ITECH

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IT-N6700

Programmable DC Power Supply

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IT-N6700 Series
Programmable DC Power Supply

The IT-N6700 Series Programmable DC Power Supply is designed to meet high power density and performance requirements, widely used in automated test equipment (ATE), R&D laboratories, semiconductor testing, and power electronics. The series offers 1000W and 1500W power options, with a voltage range from 32V to 1500V, catering to various testing needs. Its compact 1/2 2U rack design delivers powerful output in limited space. Equipped with a high-definition LCD screen, it provides not only traditional numeric measurements but also waveform trend display, allowing real-time monitoring of parameter changes during the testing process.

Features

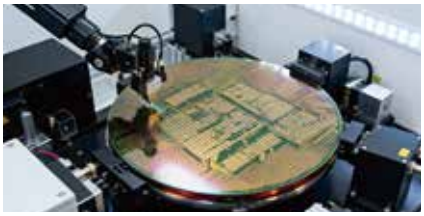
- 4.3-inch LCD screen
- Three output modes: CC/CV/CP
- Wide range : 32V-1500V, 1000W & 1500W
- LIST mode, adjustable rise/fall slope
- CC/CV priority mode for compatibility with various DUTs
- Trend analysis function for monitoring long-duration U/I/P curves
- Remote sensing compensation
- Rich protections: OCP/OVP/UVP/OPP/OTP/Foldback
- Standard USB/LAN/RS232/Digital I/O communication interfaces

Model	1000W	Model	1500W
IT-N6723C	32V/110A/1000W	IT-N6724C	32V/110A/1500W
IT-N6723	80V/40A/1000W	IT-N6724	80V/40A/1500W
IT-N6723B	150V/20A/1000W	IT-N6724B	150V/20A/1500W
IT-N6723H	300V/10A/1000W	IT-N6724H	300V/10A/1500W
IT-N6723G	600V/5A/1000W	IT-N6724G	600V/5A/1500W
IT-N6723V	1000V/3A/1000W	IT-N6724V	1000V/3A/1500W
IT-N6723P	1500V/2A/1000W	IT-N6724P	1500V/2A/1500W

Automotive Electronics

Production Line Testing

Semiconductor Devices



DC Motors

Power Modules

Consumer Electronics

Data Logging Function (Trend Analysis)

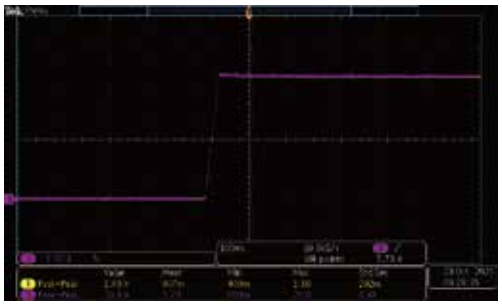
The IT-N6700 Programmable DC Power Supply Series supports CC/CV/CP output modes, catering to a wide range of power supply testing needs. It also features trend analysis and, with an external USB drive, can continuously record and visualize U/I/P curves (from minutes to several hours). The data supports zooming, cursor comparison, and interval statistics (mean, max, min), and can be exported as CSV files for further analysis and report generation.

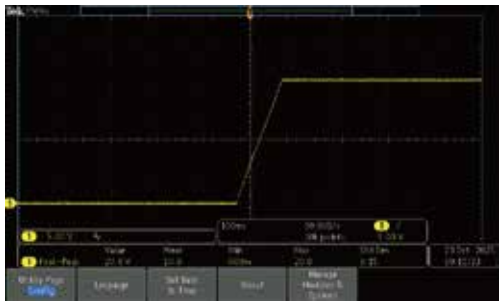
LIST Programming Function

The IT-N6700 Series offers LIST functionality, allowing users to edit voltage, current, duration, rise slope, and cycle count for each step, creating output waveforms that change over time. It supports 100-step sequence outputs and allows editing of up to 10 sequence files.

CC/CV Priority Function

The IT-N6700 Series Programmable DC Power Supply supports CC/CV priority, allowing it to match different load characteristics of the DUT. By selecting CV priority, faster voltage rise and steady-state convergence can be achieved, making it suitable for scenarios that require quick voltage response. With CC priority, peak current is effectively limited, and inrush current is suppressed, protecting surge-sensitive devices and loads. By properly setting the priority, loop stability, test repeatability, and DUT safety are significantly improved.





Foldback Protection Function

The IT-N6700 Series Programmable DC Power Supply offers OVP/UVP/OCP/UCP/OPP/OTP and Foldback Protection features. The Foldback Protection function is primarily used to shut down the output during the transition between CC/CV modes, protecting DUTs that are sensitive to voltage and current overshoot. Users can specify the operating mode and set a protection delay time. If the mode switches, the protection will be triggered after the delay time, shutting off the output to safeguard the DUT.

