

## Product Datasheet - Technical Specifications



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# 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 $\mu$ 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

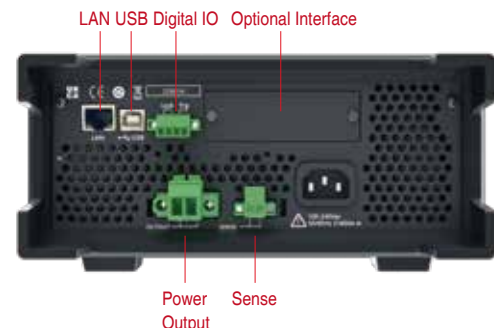
- 4.3" HD LCD
- Voltage: 60V, 150V
- Power: 850W, 1500W, wide range output
- Two current ranges, 1 $\mu$ A current resolution
- Lower ripple and noise
- Using a new type of transformer, lighter, higher efficiency and stability
- Faster voltage rise and fall
- With CC, CV priority, suitable for a variety of DUT's
- Remote Sense function
- Support OVP, UVP, OCP, OPP, OTP, F oldback 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



# Your Power Testing Solution

## IT-N6900 Programmable DC Power Supply

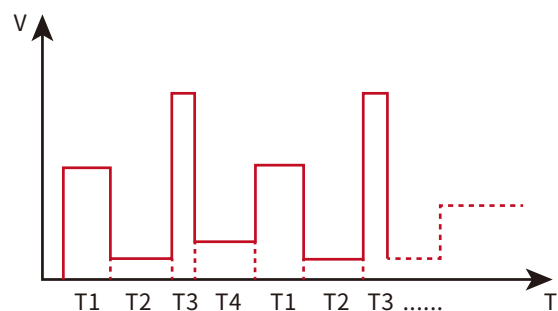
### Data Logging Function (Trend Analysis)

IT-N6900 supports trend analysis function, allowing end users to observe voltage, current and power online for a long time. Users can save test data in U disk, and the time interval of data recording can be set, which is especially suitable for long-term aging test of production lines or R&D laboratories. HD screen with graphic display, users can observe the abnormal situation of the test in real time.



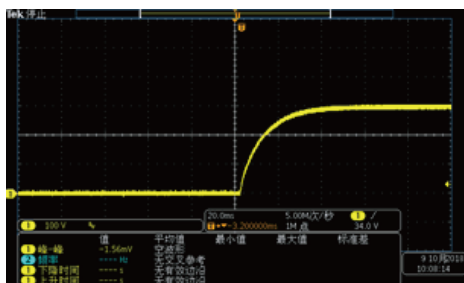
### List programming

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.

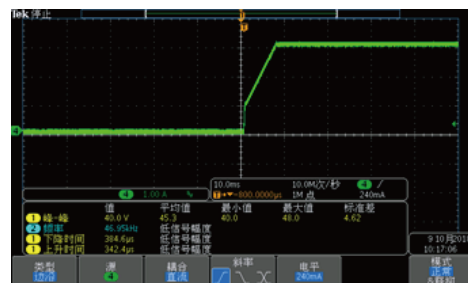


### CC&CV priority

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 overshoot

### Foldback

IT-N6900 supports multiple protection functions such as OVP/UVP/OC/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.

Parameter		IT-N6962	IT-N6963
Rated values	Voltage	0~60V	0~150V
	Current	0~25A	0~10A
	Power	0~1500W <sup>*6</sup>	0~1500W <sup>*6</sup>
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 <sup>*1</sup>	≤ 0.01%+15mV <sup>*1</sup>
	Current	≤ 0.02%+5mA	≤ 0.02%+2mA
Setup resolution	Voltage	1mV	10mV
	Current	1mA	1mA
Readback resolution	Voltage	1mV	1mV
	Current	1mA 1μA ( ≤ 20mA ) <sup>*2</sup>	1mA 1μA ( ≤ 20mA ) <sup>*2</sup>
Setup accuracy	Voltage	≤ 0.03%+12mV <sup>*3</sup>	≤ 0.03%+30mV <sup>*3</sup>
	Current	≤ 0.1%+25mA	≤ 0.1%+10mA
Readback accuracy	Voltage	≤ 0.03%+12mV	≤ 0.03%+30mV
	Current	≤ 0.1%+25mA ≤ 0.05%+20uA (20mA) <sup>*4</sup>	≤ 0.1%+10mA ≤ 0.05%+20uA (20mA) <sup>*4</sup>
Ripple (20Hz~20MHz)	Peak value	≤ 20mVp-p (Typical)	≤ 30mVp-p (Typical)
	Voltage(RMS)	≤ 3mVrms (Typical)	≤ 4.5mVrms (Typical)
Ripple (20Hz~20MHz)	Current(RMS)	≤ 9mA <sub>rms</sub>	≤ 7mA <sub>rms</sub>
Setup temperature coefficient ± (% of Output+Offset) / °C	Voltage	0.002% + 0.4mV	0.002% + 1mV
	Current	0.005% + 1.5mA	0.005% + 0.6mA
Readback temperature coefficient ± (% of Output+Offset) / °C	Voltage	0.002% + 0.4mV	0.002% + 1mV
	Current	0.005% + 1.5mA 0.005% + 1μA <sup>*4</sup>	0.005% + 0.6mA 0.005% + 1μA <sup>*4</sup>
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 <sup>*5</sup>	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/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

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

\*All specifications are subject to change without notice.