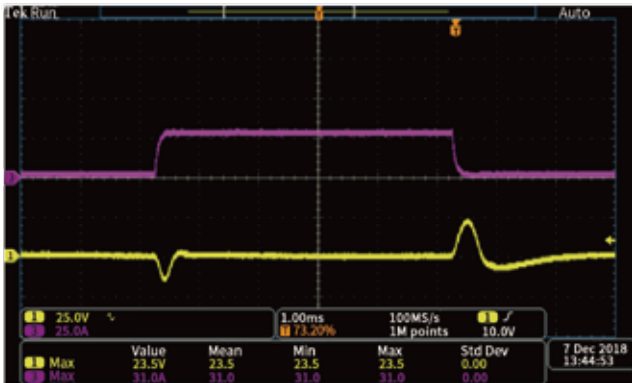
Battery charging and discharging:
seamless switching, no overshoot

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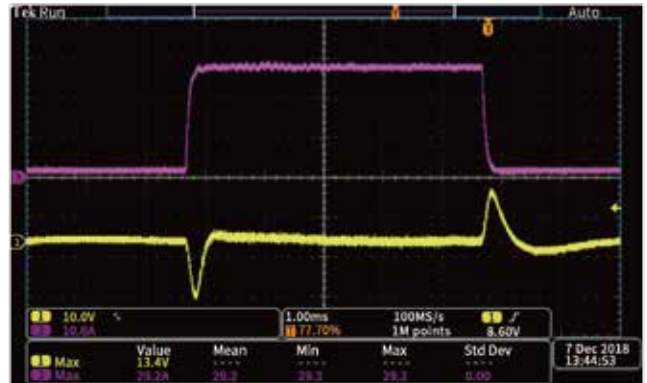
IT6000B Regenerative Power System

Patented parallel technology

- IT6000 has adopted ITECH patented parallel technology
- All the function and performance will be the same as standalone unit
- No need to calibrate after paralleling
- Fiber transmission, good for anti-interference
- Digital paralleling, fully insulated, good for protecting DUT



Standalone unit
IT6006B-500-30 500V 30A 6000W
Setting: voltage 100V current 28A
Load current: 30A



2 units IT6006B-500-30
Setting: voltage 100V current 56A
Load current: 60A

* Yellow- output voltage

Purple- output current



The diagrams above show that the dynamic waveforms are the same after the IT6000B units are paralleled. Master and slave can keep high speed response without delay simultaneously.

Fall

- Falling speed is almost the same after paralleling

Rise

- Rising speed is even faster than standalone unit

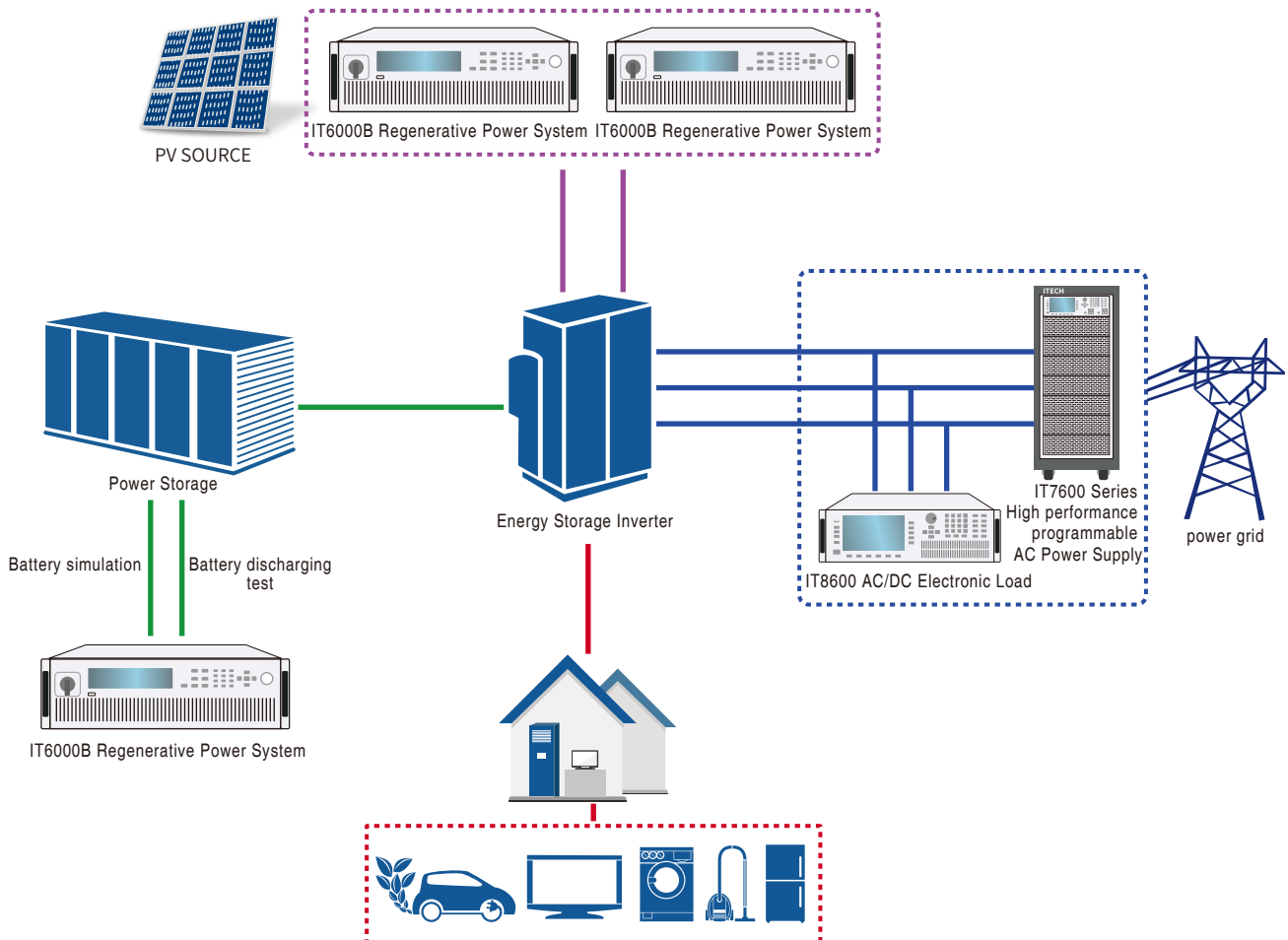
Dynamic waveform

- Dynamic waveform keeps the same after paralleling

Application-Photovoltaic energy storage integrated machine

Photovoltaic energy storage integrated machine is a device of DC-AC converter used in combined power generating of photovoltaic and energy storage system. It can coordinate the output of photovoltaic and energy storage batteries, stabilize the power fluctuation of the batteries and output qualified AC power by the technology of energy storage converting.

