N36300 Series High Performance Benchtop Programmable DC Power Supply

Product Introduction

N36300 series is a DC power supply with desktop design, high performance and high power density. It offers high-speed dynamic response, precise output and measurement, and supports multiple communication options. Housed in a 2U height ½19-inch width chassis, the N36300 series ensures accurate, reliable, and efficient testing for lab, system integration, and production applications.

Application Fields

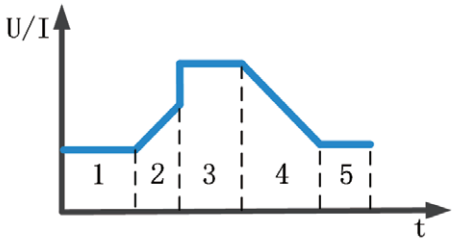
- R&D, design and verification
- ATE Testing System
- Aerospace Electronic
- Battery Application
- Automotive Electronic
- Consumer Electronics and Industrial Electronic Device

Main Features

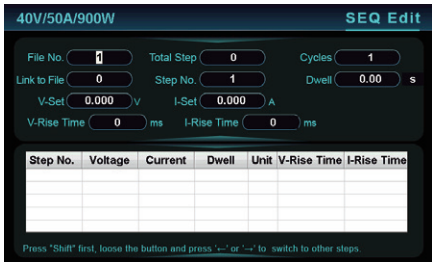
- Desktop design, supporting front and rear panel output
- Wide output range, one unit replaces multiple power supplies
- High-speed dynamic response, voltage rise/fall time ≤ 10ms
- Voltage Accuracy: 0.03% + 0.02% F.S.
- Current Accuracy: 0.1% + 0.1% F.S.
- Adjustable voltage/current slopes for diverse requirements
- Support car wave simulation
- CC & CV priority
- Standard with SEQ test, Charge test and SR etc.
- ½ 19-inch 2U Design, for benchtop and integration use
- Support LAN, RS232, RS485, CAN communication control
- Support Modbus-RTU/SCPI/CANopen communication protocol
- 4.3-inch HD Color Screen, with local/remote control, dedicated software included

SEQ mode for test sequences

N36300 supports complex waveforms, storing up to 10 sequences and 1000 steps for long-term verification and waveform testing. Test Edit with total steps, cycle times, link to file, step No., voltage, current, and dwell.



SEQ Mode



SEQ Edit

CC&CV priority function

N36300 has the function of selecting priority of voltage-control loop or current-control loop, which enables N36300 to adopt the optimal test mode for different DUTs, and thus protect the DUT.

As shown in figure one, when the DUT requires reducing voltage overshoot during test, such as supplying power to a low-voltage processor or FPGA core, voltage priority mode should be selected to obtain fast and smooth rise voltage.

As shown in figure two, when the DUT requires reducing current overshoot during test, or when the DUT is with low impedance, such as battery charging scenario, current priority mode should be selected to obtain fast and smooth rise current.

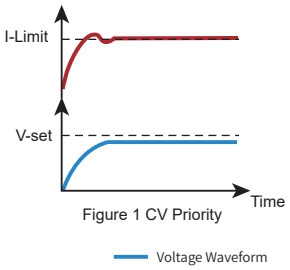


Figure 1 CV Priority

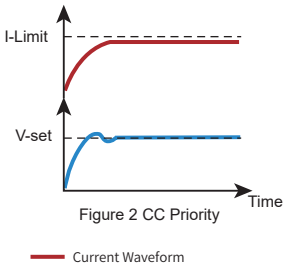


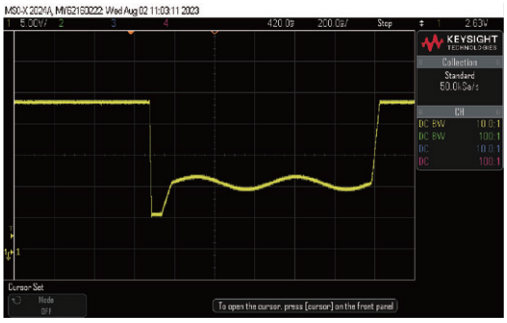
Figure 2 CC Priority

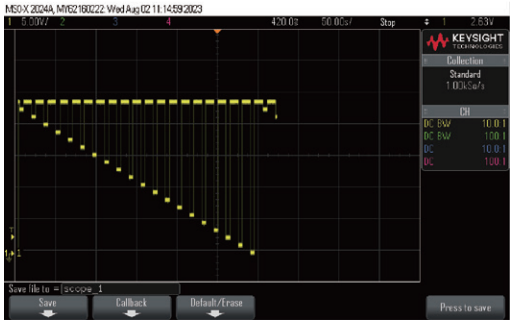
Voltage Waveform Current Waveform

Car waveform simulation for electronics performance test

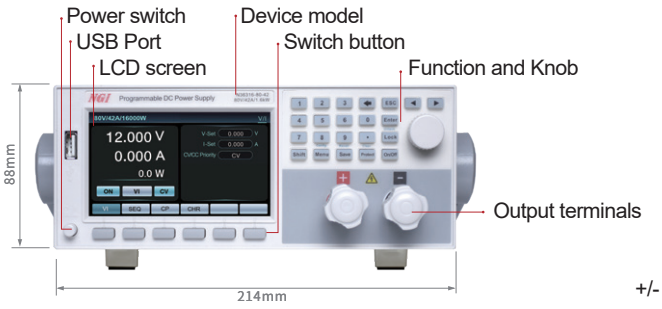
With the application of automotive electronics increasing every year, car manufacturers have formulated relevant test specifications, which focus on testing the immunity of electronic equipment to interference under certain scenarios of power transients, so that when designing automotive electronic hardware, it is important to set protections to avoid the effects of extreme situations.

