

Product

IT6000C Bidirectional Programmable DC
Power Supply

Bi-directional
Energy
Transfer

Modular Design
Easily Scalable Up to 2MW



IT6000C Series Bidirectional Programmable DC Power Supply

APPLICATIONS

- Solar Battery Charger
- Solar Inverter
- Auto Motor
- DC/DC Converter
- Battery Module/Pack
- OBC

Your Power Testing Solution

IT6000C Series Bidirectional Programmable DC Power Supply

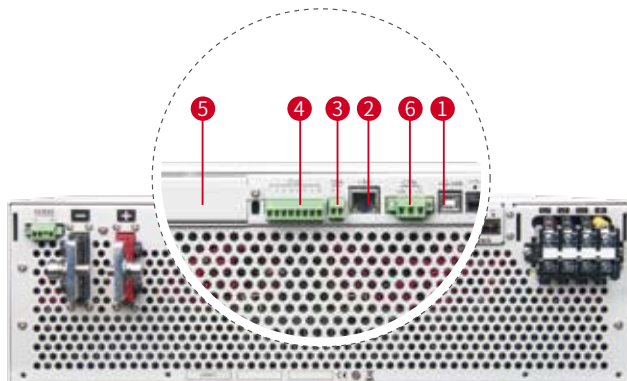
IT6000C series is a bi-directional programmable DC power supply which adopts the third generation SiC-base technology. It integrates the source and sink function in one unit. Based on these two functions, IT6000C offers the functionality of two-quadrant operation. The regenerative capability enables the energy consumed to be put back onto the grid cleanly, saving costs from energy consumption and cooling, while not interfering with the grid.

IT6000C series provide max. output voltage up to 2250V, support master-slave paralleling with averaging current distribution, max. output power up to 2MW. Built-in waveform generator supports generating arbitrary waveforms, and import LIST files for waveforms via front panel USB port. IT6000C is the combination of high reliability, high efficient setting, safe and multiple measurement functions.



	Model	Current	Power		Model	Current	Power
80V	IT6005C-80-150	±150A	±5kW	300V	IT6006C-300-75	±75A	±6kW
	IT6010C-80-300	±300A	±10kW		IT6012C-300-150	±150A	±12kW
	IT6015C-80-450	±450A	±15kW		IT6018C-300-225	±225A	±18kW
500V	IT6006C-500-40	±40A	±6kW	800V	IT6006C-800-25	±25A	±6kW
	IT6012C-500-80	±80A	±12kW		IT6012C-800-50	±50A	±12kW
	IT6018C-500-120	±120A	±18kW		IT6018C-800-75	±75A	±18kW
1500V	IT6018C-1500-40	±40A	±18kW	2250V	IT6018C-2250-25	±25A	±18kW

Multiple interfaces



1 Standard USB interface



2 Standard LAN interface



3 Standard CAN interface



4 Standard I/O interface



5 Optional RS232 & Analog or GPIB



6 External control interface



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Features

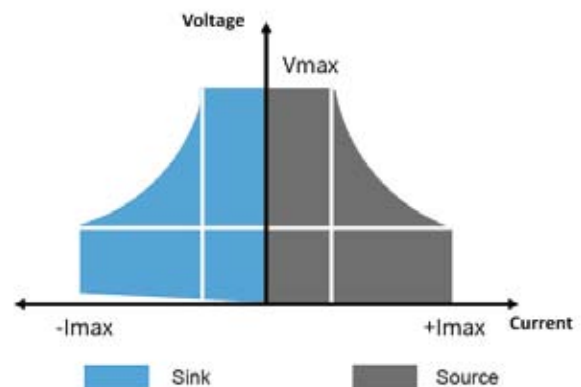
- Adopts SiC-base technology, integrates source and sink function in one unit
- Modular design, easily, expandable up to 2MW by paralleling
- Voltage range: 0 to 2250V
- Current range: 0 to 8000A by paralleling
- High power density up to 18kW in compact 3U rack space
- Bi-directional power transfer, seamless switch between sourcing and sinking
- High regenerative efficiency up to 95%
- Standard Built-in USB/CAN/LAN/digital IO interface, optional GPIB/analog & RS232
- Full protections: support OVP, $\pm$ OCP, $\pm$ OPP, OTP, power down protection, anti-islanding protection
- Support control loop priority mode setting, different loop speed can be set
- Partial pre-compliant with LV123, LV148, DIN40839, ISO-16750-2, SAEJ1113-11, LV124 and ISO21848 testing standards
- Can be used as battery cyclers and support various battery charging and discharging modes, such as CC/CV/CP
- Built-in function generator, support arbitrary-waveform generating
- Can be used as PV simulator, simulating the PV curves (with optional SAS1000 software)
- Support multiple working modes, rising and falling time can be adjustable.
- Support data saving and the shortest interval of sampling is 10 μ s
- Can be used as battery simulator (with optional BSS2000 Software)
- Strong dynamic driving profile simulation function, up to 10,000,000 points

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	High speed electronic test		LED products	Avionics
04 High-power testing		UPS	Electric motor/generator	Consumer products	Electro plating/welding	ATE systems

Bi-directional energy, seamless transfer

The IT6000C Series combines source and sink functions in one. Unlike traditional power supplies and E-loads, for which there will be short transitions and inconsistencies in the middle of positive and negative current switching, IT6000C is a standard high-speed bidirectional power supply, enables high-speed source and sink current fast and continuous seamless switching, effectively avoiding voltage or current overshoot, and can be widely used in Energy storage device test, like batteries, cell packaging equipment and battery protection board testing.