Optional Accessories - Rack Mount Kit

Model	Description
IT-E158B	Suitable for Dual Rack Mount in Non-ITECH Standard Cabinets
IT-E158D	Suitable for Single Rack Mount in Non-ITECH Standard Cabinets

Front Panel

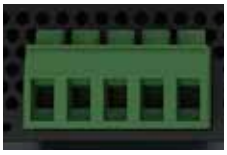
32V/80V/150V/300W/600V Model Front Panel

1000V/1500V Model Front Panel

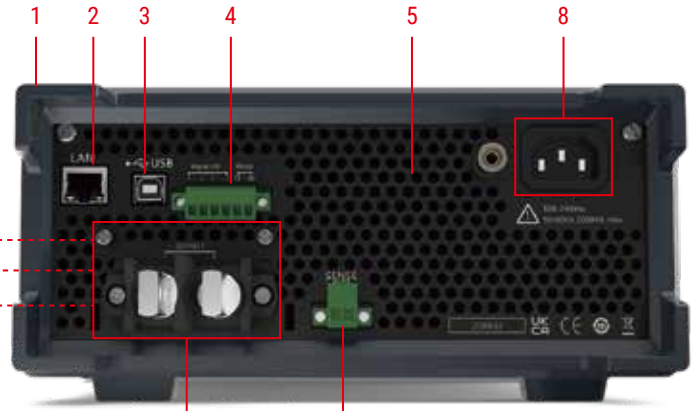
Rear Panel

32V Rear Panel Terminals

80V/150V/300V/600V
Rear Panel Terminals



1000V/1500V
Rear Panel Terminals



7* Shown as IT-N6724C model, other models may differ.

1. Rubber Shock Absorber
2. LAN Communication Interface
3. USB Communication Interface
4. Digital I/O & RS232 interface
5. Cooling Vents
6. DC Output Terminals
7. Remote Sense Terminals
8. AC Input Socket

Parameter		IT-N6723C	IT-N6724C	IT-N6723	IT-N6724
Rated values	Voltage	0~32V		0~80V	
	Current	0~110A		0~40A	
	Power	0~1000W	0~1500W	0~1000W	0~1500W
Line regulation ±(%of Output+Offset)	Voltage	≤3.5mV		≤7mV	
	Current	≤55mA		≤20mA	
Load regulation ±(%of Output+Offset)	Voltage	≤3.5mV *1		≤8mV *1	
	Current	≤55mA		≤20mA	
Setup resolution	Voltage	1mV		1mV	
	Current	10mA		1mA	
	Power	0.1W		0.1W	
Readback resolution	Voltage	1mV		1mV	
	Current	10mA		1mA	
	Power	0.1W		0.1W	
Setup accuracy	Voltage	≤0.02% + 0.02%F.S.		≤0.02% + 0.02%F.S.	
	Current	≤0.1% + 0.1%F.S.		≤0.1% + 0.1%F.S.	
	Power	≤0.2%+0.3%F.S.	≤0.2%+0.2%F.S.	≤0.2%+0.3%F.S.	≤0.2%+0.2%F.S.
Readback accuracy	Voltage	≤0.02% + 0.02%F.S.		≤0.02% + 0.02%F.S.	
	Current	≤0.1% + 0.1%F.S.		≤0.1% + 0.1%F.S.	
	Power	≤0.2%+0.3%F.S.	≤0.2%+0.2%F.S.	≤0.2%+0.3%F.S.	≤0.2%+0.2%F.S.
Ripple (20Hz~20MHz)	Vpp	≤60mV		≤130mV	
	Irms	≤110mA		≤40mA	
Setup temperature coefficient (%of Output+Offset)/°C	Voltage	≤20PPM/°C			
	Current	≤50PPM/°C			
Readback temperature coefficient (%of Output+Offset)/°C	Voltage	≤20PPM/°C			
	Current	≤50PPM/°C			
Rising time (no load)	Voltage	≤60ms			
Rising time (full load)	Voltage	≤150ms			
Falling time (no load)	Voltage	≤2s			
Falling time (full load)	Voltage	≤200ms			
Dynamic response*2	Voltage	≤1ms			
AC input	Voltage	176VAC-264VAC (Rated power)			
		99VAC-121VAC (Derated to 850W)			
	Frequency	47-63Hz			
Efficiency*3		86%/77%	88.5%/82%	87%/81%	89%/83%
Sense		≤3V			
Programming response		5ms			
Power factor		0.98	0.99	0.98	0.99
Max.input current (under 110Vac input)		12A			
Max.input apparent power		1250VA	1800VA	1250VA	1800VA
Storage temperature		-10°C~70°C			
Protection		OVP/OCP/OTP/OPP/UVP/UCP/Foldback/Sense compensation			
Isolation (output to ground)		500VDC			
Isolation (iutput to ground)		2200VDC			
Working temperature		0~40°C			
Dimension (mm)*4		255W*411.7D*108.3H			
Weight (net)		(6.5±0.5) kg			

*1 Testing in Sense Mode

*2 Output voltage recovery within 0.5% of the rated output voltage.

