

IT-N6900

Programmable DC Power Supply



Your Power Testing Solution



IT-N6900 Programmable DC Power Supply



IT-N6900 DC power supply has 60V and 150V, 850W and 1500W output. It features as black panel and HD screen, low ripple and noise. It can provide stable and pure DC power, two current ranges, up to 1 μ A current resolution. It has CC and CV priority settings, new Foldback protection. It is well used for the test of DC-DC, semiconductor lasers, automotive electronics, communication electronics, motors, PV modules and so on. IT-N6900 series supports SCPI and LabVIEW drivers, built-in USB/LAN/digital IO communication interface, optional GPIB/RS232/analog IO, suitable for remote control and system integration, and can be used in R&D, production lines, universities, etc.

FEATURE

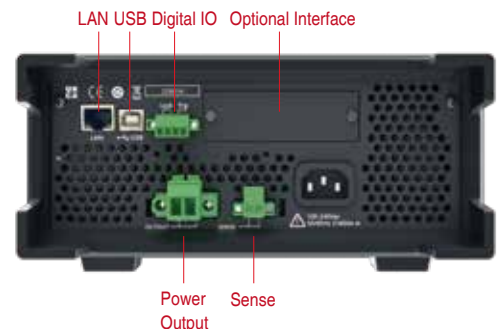
- 4.3" HD LCD
- Voltage: 60V, 150V
- Power: 850W, 1500W, wide range output
- Two current ranges, 1 μ A current resolution
- Lower ripple and noise
- Using a new type of transformer, lighter, higher efficiency and stability
- Faster voltage rise and fall
- With CC, CV priority, suitable for a variety of DUT's
- Remote Sense function
- Support OVP, UVP, OCP, OPP, OTP, Foldback protection function
- Built-in USB/LAN/Digital IO communication interface, optional GPIB/RS232/analog IO
- Support SCPI, LabVIEW programming
- Trend analysis, monitor the voltage, current and power of the DUT in time

Applications



Model	Voltage	Current	Power
IT-N6952	60V	25A	850W
IT-N6962	60V	25A	1500W*1
IT-N6953	150V	10A	850W
IT-N6963	150V	10A	1500W*1
IT-E177	RS232& analog		Optional
IT-E176	GPIB		Optional

*1 The power output is 850W under 110Vac input



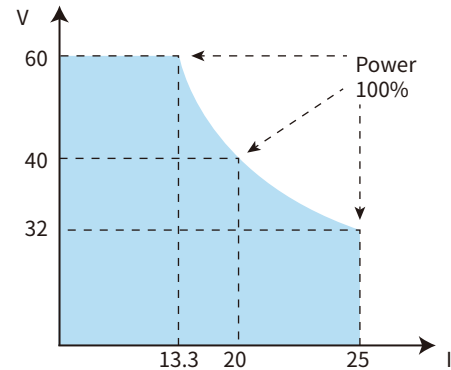
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Auto Range

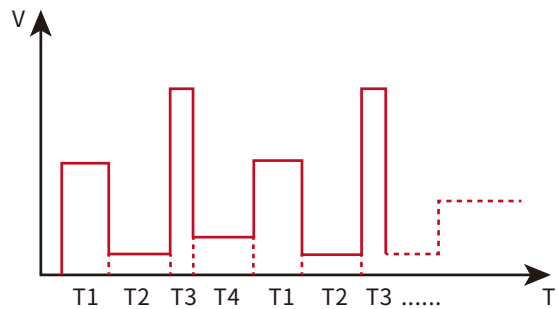
IT6900B series power supply can achieve the combined output of multiple voltage and current at a fixed power. Single power supply can meet different DUT tests with high voltage low current or high current low voltage, at the same time, because the output of voltage and current is controlled by the limit power, it will be the switching of voltage and current auto ranging.

*Not available for 1500W models



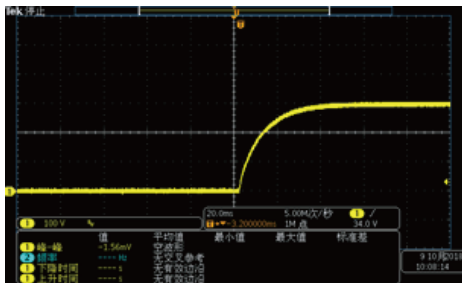
List programming

The LIST programming function of IT-N6900 can provide a maximum of 100 steps of sequence output, and a total of 10 sequence files can be edited. The user can generate various output change sequences by editing the steps such as voltage, current, time and whether to cycle the steps of each single step. The parameters include time units.