Your Power Testing Solution

IT6000C Bidirectional Programmable DC Power Supply

Power regenerative and eco-friendly

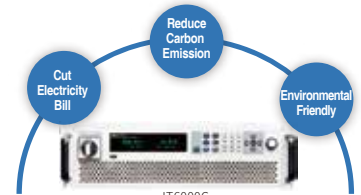
With the power regeneration function, IT6000C can feed back up to 95% power instead of consuming it as heat. It not only save your cost of electricity, HVAC and cooling infrastructure, but also help to reduce carbon emission and impact on the environment.

Production facility : 24Hr/day x 7 work days x 52 weeks

Power	electricity cost saved (appr. USD/year)	CO ₂ emission reduced (appr. ton/year)
18kW	20,914	149
36kW	41,828	298
90kW	104,570	745
108kW	125,484	894
144kW	167,312	1,191

R&D lab : 8Hr/day x 5 work days x 52 weeks

Power	electricity cost saved (appr. USD/year)	CO ₂ emission reduced (appr. ton/year)
18kW	4,980	35
36kW	9,959	71
90kW	24,898	177
108kW	29,877	213
144kW	39,836	284



Highly regenerative 95%

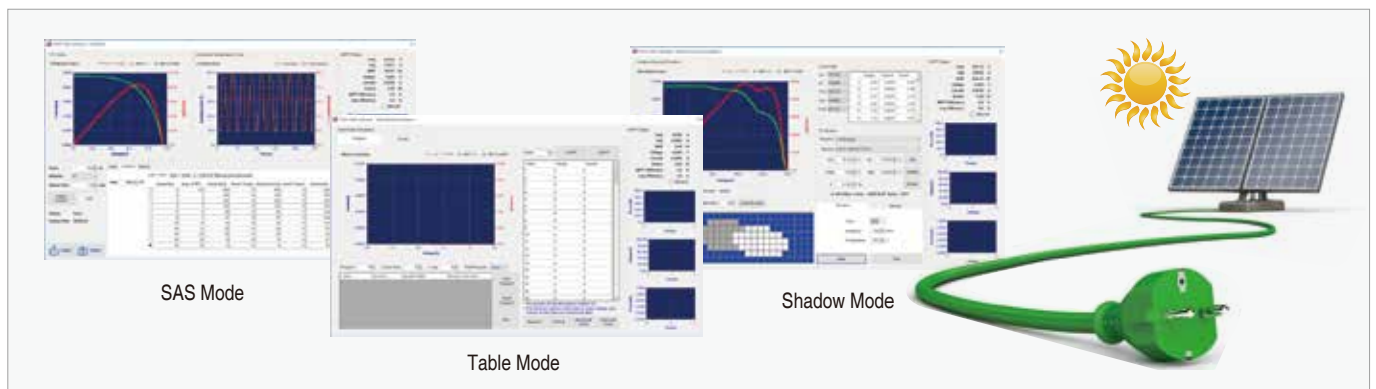
* The data is based on :

1. approximate electricity price 0.14USD/kWh for industry facility
2. 1kWh power consumption $\approx$ 0.997 CO₂ emission

* The extra cost of air conditioning is not included.

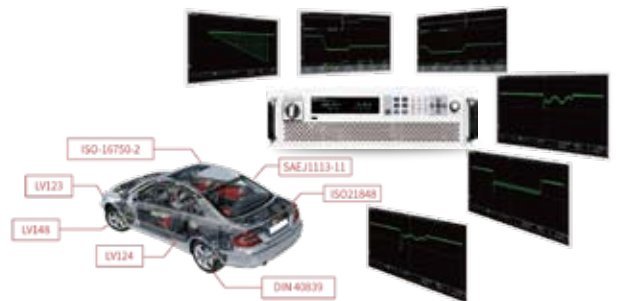
Application for solar array simulation

IT6000C configured with optional ITECH SAS1000 Solar Array Simulation Software, users can easily use the software to output, measure, display the MPP tracking status of photovoltaic inverter in real time simulation and record value. Built-in EN50530、Sandia、NB/T32004、CGC/GF004、CGC/GF035 standard testing procedures, it is convenient for users to test the static and dynamic MPPT performance of PV inverters and generate reports. Solar simulation power supply also provides the shadow and table mode operation, the user can enter up to 4096 points array to edit any shielded IV curve to achieve dynamic shadow effect simulation and also can store 100 I-V curves under different irradiation and temperature to test the long-term maximum power tracking performance of photovoltaic inverters under different climatic conditions.



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

Automotive electronics may often encounter 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 partial voltage curves LV123, LV148, DIN40839, ISO-16750-2, SAEJ1113-11, LV124 and ISO21848. The User can directly recall the vehicle's starting voltage drop, various automotive electronic tests, pulse waveforms and other related automotive electronics for performance tests. Available voltage grades in 12V, 24V and 48V voltage levels.



Your Power Testing Solution

IT6000C Bidirectional Programmable DC Power Supply

Control loop CC/CV priority mode

IT6000 C series continues to adopt ITECH-developed innovative CV & CC priority concept, which will help customers effectively and flexibly solve their various tough problems in test applications request for high speed and no over-shoot power supplies. Customers can select CV or CC priority to adjust the speed of the loop circuit, to decide output with the high-speed voltage or current with no overshoot. It is applicable for high-power integrated circuit test, charging/ discharging test and the transient simulation/ characteristic test of automotive electronics.