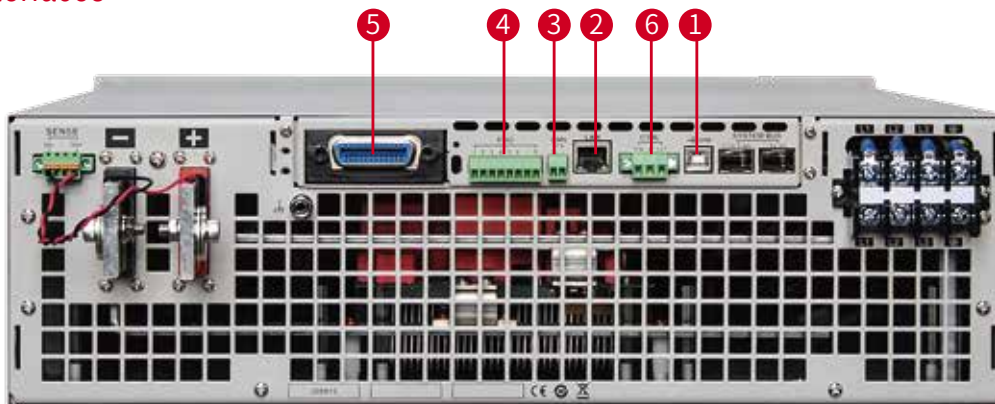
- IT6000B can precisely simulate I-V curve of solar panel.
- IT6000B can simulate batteries by its battery simulation function.
- IT7600+IT8600 can simulate the input of power grid.
- Three testing ways can be done by simulation of various power units: Battery input, AC input, PV input to converter.
- The independent load mode of IT6000B can proceed discharging test of batteries.



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Various interfaces



1 USB



2 LAN



3 CAN



4 Digital I/O



5 GPIB *

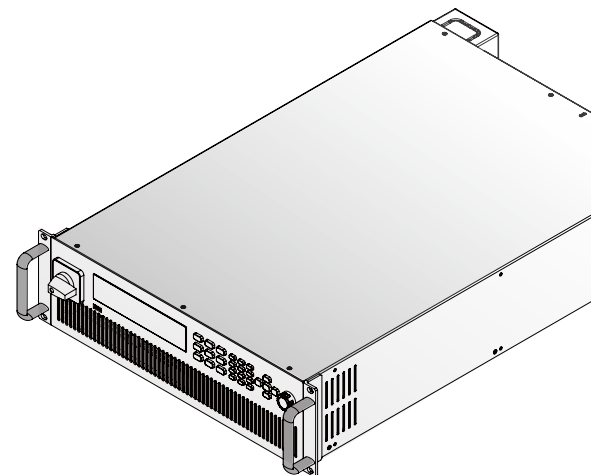
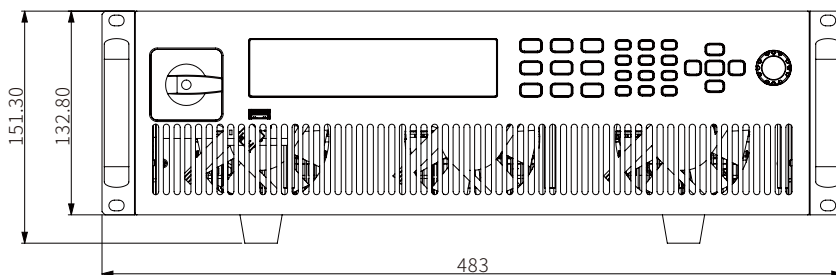


6 Main input



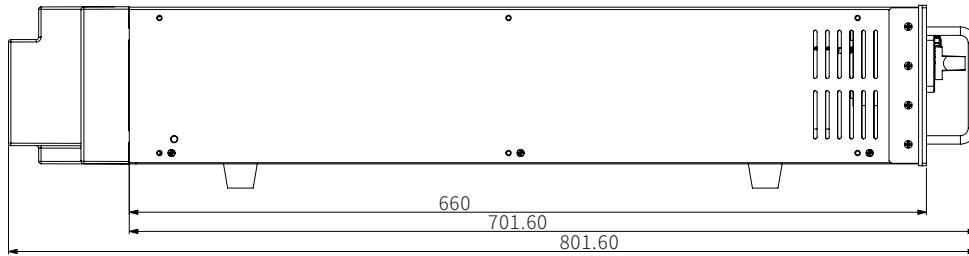
* Optional GPIB or Optional RS232 & Analog

3U/18kW Standalone unit dimension(mm)



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IT6000B Regenerative Power System



Specification

	Model	Current	Power		Model	Current	Power		Model	Current	Power
80V	IT6006B-80-170	170A	6kW	200V	IT6006B-200-70	70A	6kW	360V	IT6006B-360-40	40A	6kW
	IT6012B-80-340	340A	12kW		IT6012B-200-140	140A	12kW		IT6012B-360-80	80A	12kW
	IT6018B-80-510	510A	18kW		IT6018B-200-210	210A	18kW		IT6018B-360-120	120A	18kW
	IT6036B-80-1020	1020A	36kW		IT6036B-200-420	420A	36kW		IT6036B-360-240	240A	36kW
	IT6054B-80-1530	1530A	54kW		IT6054B-200-630	630A	54kW		IT6054B-360-360	360A	54kW
	IT6072B-80-2040	2040A	72kW		IT6072B-200-840	840A	72kW		IT6072B-360-480	480A	72kW
	IT6090B-80-2040	2040A	90kW		IT6090B-200-1050	1050A	90kW		IT6090B-360-600	600A	90kW
	IT6108B-80-2040	2040A	108kW		IT6108B-200-1260	1260A	108kW		IT6108B-360-720	720A	108kW
	IT6126B-80-2040	2040A	126kW		IT6126B-200-1470	1470A	126kW		IT6126B-360-840	840A	126kW
	IT6144B-80-2040	2040A	144kW		IT6144B-200-1680	1680A	144kW		IT6144B-360-960	960A	144kW