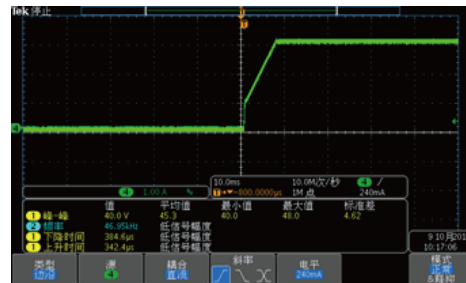


CC&CV priority

IT-N6900 has CC/CV priority function, which is suitable for complex applications with high speed or no overshoot test requirements. In CV priority mode, you can get faster voltage rising. In CC priority mode, the output current has no overshoot, which can be used to test the DUT of constant current operating characteristics. It is good for applications such as laser testing, integrated circuit testing, charge and discharge testing, power transient simulation and characterization of automotive electronics, etc.



CV priority
no voltage overshoot



CC priority
no current priority

Foldback

IT-N6900 supports multiple protection functions such as OVP/UVI/OCP/OPP/OTP/Foldback. The Foldback protection function is mainly used to turn off the output when the power supply CV/CC is switched, so as to protect the DUTs which are sensitive to voltage and current overshoot. You can set the working mode and the protection delay time. If the current working mode is changed, the protection will be triggered when the time is up and the output will be turned off.

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IT-N6900 Programmable DC Power Supply

Parameter		IT-N6952	IT-N6953
Rated values	Voltage	0~60V	0~150V
	Current	0~25A	0~10A
	Power	0~850W	0~850W
Line regulation ± (% of Output+Offset)	Voltage	≤ 0.01%+6mV	≤ 0.01%+15mV
	Current	≤ 0.02%+5mA	≤ 0.02%+2mA
Load regulation ± (% of Output+Offset)	Voltage	≤ 0.01%+6mV ^{*1}	≤ 0.01%+15mV ^{*1}
	Current	≤ 0.02%+5mA	≤ 0.02%+2mA
Setup resolution	Voltage	1mV	1mV (<100V) 10mV (≥ 100V)
	Current	1mA	1mA
Readback resolution	Voltage	1mV	1mV (<100V) 10mV (≥ 100V)
	Current	1mA	1mA
Setup accuracy	Voltage	≤ 0.03%+12mV ^{*3}	≤ 0.03%+30mV ^{*3}
	Current	≤ 0.1%+25mA	≤ 0.1%+10mA
Readback resolution	Voltage	≤ 0.03%+12mV	≤ 0.03%+30mV
	Current	≤ 0.1%+25mA ≤ 0.05%+20uA (20mA) ^{*4}	≤ 0.1%+10mA ≤ 0.05%+20uA (20mA) ^{*4}
Ripple (20Hz~20MHz)	Peak value	≤ 15mVp-p (Typical)	≤ 30mVp-p (Typical)
	Voltage(RMS)	≤ 2mVrms (Typical)	≤ 4mVrms (Typical)
Ripple (20Hz~20MHz)	Current(RMS)	≤ 9mA _{rms}	≤ 7mA _{rms}
Setup temperature coefficient ± (% of Output+Offset) / C	Voltage	0.002% + 0.4mV	0.002% + 1mV
	Current	0.005% + 1.5mA	0.005% + 0.6mA
Rising time (no load) ± (% of Output+Offset) / C	Voltage	0.002% + 0.4mV	0.002% + 1mV
	Current	0.005% + 1.5mA 0.005% + 1μA ^{*4}	0.005% + 0.6mA 0.005% + 1μA ^{*4}
Rising time (no load)	Voltage	≤ 20ms(10%-90%)	≤ 30ms(10%-90%)
Rising time (full load)	Voltage	≤ 30ms(10%-90%)	≤ 30ms(10%-90%)
Falling time (no load)	Voltage	≤ 150ms(90%-10%)	≤ 150ms(90%-10%)
Falling time (full load)	Voltage	≤ 15ms(90%-10%)	≤ 15ms(90%-10%)
Dynamic response ^{*5}	Voltage	≤ 100μs (50%-100% load back to 150mV)	≤ 200μs (50%-100% load back to 150mV)
AC input	Voltage	100V-240V	
	Frequency	50/60Hz	
Efficiency	75% (Typical)		
Sense	≤ 2.5V (Per each lead)		
Programming response	5ms		
Power factor	0.98		
Max.input current	11A		
Max. input apparent power	1100VA		
Storage temperature	-10°C~70°C		
Protection	OVP/UVP/OC/UCP/OTP/OPP/Foldback		
Isolation(output to ground)	240V		
Isolation(input to ground)	1500Vac		
Working temperature	0~40°C		
Dimension(mm)	255mm(W)×108.2mm(H)×529.5mm(D)		
Weight(net)	7.6kg		

*1 Measured with sense wiring

*2 When the current measurement range is 20mA, the capacitive load of the power supply cannot exceed 47μF

*3 Voltage setting accuracy and measurement accuracy are measured under sense wiring

*4 The accuracy of small range current (20mA range) is measured in the state of power supply output CV

*5 Test under frequency 100Hz

*All specifications are subject to change without notice.