Control loop CV priority mode

After setting the high-speed voltage mode, the voltage output faster and bring with an inrush current which is higher than the current range.



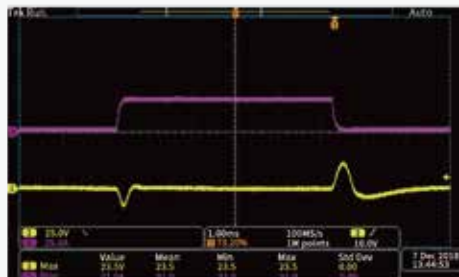
Control loop CC priority mode

battery charging and discharging, high speed seamless switch, effectively suppress the current overshoot.

Parallel connection

Advantages:

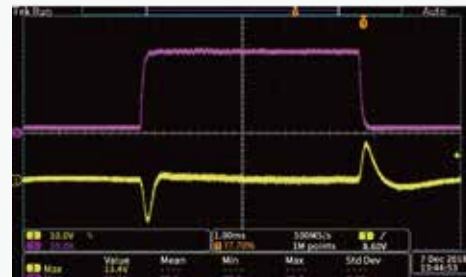
- Optical fiber transfer between master and slave, guarantee perfect performance of anti-interference
- The parameters will not change after parallel connection
- Adopt Optical fiber isolation technology, effective protection of the device and DUT
- Calibration is not requested after parallel connection



Stand-alone unit

Stand-alone unit: IT6006C-500-40 500V 40A 6000W
Input voltage:100V Input current:28A Sinking current :30A

* Yellow waveform: output voltage Violet waveform: output current



Paralleled units

2 sets IT6006C-500-40 paralleled
Input voltage:100V Input current:56A Sinking current :60A



From the above waveforms comparison:

we can see the paralleled IT6000C can output the same dynamic response waveform as the original single unit does, and show no-delay fast synchronized response.

Falling speed

No substantial changes comparing with single unit after parallel connection

Rising speed

Even faster rising speed, comparing with single unit after parallel connection

Dynamic response waveform

consistent with single unit waveform after parallel connection

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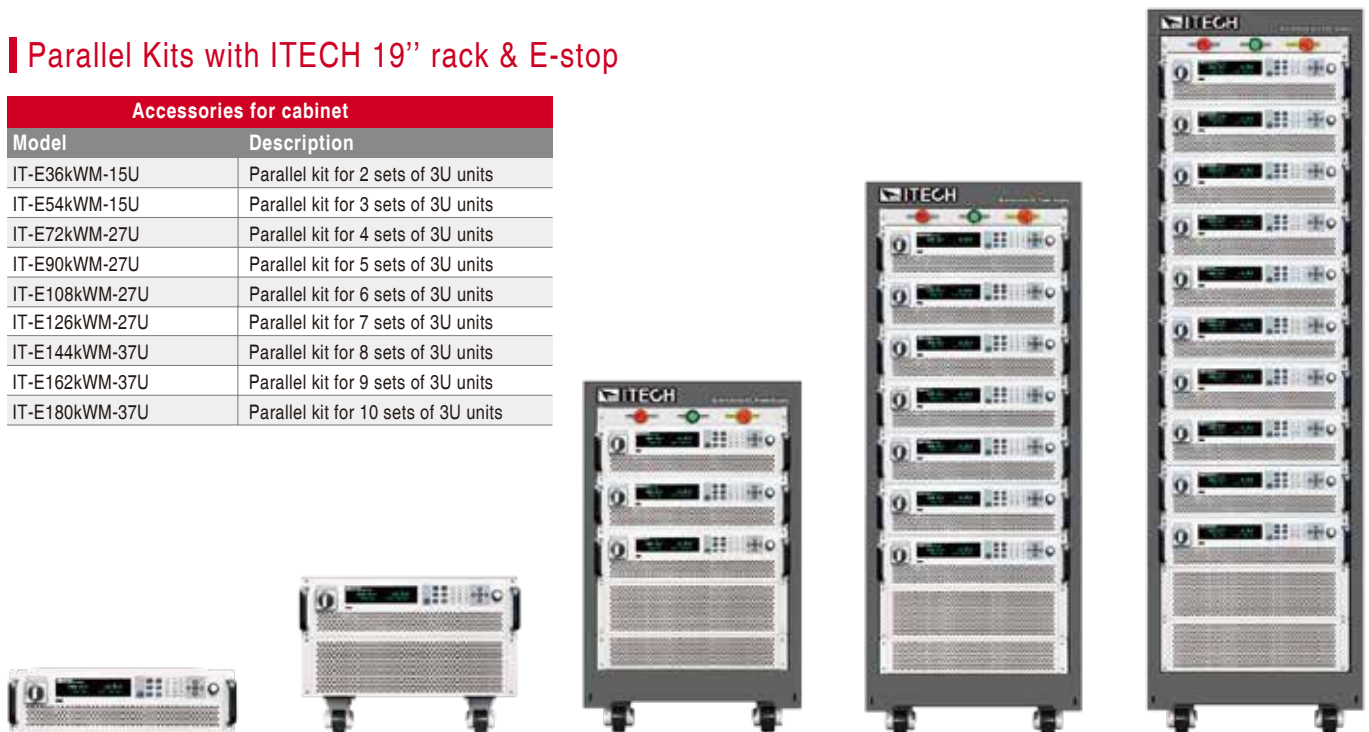
Based on the industry leading tech of paralleling and advantageous modularity of 18kW in 3U , the IT6000C High Power Systems are available offering up to 180kW 37U high rack cabinet fully configured and ready to use. Output voltage and current ratings range from 0-80V/4,500A to 0-2250V/250A in a 37U cabinet, and can be paralleled for up to 2 megawatts