	Model	Current	Power		Model	Current	Power		Model	Current	Power
500V	IT6006B-500-30	30A	6kW	800V	IT6006B-800-20	20A	6kW	1500V	IT6018B-1500-30	30A	18kW
	IT6012B-500-60	60A	12kW		IT6012B-800-40	40A	12kW		IT6036B-1500-60	60A	36kW
	IT6018B-500-90	90A	18kW		IT6018B-800-60	60A	18kW		IT6054B-1500-90	90A	54kW
	IT6036B-500-180	180A	36kW		IT6036B-800-120	120A	36kW		IT6072B-1500-120	120A	72kW
	IT6054B-500-270	270A	54kW		IT6054B-800-180	180A	54kW		IT6090B-1500-150	150A	90kW
	IT6072B-500-360	360A	72kW		IT6072B-800-240	240A	72kW		IT6108B-1500-180	180A	108kW
	IT6090B-500-450	450A	90kW		IT6090B-800-300	300A	90kW		IT6126B-1500-210	210A	126kW
	IT6108B-500-540	540A	108kW		IT6108B-800-360	360A	108kW		IT6144B-1500-240	240A	144kW
	IT6126B-500-630	630A	126kW		IT6126B-800-420	420A	126kW				
	IT6144B-500-720	720A	144kW		IT6144B-800-480	480A	144kW				

	Model	Current	Power		Model	Current	Power		Model	Current	Power
2250V	IT6018B-2250-20	20A	18kW	2250V	IT6072B-2250-80	80A	72kW	2250V	IT6126B-2250-140	140A	126kW
	IT6036B-2250-40	40A	36kW		IT6090B-2250-100	100A	90kW		IT6144B-2250-160	160A	144kW
	IT6054B-2250-60	60A	54kW		IT6108B-2250-120	120A	108kW				

* Models coming soon-80V/200V/360V

* This information is subject to change without notice

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IT6000B Regenerative Power System

Specification

		IT6006B-80-170	IT6006B-200-70	IT6006B-360-40
		Power Supply Parameters	Power Supply Parameters	Power Supply Parameters
Rated Value Range (0℃~40℃)	Output Voltage	0~80V	0~200V	0~360V
	Output Current	-170~170A	-70~70A	-40~40A
	Output Power	-6000~6000W	-6000~6000W	-6000~6000W
	Output Resistance	0~1.067Ω	0~6.667Ω	0~21.6Ω
Line Regulation ±(% of Output+Offset)	Voltage	≤0.01% + 8mV	≤0.01% + 20mV	≤0.01% + 36mV
	Current	≤0.05% + 85mA	≤0.05% + 35mA	≤0.05% + 20mA
Load Regulation ±(% of Output+Offset)	Voltage	≤0.02% + 24mV	≤0.02% + 60mV	≤0.02% + 108mV
	Current	≤0.05% + 85mA	≤0.05% + 35mA	≤0.05% + 20mA
Readback Resolution	Voltage	0.001V	0.01V	0.01V
	Current	0.01A	0.001A	0.001A
	Power	0.1W	0.1W	0.1W
	Resistance	0.0001Ω	0.0001Ω	0.001Ω
Readback Accuracy (Within 12 months, 25℃±5℃) ±(% of Output+Offset)	Voltage	≤0.05% + 40mV	≤0.05% + 100mV	≤0.05% + 180mV
	Current	≤0.1% + 170mA	≤0.1% + 70mA	≤0.1% + 40mA
	Power	≤0.5% + 30W	≤0.5% + 30W	≤0.5% + 30W
	Resistance	≤1%FS	≤1%FS	≤1%FS
Ripple (20Hz~20MHz)	Voltage	≤80mVpp	≤200mVpp	≤360mVpp
	Current	≤0.05% + 85mArms	≤0.05% + 35mArms	≤0.05% + 20mArms
Rise time (no load)	Voltage	≤15ms	≤15ms	≤15ms
Rise time(full load)	Voltage	≤30ms	≤30ms	≤30ms
Fall time (no load)	Voltage	≤30ms	≤30ms	≤30ms
Fall time (full load)	Voltage	≤15ms	≤15ms	≤15ms
Dynamic Response Time	Voltage	≤2ms	≤2ms	≤2ms
Efficiency		~95%	~95%	~95%
		Load Parameters	Load Parameters	Load Parameters
Rated Value Range (0℃~40℃)	Input Voltage	0~80V	0~200V	0~360V
	Input Current	0~170A	0~70A	0~40A
	Input Power	0~6000W	0~6000W	0~6000W
	Input Resistance	0~471Ω	0~2857Ω	0~9000Ω
	Min operating voltage	1.19V at 170A	0.49V at 70A	1.32V at 40A
Readback Resolution	Voltage	0.001V	0.01V	0.01V
	Current	0.01A	0.001A	0.001A
	Power	0.1W	0.1W	0.1W
	Resistance	0.01Ω	0.1Ω	0.1Ω
Readback Accuracy (Within 12 months, 25℃±5℃) ±(% of Output+Offset)	Voltage	≤0.1% + 80mV	≤0.1% + 200mV	≤0.1% + 360mV
	Current	≤0.1% + 170mA	≤0.1% + 70mA	≤0.1% + 40mA
	Power	≤1%FS	≤1%FS	≤1%FS
	Resistance	≤2%Rmax, 0~10%Rmax; ≤5%Rmax, 10%~Rmax;	≤2%Rmax, 0~10%Rmax; ≤5%Rmax, 10%~Rmax;	≤2%Rmax, 0~10%Rmax; ≤5%Rmax, 10%~Rmax;
Ripple (20Hz~20MHz)	Voltage	≤80mVpp	≤200mVpp	≤360mVpp
	Current	≤170mArms	≤70mArms	≤40mArms
Dynamic Response Time	Rise Speed Rate	170A/ms	70A/ms	40A/ms
	Fall Speed Rate	170A/ms	70A/ms	40A/ms
	Dynamic Frequency	500Hz	500Hz	500Hz
	Minimum Rise Time	≤1ms	≤1ms	≤1ms
Output Parameter	Output Voltage Range	380V±10% (Three Phase Four Wire)	380V±10% (Three Phase Four Wire)	380V±10% (Three Phase Four Wire)
	Output Frequency Range	47Hz~63Hz	47Hz~63Hz	47Hz~63Hz
	Max. Output Current	14A	14A	14A
	Power Factor	≥0.99	≥0.99	≥0.99
	THDI	<3%	<3%	<3%
	Island Protection	Active Anti-islanding Protection	Active Anti-islanding Protection	Active Anti-islanding Protection
Efficiency		~92%	~92%	~92%
Isolation (Output to ground)		500V	500V	500V
Dimension (mm)		483*132.8*660mm	483*132.8*660mm	483*132.8*660mm
Net weight		25kG	25kG	25kG