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IT-N6900 Programmable DC Power Supply

Parameter		IT-N6962	IT-N6963
Rated values	Voltage	0~60V	0~150V
	Current	0~25A	0~10A
	Power	0~1500W ⁶	0~1500W ⁶
Line regulation ± (% of Output+Offset)	Voltage	≤ 0.01%+6mV	≤ 0.01%+15mV
	Current	≤ 0.02%+5mA	≤ 0.02%+2mA
Load regulation ± (% of Output+Offset)	Voltage	≤ 0.01%+6mV ^{*1}	≤ 0.01%+15mV ^{*1}
	Current	≤ 0.02%+5mA	≤ 0.02%+2mA
Setup resolution	Voltage	1mV	1mV (< 100V) 10mV (≥ 100V)
	Current	1mA	1mA
Readback resolution	Voltage	1mV	1mV (< 100V) 10mV (≥ 100V)
	Current	1mA	1mA
Setup accuracy	Voltage	≤ 0.03%+12mV ^{*3}	≤ 0.03%+30mV ^{*3}
	Current	≤ 0.1%+25mA	≤ 0.1%+10mA
Readback resolution	Voltage	≤ 0.03%+12mV	≤ 0.03%+30mV
	Current	≤ 0.1%+25mA ≤ 0.05%+20uA (20mA) ^{*4}	≤ 0.1%+10mA ≤ 0.05%+20uA (20mA) ^{*4}
Ripple (20Hz~20MHz)	Peak value	≤ 15mVp-p (Typical)	≤ 30mVp-p (Typical)
	Voltage(RMS)	≤ 2mVrms (Typical)	≤ 4mVrms (Typical)
Ripple (20Hz~20MHz)	Current(RMS)	≤ 9mA _{rms}	≤ 7mA _{rms}
Setup temperature coefficient ± (% of Output+Offset) / C	Voltage	0.002% + 0.4mV	0.002% + 1mV
	Current	0.005% + 1.5mA	0.005% + 0.6mA
Rising time (no load) ± (% of Output+Offset) / C	Voltage	0.002% + 0.4mV	0.002% + 1mV
	Current	0.005% + 1.5mA 0.005% + 1μA ^{*4}	0.005% + 0.6mA 0.005% + 1μA ^{*4}
Rising time (no load)	Voltage	≤ 20ms (10%-90%)	≤ 30ms (10%-90%)
Rising time (full load)	Voltage	≤ 30ms (10%-90%)	≤ 30ms (10%-90%)
Falling time (no load)	Voltage	≤ 150ms (90%-10%)	≤ 150ms (90%-10%)
Falling time (full load)	Voltage	≤ 15ms (90%-10%)	≤ 15ms (90%-10%)
Dynamic response ^{*5}	Voltage	≤ 100μs (50%-100% load back to 150mV)	≤ 200μs (50%-100% load back to 150mV)
AC input	Voltage	100V-240V	
	Frequency	50/60Hz	
Efficiency	75% (Typical)		
Sense	≤ 2.5V (Per each lead)		
Programming response	5ms		
Power factor	0.98		
Max. input current	11A		
Max. input apparent power	2100VA		
Storage temperature	-10°C~70°C		
Protection	OVP/UVP/OCP/UCP/OTP/OPP/Foldback		
Isolation(output to ground)	240V		
Isolation(input to ground)	1500Vac		
Working temperature	0~40°C		
Dimension(mm)	255mm(W)×108.2mm(H)×529.5mm(D)		
Weight(net)	7.6kg		

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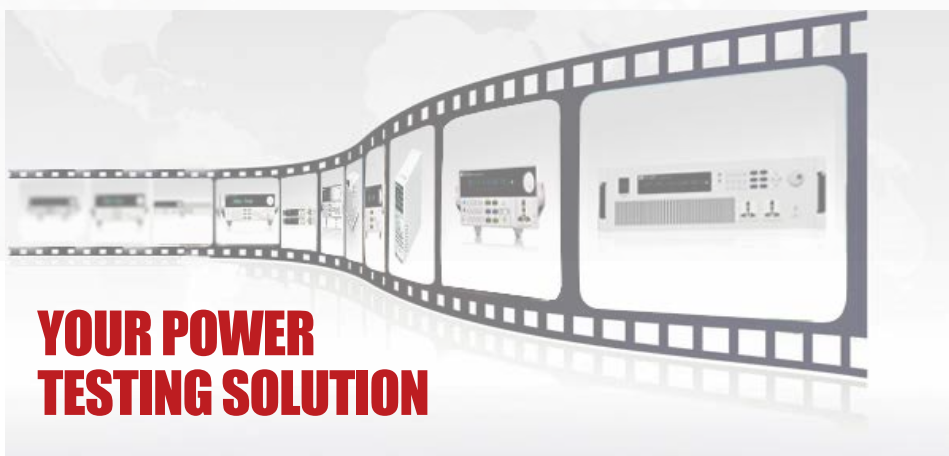
*4 The accuracy of small range current (20mA range) is measured in the state of power supply output CV

*5 Test under frequency 100Hz

*6 99Vac-121Vac max. output 850W

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