(MW) of total power output. The paralleled system can be easily adapted to ever changing test requirements. Not only it is possible to reconfigure between parallel operation to expand the system with additional power supply units, but also can be split into smaller units for multiple tasks.

Category	Model	Specification	Description
Optional accessory	IT-E168	Optic cable kits for parallel communication	parallel communication between single units (3U)
	IT-E166	GPIO card	
	IT-E167	RS232&analog card	
	IT-E165A-250	Anti-reverse protection unit	avoid reverse connection
	IT-E165A-400	Anti-reverse protection unit	avoid reverse connection
	IT-E165A-500	Anti-reverse protection unit	avoid reverse connection
	IT-E170	Bus bar kits for 2 sets of 3U units	

Parallel Kits with ITECH 19" rack & E-stop

Accessories for cabinet	
Model	Description
IT-E36kWM-15U	Parallel kit for 2 sets of 3U units
IT-E54kWM-15U	Parallel kit for 3 sets of 3U units
IT-E72kWM-27U	Parallel kit for 4 sets of 3U units
IT-E90kWM-27U	Parallel kit for 5 sets of 3U units
IT-E108kWM-27U	Parallel kit for 6 sets of 3U units
IT-E126kWM-27U	Parallel kit for 7 sets of 3U units
IT-E144kWM-37U	Parallel kit for 8 sets of 3U units
IT-E162kWM-37U	Parallel kit for 9 sets of 3U units
IT-E180kWM-37U	Parallel kit for 10 sets of 3U units



Software options for control and simulation		
Model	Specification	Description
BSS2000	Battery simulation software	BSS2000
BSS2000Pro	Battery simulation software	BSS2000Pro Version
BSS2000M	Battery simulation software	Muliti-channel (MAX.20 channel)
FCS3000	Fuel cell simulation software	Single channel
SAS1000	Solar array simulation software	Power >18kW
SAS1000L	Solar array simulation software	Power ≤ 15kW
SAS1000M	Solar array simulation software	Muliti-channel (MAX.20 channel)
IT9000-PV6000	Free control software	