* Models coming soon-80V/200V/360V

* This information is subject to change without notice

Your Power Testing Solution

IT6000B Regenerative Power System

Specification

		IT6006B-500-30	IT6006B-800-20	IT6012B-80-340
		Power Supply Parameters	Power Supply Parameters	Power Supply Parameters
Rated Value Range (0℃~40℃)	Output Voltage	0~500V	0~800V	0~80V
	Output Current	-30~30A	-20~20A	-340~340A
	Output Power	-6000~6000W	-6000~6000W	-12000~12000W
	Output Resistance	0~41.667Ω	0~106.667Ω	0~0.533Ω
Line Regulation ±(% of Output+Offset)	Voltage	≤0.01% + 50mV	≤0.01% + 80mV	≤0.01% + 8mV
	Current	≤0.05% + 15mA	≤0.05% + 10mA	≤0.05% + 170mA
Load Regulation ±(% of Output+Offset)	Voltage	≤0.02% + 150mV	≤0.02% + 240mV	≤0.02% + 24mV
	Current	≤0.05% + 15mA	≤0.05% + 10mA	≤0.05% + 170mA
Readback Resolution	Voltage	0.01V	0.01V	0.001V
	Current	0.001A	0.001A	0.01A
	Power	0.1W	0.1W	0.1W
	Resistance	0.001Ω	0.01Ω	0.00001Ω
Readback Accuracy (Within 12 months, 25℃±5℃) ±(% of Output+Offset)	Voltage	≤0.05% + 250mV	≤0.05% + 400mV	≤0.05% + 40mV
	Current	≤0.1% + 30mA	≤0.1% + 20mA	≤0.1% + 340mA
	Power	≤0.5% + 30W	≤0.5% + 30W	≤0.5% + 60W
	Resistance	≤1%FS	≤1%FS	≤1%FS
Ripple (20Hz~20MHz)	Voltage	≤500mVpp	≤800mVpp	≤80mVpp
	Current	≤0.05% + 15mArms	≤0.05% + 10mArms	≤0.05% + 170mArms
Rise time (no load)	Voltage	≤15ms	≤15ms	≤15ms
Rise time(full load)	Voltage	≤30ms	≤30ms	≤30ms
Fall time (no load)	Voltage	≤30ms	≤30ms	≤30ms
Fall time (full load)	Voltage	≤15ms	≤15ms	≤15ms
Dynamic Response Time	Voltage	≤2ms	≤2ms	≤2ms
Efficiency		~95%	~95%	~95%
		Load Parameters	Load Parameters	Load Parameters
Rated Value Range (0℃~40℃)	Input Voltage	0~500V	0~800V	0~80V
	Input Current	0~30A	0~20A	0~340A
	Input Power	0~6000W	0~6000W	0~12000W
	Input Resistance	0~16667Ω	0~40000Ω	0~235Ω
	Min operating voltage	0.99V at 30A	0.66V at 20A	2.38V at 340A
Readback Resolution	Voltage	0.01V	0.01V	0.001V
	Current	0.001A	0.001A	0.01A
	Power	0.1W	0.1W	0.1W
	Resistance	0.1Ω	0.1Ω	0.01Ω
Readback Accuracy (Within 12 months, 25℃±5℃) ±(% of Output+Offset)	Voltage	≤0.1% + 500mV	≤0.1% + 800mV	≤0.1% + 80mV
	Current	≤0.1% + 30mA	≤0.1% + 20mA	≤0.1% + 340mA
	Power	≤1%FS	≤1%FS	≤1%FS
	Resistance	≤2%Rmax, 0~10%Rmax; ≤5%Rmax, 10%~Rmax;	≤2%Rmax, 0~10%Rmax; ≤5%Rmax, 10%~Rmax;	≤2%Rmax, 0~10%Rmax; ≤5%Rmax, 10%~Rmax;
Ripple (20Hz~20MHz)	Voltage	≤500mVpp	≤800mVpp	≤80mVpp
	Current	≤30mArms	≤20mArms	≤340mArms
Dynamic Response Time	Rise Speed Rate	30A/ms	20A/ms	340A/ms
	Fall Speed Rate	30A/ms	20A/ms	340A/ms
	Dynamic Frequency	500Hz	500Hz	500Hz
	Minimum Rise Time	≤1ms	≤1ms	≤1ms
Output Parameter	Output Voltage Range	380V±10% (Three Phase Four Wire)	380V±10% (Three Phase Four Wire)	380V±10% (Three Phase Four Wire)
	Output Frequency Range	47Hz~63Hz	47Hz~63Hz	47Hz~63Hz
	Max. Output Current	14A	14A	14A
	Power Factor	≥0.99	≥0.99	≥0.99
	THDI	<3%	<3%	<3%
	Island Protection	Active Anti-islanding Protection	Active Anti-islanding Protection	Active Anti-islanding Protection
Efficiency		~92%	~92%	~92%
Isolation (Output to ground)		1000V	1500V	500V
Dimension (mm)		483*132.8*660mm	483*132.8*660mm	483*132.8*660mm
Net weight		25kG	25kG	35kG