*3 Full Voltage/Full Current (Full Load)

*4 If there are front and rear covers, the overall dimensions should include the front and rear cover dimensions.

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Parameter		IT-N6723B	IT-N6724B	IT-N6723H	IT-N6724H
Rated values	Voltage	0~150V		0~300V	
	Current	0~20A		0~10A	
	Power	0~1000W	0~1500W	0~1000W	0~1500W
Line regulation ±(%of Output+Offset)	Voltage	≤15mV		≤35mV	
	Current	≤10mA		≤3mA	
Load regulation ±(%of Output+Offset)	Voltage	≤15mV *1		≤35mV *1	
	Current	≤10mA		≤3mA	
Setup resolution	Voltage	10mV		10mV	
	Current	1mA		1mA	
	Power	0.1W		0.1W	
Readback resolution	Voltage	10mV		10mV	
	Current	1mA		1mA	
	Power	0.1W		0.1W	
Setup accuracy	Voltage	≤0.02% + 0.02%F.S.		≤0.02% + 0.02%F.S.	
	Current	≤0.1% + 0.1%F.S.		≤0.05% + 0.05%F.S.	
	Power	≤0.2%+0.3%F.S.	≤0.2%+0.2%F.S.	≤0.2%+0.3%F.S.	≤0.1%+0.15%F.S.
Readback accuracy	Voltage	≤0.02% + 0.02%F.S.		≤0.02% + 0.02%F.S.	
	Current	≤0.1% + 0.1%F.S.		≤0.05% + 0.05%F.S.	
	Power	≤0.2%+0.3%F.S.	≤0.2%+0.2%F.S.	≤0.2%+0.3%F.S.	≤0.1%+0.15%F.S.
Ripple (20Hz~20MHz)	Vpp	≤150mV		≤300mV	
	Irms	≤20mA		≤10mA	
Setup temperature coefficient (%of Output+Offset)/°C	Voltage	≤20PPM/°C			
	Current	≤50PPM/°C			
Readback temperature coefficient (%of Output+Offset)/°C	Voltage	≤20PPM/°C			
	Current	≤50PPM/°C			
Rising time (no load)	Voltage	≤60ms			
Rising time (full load)	Voltage	≤150ms			
Falling time (no load)	Voltage	≤2s			
Falling time (full load)	Voltage	≤200ms			
Dynamic response*2	Voltage	≤1ms			
AC input	Voltage	176VAC-264VAC (Rated power)			
		99VAC-121VAC (Derated to 850W)			
	Frequency	47-63Hz			
Efficiency*3		87%/81%	89%/83%	87%/81%	89%/86%
Sense		≤3V			
Programming response		5ms			
Power factor		0.98	0.99	0.98	0.99
Max.input current (under 110Vac input)		12A			
Max.input apparent power		1250VA	1800VA	1250VA	1800VA
Storage temperature		-10°C~70°C			
Protection		OVP/OCP/OTP/OPP/UVP/UCP/Foldback/Sense compensation			
Isolation (output to ground)		500VDC			
Isolation (iutput to ground)		2200VDC			
Working temperature		0~40°C			
Dimension (mm)*4		255W*411.7D*108.3H			
Weight (net)		(6.5±0.5) kg			

*1 Testing in Sense Mode

*2 Output voltage recovery within 0.5% of the rated output voltage.

*3 Full Voltage/Full Current (Full Load)

*4 If there are front and rear covers, the overall dimensions should include the front and rear cover dimensions.