Testing Solution

IT6000C Bidirectional Programmable DC Power Supply

Specification

		IT6005C-80-150	IT6010C-80-300	IT6015C-80-450
Rated Value Range (0℃~50℃)	Voltage	0~80V	0~80V	0~80V
	Current	-150~150A	-300~300A	-450~450A
	Power	-5000~5000W	-10000~10000W	-15000~15000W
	Resistance	0~0.533Ω	0~0.267Ω	0~0.178Ω
Power Regulation ±(% of Offset)	Voltage	≤0.01%FS	≤0.01%FS	≤0.01%FS
	Current	≤0.05%FS	≤0.05%FS	≤0.05%FS
Load Regulation ±(% of Offset)	Voltage	≤0.02%FS	≤0.02%FS	≤0.02%FS
	Current	≤0.05%FS	≤0.05%FS	≤0.05%FS
Setup Resolution	Voltage	0.001V	0.001V	0.001V
	Current	0.01A	0.01A	0.01A
	Power	0.001kW	0.001kW	0.001kW
	Resistance	0.001Ω	0.001Ω	0.001Ω
Readback Resolution	Voltage	0.001V	0.001V	0.001V
	Current	0.01A	0.01A	0.01A
	Power	0.001kW	0.001kW	0.001kW
	Resistance	0.001Ω	0.001Ω	0.001Ω
Setting Accuracy within 12 mons 25°±5° ±(% of Output +Offset)	Voltage	≤0.02%+0.02%FS	≤0.02%+0.02%FS	≤0.02%+0.02%FS
	Current	≤0.1%+0.1%FS	≤0.1%+0.1%FS	≤0.1%+0.1%FS
	Power	≤0.5%+0.5%FS	≤0.5%+0.5%FS	≤0.5%+0.5%FS
	Resistance	≤1%+1%FS	≤1%+1%FS	≤1%+1%FS
Readback Accuracy within 12 mons 25°±5° ±(% of Output +Offset)	Voltage	≤0.02%+0.02%FS	≤0.02%+0.02%FS	≤0.02%+0.02%FS
	Current	≤0.1%+0.1%FS	≤0.1%+0.1%FS	≤0.1%+0.1%FS
	Power	≤0.5%+0.5%FS	≤0.5%+0.5%FS	≤0.5%+0.5%FS
	Resistance	≤1%+1%FS	≤1%+1%FS	≤1%+1%FS
Ripple (20Hz~20MHz)	Voltage	≤120mVpp(MAX: ≤200mVpp)	≤120mVpp(MAX: ≤200mVpp)	≤120mVpp(MAX: ≤200mVpp)
	Current	≤0.1%FS RMS	≤0.1%FS RMS	≤0.1%FS RMS
Setting Temperature Coefficient (% of Offset/℃)	Voltage	≤50PPM/℃	≤50PPM/℃	≤50PPM/℃
	Current	≤200PPM/℃	≤200PPM/℃	≤200PPM/℃
Readback Temperature Coefficient (% of Offset/℃)	Voltage	≤50PPM/℃	≤50PPM/℃	≤50PPM/℃
	Current	≤200PPM/℃	≤200PPM/℃	≤200PPM/℃
Rising Time (no load)	Voltage	≤15ms	≤15ms	≤15ms
Rising Time (full load)	Voltage	≤30ms	≤30ms	≤30ms
Falling Time (no load)	Voltage	≤30ms	≤30ms	≤30ms
Falling Time (full load)	Voltage	≤15ms	≤15ms	≤15ms
Transient Response Time	Voltage	≤2ms	≤2ms	≤2ms
AC Input	Voltage	208V (Decrease 50%) 342V~528V (3PH+PE)		
	Frequency	47Hz~63Hz	47Hz~63Hz	47Hz~63Hz
Setup Stability-30min (% of Output +Offset)	Voltage	≤0.02%+0.02%FS	≤0.02%+0.02%FS	≤0.02%+0.02%FS
	Current	≤0.1%+0.1%FS	≤0.1%+0.1%FS	≤0.1%+0.1%FS
Setup Stability-8h (% of Output +Offset)	Voltage	≤0.02%+0.02%FS	≤0.02%+0.02%FS	≤0.02%+0.02%FS
	Current	≤0.1%+0.1%FS	≤0.1%+0.1%FS	≤0.1%+0.1%FS
Readback Stability-30min (% of Output +Offset)	Voltage	≤0.02%+0.02%FS	≤0.02%+0.02%FS	≤0.02%+0.02%FS
	Current	≤0.1%+0.1%FS	≤0.1%+0.1%FS	≤0.1%+0.1%FS
Readback Stability-8h (% of Output +Offset)	Voltage	≤0.02%+0.02%FS	≤0.02%+0.02%FS	≤0.02%+0.02%FS
	Current	≤0.1%+0.1%FS	≤0.1%+0.1%FS	≤0.1%+0.1%FS
Efficiency		~90%	~90%	~90%
Remote Sense Compensation Voltage		≤5V	≤5V	≤5V
Command Response Time		2mS	2mS	2mS
Power Factor		0.99	0.99	0.99
Maximum Input Current		L1,L2/17A;L3/0A	L1,L2/17A;L3/29A	28.42A
Maximum Input Apparent Power		5.7kVA	11.3kVA	16.9kVA
Storage Tem.		-10℃~70℃	-10℃~70℃	-10℃~70℃
Working Tem.		0~50℃	0~50℃	0~50℃
Net. Dimension (mm)		483W*801.61D*151.3H	483W*801.61D*151.3H	483W*801.61D*151.3H
Net. Weight		20KG	30KG	40KG

*This information is subject to change without notice.