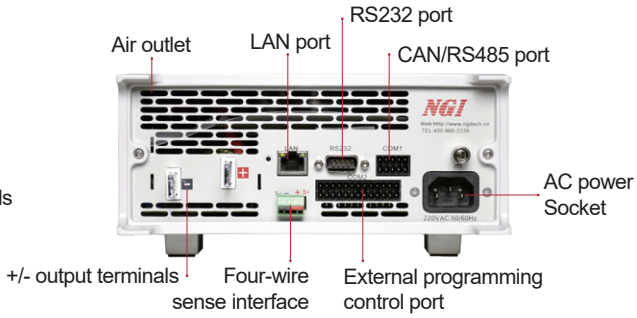
N36300 series can be standard with car waveform simulation, including car start-up waveform, car short-time voltage drop waveform, load dump waveform, car voltage reset test Waveform etc., meeting ISO16750-2, LV124 and other standards, used for electronics electric performance test.

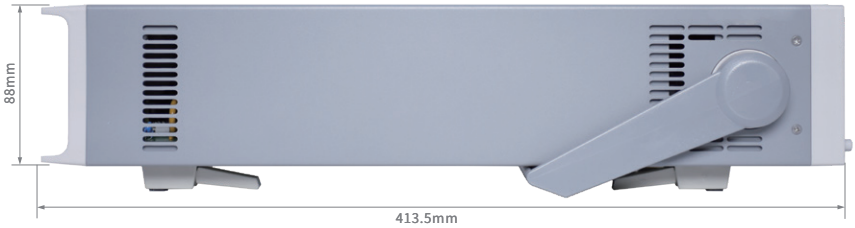




Product Dimension







Technical Data Sheet

Model		N36309-40-50	N36316-80-42
Rated Value	Voltage	0~40V	0~80V
	Current	0~50A	0~42A
	Power	900W	1600W
Channels		1CH	
CV Mode			
Range		0~40V	0~80V
Setting Resolution		1mV	
Setting Accuracy (23±5°C)		≤0.03%+0.02%F.S.	
Voltage Ripple(20Hz-20MHz)		≤40mVp-p	≤80mVp-p
CC Mode			
Range		0~50A	0~42A
Setting Resolution		1mA	
Setting Accuracy (23±5°C)		≤0.1%+0.1%F.S.	
Current Ripple(20Hz-5MHz)		≤50mArms	
CP Mode			
Range		900W	1600W
Setting Resolution		0.01W	0.1W
Setting Accuracy (23±5°C)		0.5%F.S.	
Voltage Measurement			
Range		0~40V	0~80V
Readback Resolution		1mV	
Readback Accuracy (23±5°C)		≤0.03%+0.02%F.S.	
Current Measurement			
Range		0~50A	0~42A
Readback Resolution		1mA	
Readback Accuracy (23±5°C)		≤0.1%+0.1%F.S.	
Line Regulation			
Voltage		<0.02%F.S.	Current <0.05%F.S.
Load Regulation			
Voltage		<0.05%F.S.	Current <0.05%F.S.
Dynamic Characteristics			
Voltage Rise Time(no load)		≤10ms	
Voltage Rise Time(full load)		≤10ms	
Voltage Fall Time(no load)		≤25ms	≤300ms
Voltage Fall Time(full load)		≤10ms	
Transient Recovery Time		The output voltage recovering within 0.5% of the rated output voltage value（10%~90% load)≤2ms	
Others			
Isolation(Output to Ground)		500V DC	
Max. Efficiency		91%	90.5%
Power Factor		0.99	
Interface		LAN/RS232/RS485/CAN	
Communication Response Time		≤5ms	
AC Input		220V AC±10%,47Hz~63Hz,≤10A	220V AC±10%,47Hz~63Hz,≤16A
Temperature		Operating temperature: 0°C~40°C, storage temperature: -10°C~70°C	
Operating Environment		Altitude <2000m, relative humidity: 5%~90%RH(non-condensing), atmospheric pressure: 80~110kPa	
Net Weight		Approx. 5kg	Approx. 8kg
Dimension		88.0(H)*214.0(W)*413.5(D)mm, with output shield	88.0(H)*214.0(W)*455.0(D)mm, with output shield

Note 1: For other specifications, please contact NGI.
Note 2: All specifications are subject to change without notice.