* Models coming soon-80V/200V/360V

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Your Power Testing Solution

IT6000B Regenerative Power System

Specification

		IT6012B-200-140	IT6012B-360-80	IT6012B-500-60
		Power Supply Parameters	Power Supply Parameters	Power Supply Parameters
Rated Value Range (0℃~40℃)	Output Voltage	0~200V	0~360V	0~500V
	Output Current	-140~140A	-80~80A	-60~60A
	Output Power	-12000~12000W	-12000~12000W	-12000~12000W
	Output Resistance	0~3.333Ω	0~12.960Ω	0~20.833Ω
Line Regulation ±(% of Output+Offset)	Voltage	≤0.01%+20mV	≤0.01%+36mV	≤0.01%+50mV
	Current	≤0.05%+70mA	≤0.05%+40mA	≤0.05%+30mA
Load Regulation ±(% of Output+Offset)	Voltage	≤0.02%+60mV	≤0.02%+108mV	≤0.02%+150mV
	Current	≤0.05%+70mA	≤0.05%+40mA	≤0.05%+30mA
Readback Resolution	Voltage	0.01V	0.01V	0.01V
	Current	0.01A	0.001A	0.001A
	Power	0.1W	0.1W	0.1W
	Resistance	0.0001Ω	0.001Ω	0.001Ω
Readback Accuracy (Within 12 months, 25℃±5℃) ±(% of Output+Offset)	Voltage	≤0.05%+100mV	≤0.05%+180mV	≤0.05%+250mV
	Current	≤0.1%+140mA	≤0.1%+80mA	≤0.1%+60mA
	Power	≤0.5%+60W	≤0.5%+60W	≤0.5%+60W
	Resistance	≤1%FS	≤1%FS	≤1%FS
Ripple (20Hz~20MHz)	Voltage	≤200mVpp	≤360mVpp	≤500mVpp
	Current	≤0.05%+70mA _{rms}	≤0.05%+40mA _{rms}	≤0.05%+30mA _{rms}
Rise time (no load)	Voltage	≤15ms	≤15ms	≤15ms
Rise time (full load)	Voltage	≤30ms	≤30ms	≤30ms
Fall time (no load)	Voltage	≤30ms	≤30ms	≤30ms
Fall time (full load)	Voltage	≤15ms	≤15ms	≤15ms
Dynamic Response Time	Voltage	≤2ms	≤2ms	≤2ms
Efficiency		~95%	~95%	~95%
		Load Parameters	Load Parameters	Load Parameters
Rated Value Range (0℃~40℃)	Input Voltage	0~200V	0~360V	0~500V
	Input Current	0~140A	0~80A	0~60A
	Input Power	0~12000W	0~12000W	0~12000W
	Input Resistance	0~1429Ω	0~4500Ω	0~8333Ω
	Min operating voltage	0.98V at 140A	0.56V at 80A	1.98V at 60A
Readback Resolution	Voltage	0.01V	0.01V	0.01V
	Current	0.01A	0.001A	0.001A
	Power	0.1W	0.1W	0.1W
	Resistance	0.1Ω	0.1Ω	0.1Ω
Readback Accuracy (Within 12 months, 25℃±5℃) ±(% of Output+Offset)	Voltage	≤0.1%+200mV	≤0.1%+360mV	≤0.1%+500mV
	Current	≤0.1%+140mA	≤0.1%+80mA	≤0.1%+60mA
	Power	≤1%FS	≤1%FS	≤1%FS
	Resistance	≤2%R _{max} , 0~10%R _{max} ; ≤5%R _{max} , 10%~R _{max}	≤2%R _{max} , 0~10%R _{max} ; ≤5%R _{max} , 10%~R _{max}	≤2%R _{max} , 0~10%R _{max} ; ≤5%R _{max} , 10%~R _{max}
Ripple (20Hz~20MHz)	Voltage	≤200mVpp	≤360mVpp	≤500mVpp
	Current	≤140mA _{rms}	≤80mA _{rms}	≤60mA _{rms}
Dynamic Response Time	Rise Speed Rate	140A/ms	80A/ms	60A/ms
	Fall Speed Rate	140A/ms	80A/ms	60A/ms
	Dynamic Frequency	500Hz	500Hz	500Hz
	Minimum Rise Time	≤1ms	≤1ms	≤1ms
Output Parameter	Output Voltage Range	380V±10% (Three Phase Four Wire)	380V±10% (Three Phase Four Wire)	380V±10% (Three Phase Four Wire)
	Output Frequency Range	47Hz~63Hz	47Hz~63Hz	47Hz~63Hz
	Max. Output Current	14A	14A	14A
	Power Factor	≥0.99	≥0.99	≥0.99
	THDI	<3%	<3%	<3%
	Island Protection	Active Anti-islanding Protection	Active Anti-islanding Protection	Active Anti-islanding Protection
Efficiency		~92%	~92%	~92%
Isolation (Output to ground)		500V	500V	1000V
Dimension (mm)		483*132.8*660mm	483*132.8*660mm	483*132.8*660mm
Net weight		35kG	35kG	35kG