Your Power Testing Solution

IT6000C Bidirectional Programmable DC Power Supply

Specification

		IT6006C-300-75	IT6012C-300-150	IT6018C-300-225
Rated Value Range (0℃~50℃)	Voltage	0~300V	0~300V	0~300V
	Current	-75~75A	-150~150A	-225~225A
	Power	-6000~6000W	-12000~12000W	-18000~18000W
	Resistance	0~1Ω	0~1Ω	0~1Ω
Power Regulation ±(% of Offset)	Voltage	≤0.01%FS	≤0.01%FS	≤0.01%FS
	Current	≤0.05%FS	≤0.05%FS	≤0.05%FS
Load Regulation ±(% of Offset)	Voltage	≤0.02%FS	≤0.02%FS	≤0.02%FS
	Current	≤0.05%FS	≤0.05%FS	≤0.05%FS
Setup Resolution	Voltage	0.01V	0.01V	0.01V
	Current	0.01A	0.01A	0.01A
	Power	0.001kW	0.001kW	0.001kW
	Resistance	0.01Ω	0.001Ω	0.001Ω
Readback Resolution	Voltage	0.01V	0.01V	0.01V
	Current	0.01A	0.01A	0.01A
	Power	0.001kW	0.001kW	0.001kW
	Resistance	0.01Ω	0.001Ω	0.001Ω
Setting Accuracy within 12 mons 25°±5° ±(% of Output +Offset)	Voltage	≤0.02% + 0.02%FS	≤0.02% + 0.02%FS	≤0.02% + 0.02%FS
	Current	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS
	Power	≤0.5% + 0.5%FS	≤0.5% + 0.5%FS	≤0.5% + 0.5%FS
	Resistance	≤1% + 1%FS	≤1% + 1%FS	≤1% + 1%FS
Readback Accuracy within 12 mons 25°±5° ±(% of Output +Offset)	Voltage	≤0.02% + 0.02%FS	≤0.02% + 0.02%FS	≤0.02% + 0.02%FS
	Current	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS
	Power	≤0.5% + 0.5%FS	≤0.5% + 0.5%FS	≤0.5% + 0.5%FS
	Resistance	≤1% + 1%FS	≤1% + 1%FS	≤1% + 1%FS
Ripple (20Hz ~20MHz)	Voltage	≤120mVpp(MAX: ≤600mVpp)	≤120mVpp(MAX: ≤600mVpp)	≤120mVpp(MAX: ≤300mVpp)
	Current	≤0.1%FS RMS	≤0.1%FS RMS	≤0.1%FS RMS
Setting Temperature Coefficient (% of Offset/℃)	Voltage	≤50PPM/℃	≤50PPM/℃	≤50PPM/℃
	Current	≤200PPM/℃	≤200PPM/℃	≤200PPM/℃
Readback Temperature Coefficient (% of Offset/℃)	Voltage	≤50PPM/℃	≤50PPM/℃	≤50PPM/℃
	Current	≤200PPM/℃	≤200PPM/℃	≤200PPM/℃
Rising Time (no load)	Voltage	≤15ms	≤15ms	≤15ms
Rising Time (full load)	Voltage	≤30ms	≤30ms	≤30ms
Falling Time (no load)	Voltage	≤30ms	≤30ms	≤30ms
Falling Time (full load)	Voltage	≤15ms	≤15ms	≤15ms
Transient Response Time	Voltage	≤2ms	≤2ms	≤2ms
AC Input	Voltage	208V (Decrease 50%) 342V~528V (3PH+PE)		
	Frequency	47Hz~63Hz	47Hz~63Hz	47Hz~63Hz
Setup Stability-30min (% of Output +Offset)	Voltage	≤0.02%+0.02%FS	≤0.02%+0.02%FS	≤0.02%+0.02%FS
	Current	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS
Setup Stability-8h (% of Output +Offset)	Voltage	≤0.02%+0.02%FS	≤0.02%+0.02%FS	≤0.02%+0.02%FS
	Current	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS
Readback Stability-30min (% of Output +Offset)	Voltage	≤0.02%+0.02%FS	≤0.02%+0.02%FS	≤0.02%+0.02%FS
	Current	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS
Readback Stability-8h (% of Output +Offset)	Voltage	≤0.02%+0.02%FS	≤0.02%+0.02%FS	≤0.02%+0.02%FS
	Current	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS
Efficiency		~92%	~92%	~92%
Remote Sense Compensation Voltage		≤5V	≤5V	≤5V
Command Response Time		2mS	2mS	2mS
Power Factor		0.99	0.99	0.99
Maximum Input Current		L1,L2/20A;L3/0A	L1,L2/20A;L3/34A	33.37A
Maximum Input Apparent Power		6.6kVA	13.2kVA	19.8kVA
Storage Tem.		-10℃~70℃	-10℃~70℃	-10℃~70℃
Working Tem.		0~50℃	0~50℃	0~50℃
Net. Dimension (mm)		483W*801.61D*151.3H	483W*801.61D*151.3H	483W*801.61D*151.3H
Net. Weight		20KG	30KG	40KG

*This information is subject to change without notice.

Testing Solution

IT6000C Bidirectional Programmable DC Power Supply

Specification

		IT6006C-500-40	IT6012C-500-80	IT6018C-500-120
Rated Value Range (0℃~50℃)	Voltage	0~500V	0~500V	0~500V
	Current	-40~40A	-80~80A	-120~120A
	Power	-6000~6000W	-12000~12000W	-18000~18000W
	Resistance	0~1Ω	0~1Ω	0~1Ω
Power Regulation ±(% of Offset)	Voltage	≤0.01%FS	≤0.01%FS	≤0.01%FS
	Current	≤0.05%FS	≤0.05%FS	≤0.05%FS
Load Regulation ±(% of Offset)	Voltage	≤0.02%FS	≤0.02%FS	≤0.02%FS
	Current	≤0.05%FS	≤0.05%FS	≤0.05%FS
Setup Resolution	Voltage	0.01V	0.01V	0.01V
	Current	0.001A	0.01A	0.01A
	Power	0.001kW	0.001kW	0.001kW
	Resistance	0.01Ω	0.01Ω	0.01Ω
Readback Resolution	Voltage	0.01V	0.01V	0.01V
	Current	0.001A	0.01A	0.01A
	Power	0.001kW	0.001kW	0.001kW
	Resistance	0.01Ω	0.01Ω	0.01Ω
Setting Accuracy within 12 mons 25°±5° ±(% of Output +Offset)	Voltage	≤0.02% + 0.02%FS	≤0.02% + 0.02%FS	≤0.02% + 0.02%FS
	Current	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS
	Power	≤0.5% + 0.5%FS	≤0.5% + 0.5%FS	≤0.5% + 0.5%FS
	Resistance	≤1% + 1%FS	≤1% + 1%FS	≤1% + 1%FS
Readback Accuracy within 12 mons 25°±5° ±(% of Output +Offset)	Voltage	≤0.02% + 0.02%FS	≤0.02% + 0.02%FS	≤0.02% + 0.02%FS
	Current	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS
	Power	≤0.5% + 0.5%FS	≤0.5% + 0.5%FS	≤0.5% + 0.5%FS
	Resistance	≤1% + 1%FS	≤1% + 1%FS	≤1% + 1%FS
Ripple (20Hz~20MHz)	Voltage	≤200mVpp(MAX: ≤500mVpp)	≤200mVpp(MAX: ≤500mVpp)	≤200mVpp(MAX:500mVpp)
	Current	≤0.1%FS RMS	≤0.1%FS RMS	≤0.1%FS RMS
Setting Temperature Coefficient (% of Offset/℃)	Voltage	≤50PPM/℃	≤50PPM/℃	≤50PPM/℃
	Current	≤200PPM/℃	≤200PPM/℃	≤200PPM/℃
Readback Temperature Coefficient (% of Offset/℃)	Voltage	≤50PPM/℃	≤50PPM/℃	≤50PPM/℃
	Current	≤200PPM/℃	≤200PPM/℃	≤200PPM/℃
Rising Time (no load)	Voltage	≤15ms	≤15ms	≤15ms
Rising Time (full load)	Voltage	≤30ms	≤30ms	≤30ms
Falling Time (no load)	Voltage	≤30ms	≤30ms	≤30ms
Falling Time (full load)	Voltage	≤15ms	≤15ms	≤15ms
Transient Response Time	Voltage	≤2ms	≤2ms	≤2ms
AC Input	Voltage	208V (Decrease 50%) 342V~528V (3PH+PE)		
	Frequency	47Hz~63Hz	47Hz~63Hz	47Hz~63Hz
Setup Stability-30min (% of Output +Offset)	Voltage	≤0.02%+0.02%FS	≤0.02% + 0.02%FS	≤0.02% + 0.02%FS
	Current	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS
Setup Stability-8h (% of Output +Offset)	Voltage	≤0.02%+0.02%FS	≤0.02% + 0.02%FS	≤0.02% + 0.02%FS
	Current	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS
Readback Stability-30min (% of Output +Offset)	Voltage	≤0.02%+0.02%FS	≤0.02% + 0.02%FS	≤0.02% + 0.02%FS
	Current	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS
Readback Stability-8h (% of Output +Offset)	Voltage	≤0.02%+0.02%FS	≤0.02% + 0.02%FS	≤0.02% + 0.02%FS
	Current	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS
Efficiency		~92%	~92%	~92%
Remote Sense Compensation Voltage		≤5V	≤5V	≤5V
Command Response Time		2mS	2mS	2mS
Power Factor		0.99	0.99	0.99
Maximum Input Current		L1,I2/20A;L3/0A	L1,I2/20A;L3/34A	33.37A
Maximum Input Apparent Power		6.6kVA	13.2kVA	19.8kVA
Storage Tem.		-10℃~70℃	-10℃~70℃	-10℃~70℃
Working Tem.		0~50℃	0~50℃	0~50℃
Net. Dimension (mm)		483W*801.61D*151.3H	483W*801.61D*151.3H	483W*801.61D*151.3H
Net. Weight		20KG	30KG	40KG

