IT6100B High Accuracy Programmable DC Power Supply

IT6100B series (86 ~ 1200W) high speed high precision programmable DC power supply is with ultra-fast voltage rising slew rate, resolution up to 0.1mV / 0.01mA, the latest output waveform priority mode allows rising waveform of voltage or current is generated with high-speed and no overshoot, which is widely used in aerospace power modules and other high-precision tests. IT6100B has built-in USB / RS232 / GPIB communication interfaces and the panel supports List programming, which can provide multi-purpose solution according to customer design and testing demands, easy to use.

Applications

Aerospace power module testing, circuit board testing, medical equipment testing, electronic rectifier testing, etc.

Feature

- Output linear adjustment, high speed, reliable, low noise
- High accuracy and resolution
- Ultrafast voltage rise slew rate
- Built-in 5½ digit voltmeter and milliohmmeter
- Memory capacity: 100 groups
- List mode
- Timer function (0.01~60000S)
- Remote sense, compensate line voltage
- Built-in RS232/USB/GPIB interfaces, support SCPI protocol

Model	Voltage	Current	Power	Size
IT6121B	20V	5A	100W	1/2 2U
IT6122B	32V	3A	96W	1/2 2U
IT6123B	72V	1.2A	86W	1/2 2U
IT6132B	30V	5A	150W	1/2 2U
IT6133B	60V	2.5A	150W	1/2 2U
IT6162B	20V	50A	1000W	2U
IT6164B	30V/60V	40A/20A	1200W	2U

Ultrafast voltage rise speed

Comparing with general high speed power supplies, IT6100B series power supplies reduce the ripple and noise to the lowest level. The ultrafast voltage rise speed suits for all high speed and precise tests.

Digital voltage milliohmmeter

IT6100B series has built-in precision digital voltage ohmmeter
Digital ohmmeter: Provide four-wire system to measure resistance, within range: 0 ~ 1KΩ
Digital voltmeter: Built-in 5½ voltmeter is provided to measure the external voltage within range: 0 ~ 40V

Power Supply

IT6100B Specifications

		IT6121B	IT6122B	IT6123B	IT6132B	IT6133B
DC output range	Voltage	0~20V	0~32V	0~72V	0~30V	0~60V
	Current	0~5A	0~3A	0~1.2A	0~5A	0~2.5A
	Power	100W	96W	86.4W	150W	150W
Line regulation	Voltage	<0.01%+1mV	<0.01%+1mV	<0.01%+1mV	<0.01%+1mV	<0.01%+2mV
	Current	<0.05%+1mA	<0.05%+1mA	<0.05%+1mA	<0.05%+1mA	<0.05%+0.05mA
Load regulation	Voltage	<0.01%+2mV	<0.01%+2mV	<0.01%+2mV	<0.01%+2mV	<0.01%+2mV
	Current	<0.05%+0.1mA	<0.05%+0.1mA	<0.05%+0.1mA	<0.05%+1.5mA	<0.05%+0.5mA
Ripple and noise (20HZ-7MHZ)	Voltage	<1mv Vrms/<3mv Vpp	<1mv Vrms/<3mv Vpp	<1mv Vrms/<4mv Vpp	<1mv Vrms/<4mv Vpp	<1mv Vrms/<5mv Vpp
	Current	<3mA rms	<3mA rms	<3mA rms	<4mA rms	<3mA rms
Programming resolution	Voltage	1mV	1mV	1mV	1mV	1mV
	Current	0.1mA	0.1mA	0.1mA	0.1mA	0.1mA
Programming accuracy	Voltage	±0.03%+3mV	±0.03%+3mV	±0.03%+6mV	±0.03%+3mV	±0.03%+6mV
	Current	±0.05%+2mA	±0.05%+2mA	±0.05%+1mA	±0.05%+2.5mA	±0.05%+1.5mA
Display value resolution	Voltage	0.1mV	0.1mV	0.1mV	0.1mV	0.1mV
	Current	0.01mA	0.01mA	0.01mA	0.01mA	0.01mA
Read back accuracy	Voltage	±0.02%+3mV	±0.02%+3mV	±0.02%+5mV	±0.02%+3mV	±0.02%+5mV
	Current	±0.05%+2mA	±0.05%+2mA	±0.05%+1mA	±0.05%+2.5mA	±0.05%+1.5mA
Transient response (typical)						
Load changes 50% -100% Load back to less than 75mV		<200us	<200us	<200us	<200us	<200us
Set the change voltage to rise Set the voltage from 0% to 100%, voltage change from 10% to 90% of the time		<20ms	<20ms	<20ms	<20ms	<20ms
Set the change voltage to drop Set the voltage from 0% to 100%, voltage change from 10% to 90% of the time		<200ms	<150ms	<150ms	<250ms	<200ms
Overvoltage protection	Range (typical)	1~19V	1~31V	1~71V	1~29V	1~59V
	Accuracy (typical)	± (setting value * 0.5% + 0.5V)				
	Response time (typical)	<10ms				
DVM(DC)						
Display value accuracy		±0.02%+10mV				
Display resolution		0.1mV when less than 10V; 1mV when more than 10V				
Enter the differential mode voltage range		0~40Vpk				
Enter the common mode voltage range		0~30Vpk				
Common mode rejection ratio		<0.1%				
Weight		7Kg				

		IT6162B	IT6164B	
DC output range	Voltage	0~20V	0~30V	0~60V
	Current	0~50A	0~40A	0~20A
	Power	1000W	1200W	
Line regulation	Voltage	≤0.02%+2mV	≤0.02%+2mV	
	Current	≤0.1%+2mA	≤0.1%+2mA	
Load regulation	Voltage	≤0.01%+10mV	≤0.01%+10mV	
	Current	≤0.1%+10mA	≤0.1%+10mA	
Ripple and noise (20HZ-207MHZ)	Voltage	≤ 4mVp-p / 1.2 mV rms	≤ 5mVp-p / 1.2 mV rms	
	Current	≤15mArms	≤15mArms	
Programming resolution	Voltage	1mV	1mV	
	Current	1mA	1mA	
Programming accuracy (Within 12 months, 25℃±5℃) (%of Output+Offset)	Voltage	≤0.02%+2mV	≤0.02%+6mV	
	Current	≤0.1%+25mA	≤0.1%+15mA	
Display value resolution	Voltage	1mV	1mV	
	Current	1mA	1mA	
Read back accuracy (Within 12 months, 25℃±5℃) (%of Output+Offset)	Voltage	≤0.02%+2mV	≤0.02%+6mV	
	Current	≤0.05%+15mA	≤0.05%+15mA	
Rise time (no load)		≤1ms	≤1ms [1]	≤2ms [1]
Rise time (full load)		≤1ms	≤1ms [1]	≤2ms [1]
Fall time (no load)		≤50ms	≤50ms [1]	≤120ms [1]
Fall time (full load)		≤1ms	≤1ms [1]	≤2ms [1]
Dynamic response time		≤200us	≤200us [2]	
Protective function		OVP/OCP/OTP		
Communication Interface		GPIB/USB/RS232		
Size (mm)		483mmW*88.4mmH*664.1mmD	483mmW*88.4mmH*664.1mmD	
Weight		30Kg		

*1 Output waveform changes 10% -90% of the time

*2 Load changes 50-100%, the time from output voltage recovers to set value of 75mV

*This information is subject to change without notice