Your Power Testing Solution

IT6000B Regenerative Power System

Specification

		IT6012B-800-40	IT6018B-80-510	IT6018B-200-210
		Power Supply Parameters	Power Supply Parameters	Power Supply Parameters
Rated Value Range (0℃~40℃)	Output Voltage	0~800V	0~80V	0~200V
	Output Current	-40~40A	-510~510A	-210~210A
	Output Power	-12000~12000W	-18000~18000W	-18000~18000W
	Output Resistance	0~53.333Ω	0~0.356Ω	0~2.222Ω
Line Regulation ±(% of Output+Offset)	Voltage	≤0.01% + 80mV	≤0.01% + 8mV	≤0.01% + 20mV
	Current	≤0.05% + 20mA	≤0.05% + 255mA	≤0.05% + 105mA
Load Regulation ±(% of Output+Offset)	Voltage	≤0.02% + 240mV	≤0.02% + 24mV	≤0.02% + 60mV
	Current	≤0.05% + 20mA	≤0.05% + 255mA	≤0.05% + 105mA
Readback Resolution	Voltage	0.01V	0.001V	0.01V
	Current	0.001A	0.01A	0.01A
	Power	0.1W	0.1W	0.1W
	Resistance	0.001Ω	0.00001Ω	0.0001Ω
Readback Accuracy (Within 12 months, 25℃±5℃) ±(% of Output+Offset)	Voltage	≤0.05% + 400mV	≤0.05% + 40mV	≤0.05% + 100mV
	Current	≤0.1% + 40mA	≤0.1% + 510mA	≤0.1% + 210mA
	Power	≤0.5% + 60W	≤0.5% + 90W	≤0.5% + 90W
	Resistance	≤1%FS	≤1%FS	≤1%FS
Ripple (20Hz~20MHz)	Voltage	≤800mVpp	≤80mVpp	≤200mVpp
	Current	≤0.05% + 20mArms	≤0.05% + 255mArms	≤0.05% + 105mArms
Rise time (no load)	Voltage	≤15ms	≤15ms	≤15ms
Rise time(full load)	Voltage	≤30ms	≤30ms	≤30ms
Fall time (no load)	Voltage	≤30ms	≤30ms	≤30ms
Fall time (full load)	Voltage	≤15ms	≤15ms	≤15ms
Dynamic Response Time	Voltage	≤2ms	≤2ms	≤2ms
Efficiency		~95%	~95%	~95%
		Load Parameters	Load Parameters	Load Parameters
Rated Value Range (0℃~40℃)	Input Voltage	0~800V	0~80V	0~200V
	Input Current	0~40A	0~510A	0~210A
	Input Power	0~12000W	0~18000W	0~18000W
	Input Resistance	0~20000Ω	0~157Ω	0~952Ω
	Min operating voltage	1.32V at 40A	3.57V at 510A	1.47V at 210A
Readback Resolution	Voltage	0.01V	0.001V	0.01V
	Current	0.001A	0.01A	0.01A
	Power	0.1W	0.1W	0.1W
	Resistance	0.1Ω	0.01Ω	0.1Ω
Readback Accuracy (Within 12 months, 25℃±5℃) ±(% of Output+Offset)	Voltage	≤0.1% + 800mV	≤0.1% + 80mV	≤0.1% + 200mV
	Current	≤0.1% + 40mA	≤0.1% + 510mA	≤0.1% + 210mA
	Power	≤1%FS	≤1%FS	≤1%FS
	Resistance	≤2%Rmax, 0~10%Rmax; ≤5%Rmax, 10%~Rmax;	≤2%Rmax, 0~10%Rmax; ≤5%Rmax, 10%~Rmax;	≤2%Rmax, 0~10%Rmax; ≤5%Rmax, 10%~Rmax;
Ripple (20Hz~20MHz)	Voltage	≤800mVpp	≤80mVpp	≤200mVpp
	Current	≤40mArms	≤510mArms	≤210mArms
Dynamic Response Time	Rise Speed Rate	40A/ms	510A/ms	210A/ms
	Fall Speed Rate	40A/ms	510A/ms	210A/ms
	Dynamic Frequency	500Hz	500Hz	500Hz
	Minimum Rise Time	≤1ms	≤1ms	≤1ms
Output Parameter	Output Voltage Range	380V±10% (Three Phase Four Wire)	380V±10% (Three Phase Four Wire)	380V±10% (Three Phase Four Wire)
	Output Frequency Range	47Hz~63Hz	47Hz~63Hz	47Hz~63Hz
	Max. Output Current	19A	24A	24A
	Power Factor	≥0.99	≥0.99	≥0.99
	THDI	<3%	<3%	<3%
	Island Protection	Active Anti-islanding Protection	Active Anti-islanding Protection	Active Anti-islanding Protection
Efficiency		~92%	~92%	~92%
Isolation (Output to ground)		1500V	500V	500V
Dimension (mm)		483*132.8*660mm	483*132.8*660mm	483*132.8*660mm
Net weight		35kG	45kG	45kG