*This information is subject to change without notice.

Your Power Testing Solution

IT6000C Bidirectional Programmable DC Power Supply

		IT6006C-800-25	IT6012C-800-50	IT6018C-800-75
Rated Value Range (0 °C -50 °C)	Voltage	0~800V	0~800V	0~800V
	Current	-25~25A	-50~50A	-75~75A
	Power	-6000~6000W	-12000~12000W	-18000~18000W
	Resistance	0~1Ω	0~1Ω	0~1Ω
Power Regulation ±(% of Offset)	Voltage	≤0.01%FS	≤0.01%FS	≤0.01%FS
	Current	≤0.05%FS	≤0.05%FS	≤0.05%FS
Load Regulation ±(% of Offset)	Voltage	≤0.02%FS	≤0.02%FS	≤0.02%FS
	Current	≤0.05%FS	≤0.05%FS	≤0.05%FS
Setup Resolution	Voltage	0.01V	0.01V	0.01V
	Current	0.001A	0.01A	0.01A
	Power	0.001kW	0.001kW	0.001kW
	Resistance	0.1Ω	0.01Ω	0.01Ω
Readback Resolution	Voltage	0.01V	0.01V	0.01V
	Current	0.001A	0.01A	0.01A
	Power	0.001kW	0.001kW	0.001kW
	Resistance	0.1Ω	0.01Ω	0.01Ω
Setting Accuracy within 12 mons 25°±5° ±(%of Output +Offset)	Voltage	≤0.02% + 0.02%FS	≤0.02% + 0.02%FS	≤0.02% + 0.02%FS
	Current	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS
	Power	≤0.5% + 0.5%FS	≤0.5% + 0.5%FS	≤0.5% + 0.5%FS
	Resistance	≤1% + 1%FS	≤1% + 1%FS	≤1% + 1%FS
Readback Accuracy within 12 mons 25°±5° ±(%of Output +Offset)	Voltage	≤0.02% + 0.02%FS	≤0.02% + 0.02%FS	≤0.02% + 0.02%FS
	Current	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS
	Power	≤0.5% + 0.5%FS	≤0.5% + 0.5%FS	≤0.5% + 0.5%FS
	Resistance	≤1% + 1%FS	≤1% + 1%FS	≤1% + 1%FS
Ripple (20Hz -20MHz)	Voltage	≤800mVpp(MAX: ≤1.2Vpp)	≤800mVpp(MAX: ≤1.2Vpp)	≤320mVpp(MAX: ≤800mVpp)
	Current	≤0.1%FS RMS	≤0.1%FS RMS	≤0.1%FS RMS
Setting Temperature Coefficient (% of Offset/°C)	Voltage	≤50PPM/°C	≤50PPM/°C	≤50PPM/°C
	Current	≤200PPM/°C	≤200PPM/°C	≤200PPM/°C
Readback Temperature Coefficient (% of Offset/°C)	Voltage	≤50PPM/°C	≤50PPM/°C	≤50PPM/°C
	Current	≤200PPM/°C	≤200PPM/°C	≤200PPM/°C
Rising Time (no load)	Voltage	≤15ms	≤15ms	≤15ms
Rising Time (full load)	Voltage	≤30ms	≤30ms	≤30ms
Falling Time (no load)	Voltage	≤30ms	≤30ms	≤30ms
Falling Time (full load)	Voltage	≤15ms	≤15ms	≤15ms
Transient Response Time	Voltage	≤2ms	≤2ms	≤2ms
AC Input	Voltage	208V (Decrease 50%) 342V ~ 528V (3PH+PE)		
	Frequency	47Hz~63Hz	47Hz~63Hz	47Hz~63Hz
Setup Stability-30min (%of Output +Offset)	Voltage	≤0.02%+0.02%FS	≤0.02% + 0.02%FS	≤0.02% + 0.02%FS
	Current	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS
Setup Stability-8h (%of Output +Offset)	Voltage	≤0.02%+0.02%FS	≤0.02% + 0.02%FS	≤0.02% + 0.02%FS
	Current	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS
Readback Stability-30min (%of Output +Offset)	Voltage	≤0.02%+0.02%FS	≤0.02% + 0.02%FS	≤0.02% + 0.02%FS
	Current	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS
Readback Stability-8h (%of Output +Offset)	Voltage	≤0.02%+0.02%FS	≤0.02% + 0.02%FS	≤0.02% + 0.02%FS
	Current	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS
Efficiency		~92%	~92%	~92%
Remote Sense Compensation Voltage		≤8V	≤8V	≤8V
Command Response Time		2mS	2mS	2mS
Power Factor		0.99	0.99	0.99
Maximum Input Current		L1,L2/20A;L3/0A	L1,L2/20A;L3/34A	33.37A
Maximum Input Apparent Power		6.6kVA	13.2kVA	19.8kVA
Storage Tem.		-10°C~70°C	-10°C~70°C	-10°C~70°C
Working Tem.		0~50°C	0~50°C	0~50°C
Net. Dimension (mm)		483W*801.61D*151.3H	483W*801.61D*151.3H	483W*801.61D*151.3H
Net. Weight		20KG	30KG	40kg