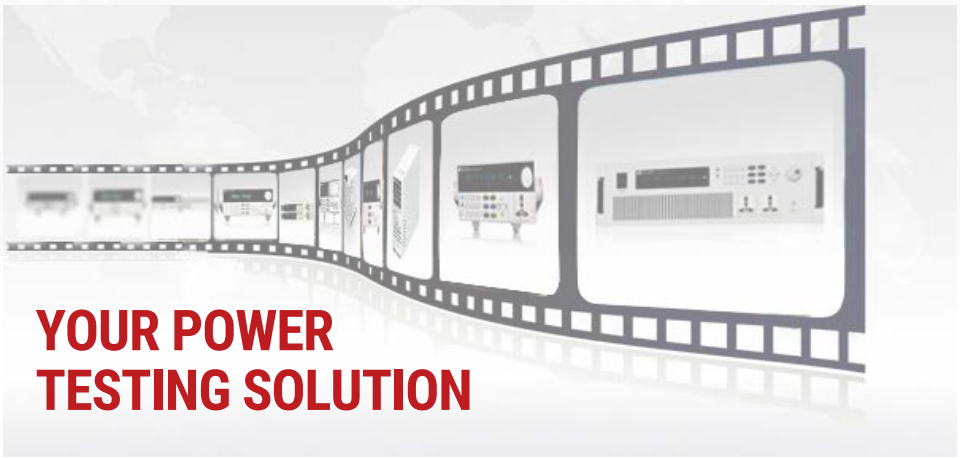
Parameter		IT-N6723G	IT-N6724G	IT-N6723V	IT-N6724V	IT-N6723P	IT-N6724P
Rated values	Voltage	0~600V		0~1000V		0~1500V	
	Current	0~5A		0~3A		0~2A	
	Power	0~1000W	0~1500W	0~1000W	0~1500W	0~1000W	0~1500W
Line regulation ±(%of Output+Offset)	Voltage	≤60mV		100mV		≤100mV	
	Current	≤1.5mA		≤0.8mA		≤0.6mA	
Load regulation ±(%of Output+Offset)	Voltage	≤60mV *1		100mV *1		≤100mV *1	
	Current	≤1.5mA		≤0.8mA		≤0.6mA	
Setup resolution	Voltage	10mV		100mV		100mV	
	Current	0.1mA		0.1mA		0.1mA	
	Power	0.1W		0.1W		0.1W	
Readback resolution	Voltage	10mV		100mV		100mV	
	Current	0.1mA		0.1mA		0.1mA	
	Power	0.1W		0.1W		0.1W	
Setup accuracy	Voltage	≤0.02% + 0.02%F.S.		≤0.02% + 0.02%F.S.		≤0.02% + 0.02%F.S.	
	Current	≤0.05% + 0.05%F.S.		≤0.05% + 0.05%F.S.		≤0.05% + 0.05%F.S.	
	Power	≤0.2%+0.3%F.S.	≤0.1%+0.15%F.S.	≤0.2%+0.3%F.S.	≤0.1%+0.15%F.S.	≤0.2%+0.3%F.S.	≤0.1%+0.15%F.S.
Readback accuracy	Voltage	≤0.02% + 0.02%F.S.		≤0.02% + 0.02%F.S.		≤0.02% + 0.02%F.S.	
	Current	≤0.05% + 0.05%F.S.		≤0.05% + 0.05%F.S.		≤0.05% + 0.05%F.S.	
	Power	≤0.2%+0.3%F.S.	≤0.1%+0.15%F.S.	≤0.2%+0.3%F.S.	≤0.1%+0.15%F.S.	≤0.2%+0.3%F.S.	≤0.1%+0.15%F.S.
Ripple (20Hz~20MHz)	Vpp	≤600mV		≤1000mV		≤1500mV	
	Irms	≤5mA		≤5mA		≤5mA	
Setup temperature coefficient (%of Output+Offset)/°C	Voltage	≤20PPM/°C					
	Current	≤50PPM/°C					
Readback temperature coefficient (%of Output+Offset)/°C	Voltage	≤20PPM/°C					
	Current	≤50PPM/°C					
Rising time (no load)	Voltage	≤60ms		≤60ms		≤100ms	
Rising time (full load)	Voltage	≤150ms		≤150ms		≤150ms	
Falling time (no load)	Voltage	≤2s		≤3s		≤3s	
Falling time (full load)	Voltage	≤200ms					
Dynamic response*2	Voltage	≤1ms					
AC input	Voltage	176VAC-264VAC (Rated power)					
		99VAC-121VAC (Derated to 850W)					
	Frequency	47-63Hz					
Efficiency*3		87%/84%	89%/86%	87%/84%	89%/86%	87%/84%	89%/86%
Sense		≤3V		≤3V		≤6V	
Programming response		5ms		5ms		5ms	
Power factor		0.98	0.99	0.98	0.99	0.98	0.99
Max.input current (under 110Vac input)		12A					
Max.input apparent power		1250VA	1800VA	1250VA	1800VA	1250VA	1800VA
Storage temperature		-10°C~70°C					
Protection		OVP/OCP/OTP/OPP/UVP/UCP/Foldback/Sense compensation					
Isolation (output to ground)		900VDC		1500VDC		2250VDC	
Isolation (iutput to ground)		2200VDC		2200VDC		2200VDC	
Working temperature		0~40°C					
Dimension (mm)*4		255W*411.7D*108.3H					
Weight (net)		(6.5±0.5) kg					

*1 Testing in Sense Mode

*2 Output voltage recovery within 0.5% of the rated output voltage.

*3 Full Voltage/Full Current (Full Load)

*4 If there are front and rear covers, the overall dimensions should include the front and rear cover dimensions.



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