* Models coming soon-80V/200V/360V

* This information is subject to change without notice

Your Power Testing Solution

IT6000B Regenerative Power System

Specification

		IT6018B-360-120	IT6018B-500-90	IT6018B-800-60
		Power Supply Parameters	Power Supply Parameters	Power Supply Parameters
Rated Value Range (0℃~40℃)	Output Voltage	0~360V	0~500V	0~800V
	Output Current	-120~120A	-90~90A	-60~60A
	Output Power	-18000~18000W	-18000~18000W	-18000~18000W
	Output Resistance	0~7.200Ω	0~13.889Ω	0~35.556Ω
Line Regulation ±(% of Output+Offset)	Voltage	≤0.01% + 36mV	≤0.01% + 50mV	≤0.01% + 80mV
	Current	≤0.05% + 60mA	≤0.05% + 45mA	≤0.05% + 30mA
Load Regulation ±(% of Output+Offset)	Voltage	≤0.02% + 108mV	≤0.02% + 150mV	≤0.02% + 240mV
	Current	≤0.05% + 60mA	≤0.05% + 45mA	≤0.05% + 30mA
Readback Resolution	Voltage	0.01V	0.01V	0.01V
	Current	0.01A	0.001A	0.001A
	Power	0.1W	0.1W	0.1W
	Resistance	0.0001Ω	0.001Ω	0.001Ω
Readback Accuracy (Within 12 months, 25℃±5℃) ±(% of Output+Offset)	Voltage	≤0.05% + 180mV	≤0.05% + 250mV	≤0.05% + 400mV
	Current	≤0.1% + 120mA	≤0.1% + 90mA	≤0.1% + 60mA
	Power	≤0.5% + 90W	≤0.5% + 90W	≤0.5% + 90W
	Resistance	≤1%FS	≤1%FS	≤1%FS
Ripple (20Hz~20MHz)	Voltage	≤360mVpp	≤500mVpp	≤800mVpp
	Current	≤0.05% + 60mArms	≤0.05% + 45mArms	≤0.05% + 30mArms
Rise time (no load)	Voltage	≤15ms	≤15ms	≤15ms
Rise time(full load)	Voltage	≤30ms	≤30ms	≤30ms
Fall time (no load)	Voltage	≤30ms	≤30ms	≤30ms
Fall time (full load)	Voltage	≤15ms	≤15ms	≤15ms
Dynamic Response Time	Voltage	≤2ms	≤2ms	≤2ms
Efficiency		~95%	~95%	~95%
		Load Parameters	Load Parameters	Load Parameters
Rated Value Range (0℃~40℃)	Input Voltage	0~360V	0~500V	0~800V
	Input Current	0~120A	0~90A	0~60A
	Input Power	0~18000W	0~18000W	0~13333W
	Input Resistance	0~3000Ω	0~5556Ω	0~12500Ω
	Min operating voltage	3.96V at 120A	2.97V at 90A	1.98V at 60A
Readback Resolution	Voltage	0.01V	0.01V	0.01V
	Current	0.01A	0.001A	0.001A
	Power	0.1W	0.1W	0.1W
	Resistance	0.1Ω	0.1Ω	0.1Ω
Readback Accuracy (Within 12 months, 25℃±5℃) ±(% of Output+Offset)	Voltage	≤0.1% + 360mV	≤0.1% + 500mV	≤0.1% + 800mV
	Current	≤0.1% + 120mA	≤0.1% + 90mA	≤0.1% + 60mA
	Power	≤1%FS	≤1%FS	≤1%FS
	Resistance	≤2%Rmax, 0~10%Rmax; ≤5%Rmax, 10%~Rmax;	≤2%Rmax, 0~10%Rmax; ≤5%Rmax, 10%~Rmax;	≤2%Rmax, 0~10%Rmax; ≤5%Rmax, 10%~Rmax;
Ripple (20Hz~20MHz)	Voltage	≤360mVpp	≤500mVpp	≤800mVpp
	Current	≤120mArms	≤90mArms	≤60mArms
Dynamic Response Time	Rise Speed Rate	120A/ms	90A/ms	60A/ms
	Fall Speed Rate	120A/ms	90A/ms	60A/ms
	Dynamic Frequency	500Hz	500Hz	500Hz
	Minimum Rise Time	≤1ms	≤1ms	≤1ms
Output Parameter	Output Voltage Range	380V±10% (Three Phase Four Wire)	380V±10% (Three Phase Four Wire)	380V±10% (Three Phase Four Wire)
	Output Frequency Range	47Hz~63Hz	47Hz~63Hz	47Hz~63Hz
	Max. Output Current	24A	24A	29A
	Power Factor	≥0.99	≥0.99	≥0.99
	THDI	<3%	<3%	<3%
	Island Protection	Active Anti-islanding Protection	Active Anti-islanding Protection	Active Anti-islanding Protection
Efficiency		~92%	~92%	~92%
Isolation (Output to ground)		500V	1000V	1500V
Dimension (mm)		483*132.8*660mm	483*132.8*660mm	483*132.8*660mm
Net weight		45kG	45kG	45kG

Your Power Testing Solution

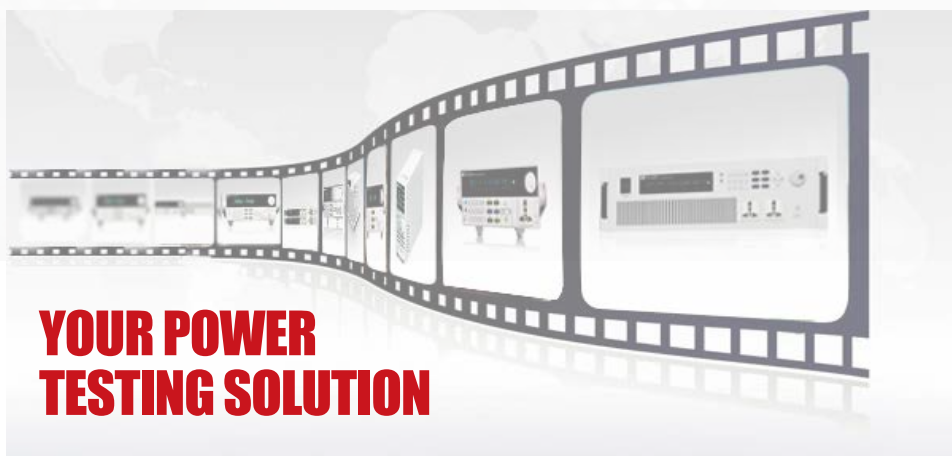
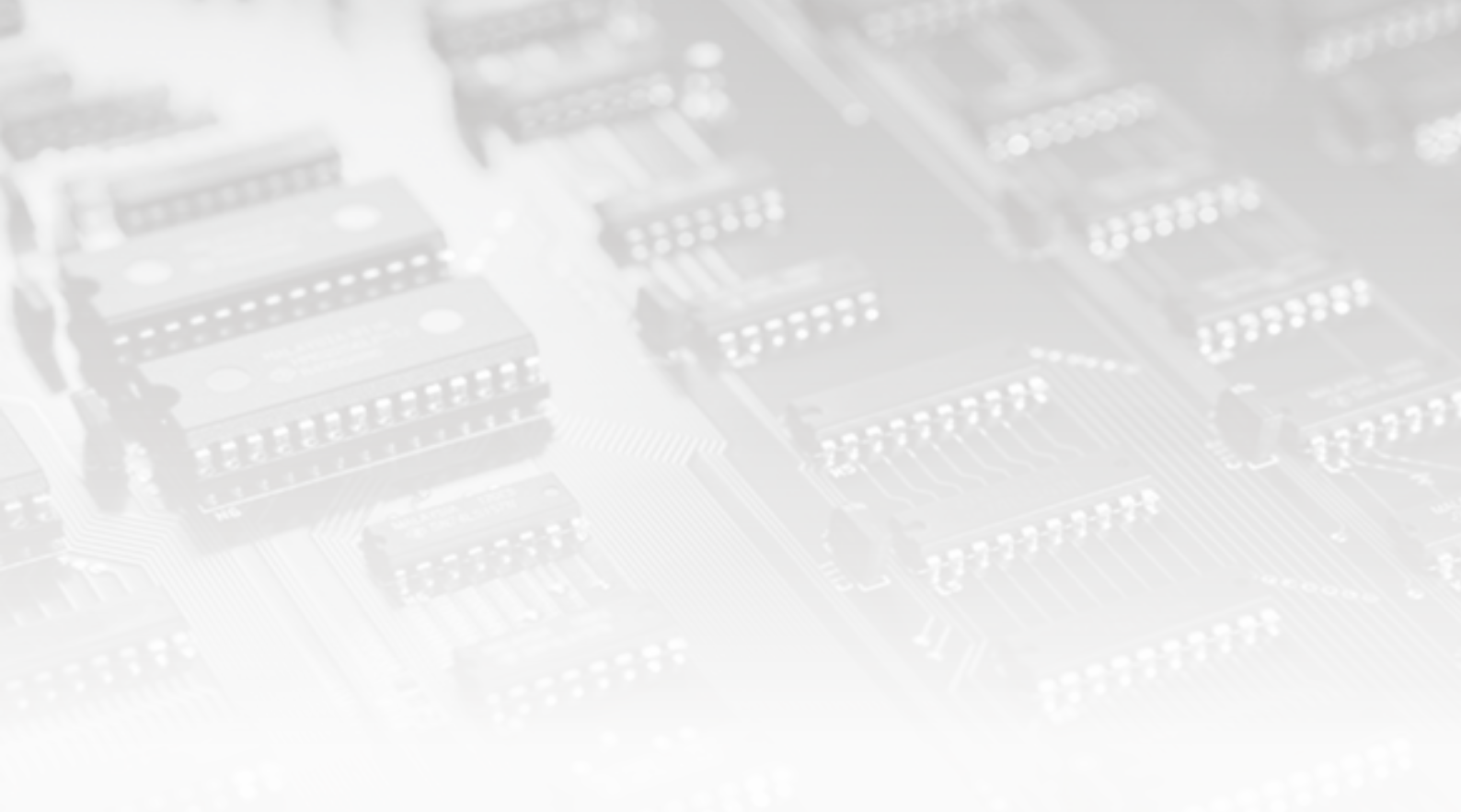
IT6000B Regenerative Power System