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Testing Solution

IT6000C Bidirectional Programmable DC Power Supply

IT6018C-1500-40		IT6018C-2250-25
Rated Value Range (0 °C -50 °C)	Voltage	0~1500V
	Current	-40~40A
	Power	-18000~18000W
	Resistance	0~1Ω
Power Regulation ±(% of Offset)	Voltage	≤0.01%FS
	Current	≤0.05%FS
Load Regulation ±(% of Offset)	Voltage	≤0.02%FS
	Current	≤0.05%FS
Setup Resolution	Voltage	0.1V
	Current	0.001A
	Power	0.001kW
	Resistance	0.1Ω
Readback Resolution	Voltage	0.1V
	Current	0.001A
	Power	0.001kW
	Resistance	0.1Ω
Setting Accuracy within 12 mons 25°±5° ±(%of Output +Offset)	Voltage	≤0.02% + 0.02%FS
	Current	≤0.1% + 0.1%FS
	Power	≤0.5% + 0.5%FS
	Resistance	≤1% + 1%FS
Readback Accuracy within 12 mons 25°±5° ±(%of Output +Offset)	Voltage	≤0.02% + 0.02%FS
	Current	≤0.1% + 0.1%FS
	Power	≤0.5% + 0.5%FS
	Resistance	≤1% + 1%FS
Ripple (20Hz -20MHz)	Voltage	≤600mVpp(MAX: ≤1500mVpp)
	Current	≤0.1%FS RMS
Setting Temperature Coefficient (% of Offset/ °C)	Voltage	≤50PPM/°C
	Current	≤200PPM/°C
Readback Temperature Coefficient (% of Offset/ °C)	Voltage	≤50PPM/°C
	Current	≤200PPM/°C
Rising Time (no load)	Voltage	≤15ms
Rising Time (full load)	Voltage	≤30ms
Falling Time (no load)	Voltage	≤30ms
Falling Time (full load)	Voltage	≤15ms
Transient Response Time	Voltage	≤2ms
AC Input	Voltage	208V (Decrease 50%) 342V ~ 528V (3PH+PE)
	Frequency	47Hz~63Hz
Setup Stability-30min (%of Output +Offset)	Voltage	≤0.02% + 0.02%FS
	Current	≤0.1% + 0.1%FS
Setup Stability-8h (%of Output +Offset)	Voltage	≤0.02% + 0.02%FS
	Current	≤0.1% + 0.1%FS
Readback Stability-30min (%of Output +Offset)	Voltage	≤0.02% + 0.02%FS
	Current	≤0.1% + 0.1%FS
Readback Stability-8h (%of Output +Offset)	Voltage	≤0.02% + 0.02%FS
	Current	≤0.1% + 0.1%FS
Efficiency		~92%
Remote Sense Compensation Voltage		≤15V
Command Response Time		2mS
Power Factor		0.99
Maximum Input Current		33.37A
Maximum Input Apparent Power		19.8kVA
Storage Tem.		-10°C~70°C
Working Tem.		0~50°C
Net. Dimension (mm)		483W*801.61D*151.3H
Net. Weight		40KG

*This information is subject to change without notice.

Local Distribution



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