Specification

		IT6018B-1500-30	IT6018B-2250-20
		Power Supply Parameters	Power Supply Parameters
Rated Value Range (0 °C~40 °C)	Output Voltage	0~1500V	0~2250V
	Output Current	-30~30A	-20~20A
	Output Power	-18000~18000W	-18000~18000W
	Output Resistance	0~125.00Ω	0~281.25Ω
Line Regulation ±(% of Output+Offset)	Voltage	≤0.01% + 150mV	≤0.01% + 225mV
	Current	≤0.05% + 15mA	≤0.05% + 10mA
Load Regulation ±(% of Output+Offset)	Voltage	≤0.02% + 450mV	≤0.02% + 675mV
	Current	≤0.05% + 15mA	≤0.05% + 10mA
Readback Resolution	Voltage	0.1V	0.1V
	Current	0.001A	0.001A
	Power	0.1W	0.1W
	Resistance	0.01Ω	0.01Ω
Readback Accuracy (Within 12 months-25 °C±5 °C) ±(% of Output+Offset)	Voltage	≤0.05% + 750mV	≤0.05% + 1125mV
	Current	≤0.1% + 30mA	≤0.1% + 20mA
	Power	≤0.5% + 90W	≤0.5% + 90W
	Resistance	≤1%FS	≤1%FS
Ripple (20Hz ~20MHz)	Voltage	≤1500mVpp	≤2250mVpp
	Current	≤0.05% + 15mArms	≤0.05% + 10mArms
Rise time (no load)	Voltage	≤15ms	≤15ms
Rise time(full load)	Voltage	≤30ms	≤30ms
Fall time (no load)	Voltage	≤30ms	≤30ms
Fall time (full load)	Voltage	≤15ms	≤15ms
Dynamic Response Time	Voltage	≤2ms	≤2ms
Efficiency		~95%	~95%
		Load Parameters	Load Parameters
Rated Value Range (0 °C~40 °C)	Input Voltage	0~1500V	0~2250V
	Input Current	0~30A	0~20A
	Input Power	0~18000W	0~18000W
	Input Resistance	0~50000Ω	0~112500Ω
	Min operating voltage	9V at 30A	6V at 20A
Readback Resolution	Voltage	0.1V	0.1V
	Current	0.001A	0.001A
	Power	0.1W	0.1W
	Resistance	0.1Ω	0.1Ω
Readback Accuracy (Within 12 months-25 °C±5 °C) ±(% of Output+Offset)	Voltage	≤0.1% + 1500mV	≤0.1% + 2250mV
	Current	≤0.1% + 30mA	≤0.1% + 20mA
	Power	≤1%FS	≤1%FS
	Resistance	≤2%Rmax,0~10%Rmax; ≤5%Rmax,10%~Rmax;	≤2%Rmax,0~10%Rmax; ≤5%Rmax,10%~Rmax;
Ripple (20Hz ~20MHz)	Voltage	≤1500mVpp	≤2250mVpp
	Current	≤30mArms	≤20mArms
Dynamic Response Time	Rise Speed Rate	30A/ms	20A/ms
	Fall Speed Rate	30A/ms	20A/ms
	Dynamic Frequency	500Hz	500Hz
	Minimum Rise Time	≤1ms	≤1ms
Output Parameter	Output Voltage Range	380V±10% (Three Phase Four Wire)	380V±10% (Three Phase Four Wire)
	Output Frequency Range	47Hz~63Hz	47Hz~63Hz
	Max. Output Current	24A	24A
	Power Factor	≥0.99	≥0.99
	THDI	<3%	<3%
	Island Protection	Active Anti-islanding Protection	Active Anti-islanding Protection
Efficiency		~95%	~92%
Isolation (Output to ground)		2000V	2500V
Dimension (mm)		483*132.8*660mm	483*132.8*660mm
Net weight		45kG	45kG

* Models coming soon-80V/200V/360V

* This information is subject to change without notice



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Taipei

Add: No.918, Zhongzheng Rd., Zhonghe Dist., New Taipei City
235, Taiwan

Web: www.itechate.com.tw

TEL: +886-3-6684333

E-mail: taiwan@itechate.com.tw

Xishan Factory

Add: No.108, XiShanqiao Nanlu, Nanjing city, 210039, China

TEL: +86-25-52415098

Web: www.itechate.com

Meishan Factory

Add: No.150, Yaonanlu, Meishan Cun, Nanjing city, 210039, China

TEL: +86-25-52415099

Web: www.itechate.com



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