

## N36100 Series Wide Range Programmable DC Power Supply



### Product Introduction

N36100 series is a DC power supply with ultra compact size, high performance and high power density. The 1U height and half 19-inch width design brings comfortable experience with space-saving in both standalone and integrated cabinet. Maximum output power of N36100 is 900W. In view of test characteristics of different fields such as laboratory test, system integration test and large-scale production line test, N36100 series adopts wide range designs to meet the needs of different application scenarios.

### Application Fields

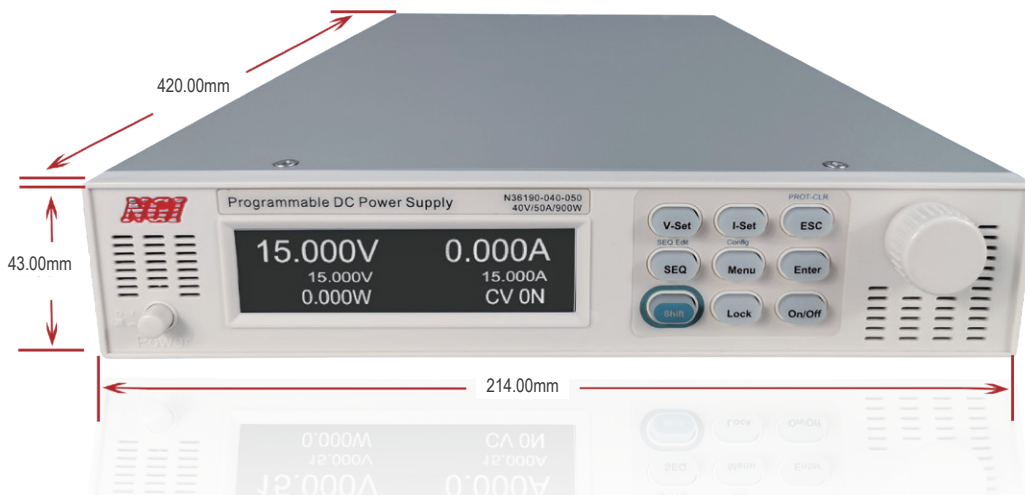
- ▶ R&D laboratory
- ▶ Automotive and avionics
- ▶ ATE test system
- ▶ Small DC motor
- ▶ Industrial DC/DC converter

### Main Features

- ▶ 1U height + half 19-inch width, wide range and high power density
- ▶ Maximum output power: 900W
- ▶ Multiple protections: OVP, OCP, OPP, OTP and short circuit
- ▶ CC&CV priority function
- ▶ Supporting battery charging test and internal resistance simulation function
- ▶ SEQ test function
- ▶ Multiple communication interfaces: LAN/CAN/RS232/RS485
- ▶ Auto run function after startup, editable run delay time
- ▶ Remote sense
- ▶ External analog programming control
- ▶ Modular design, convenient for multi channels combination

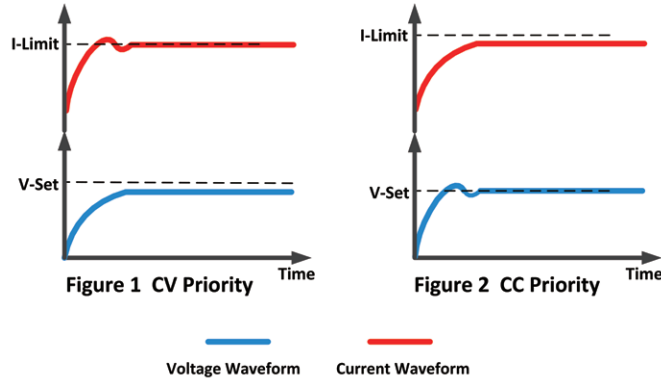
### Ultra-compact size, high performance

N36100 series is only 1U and half 19 inch. However, its maximum output power is up to 900W. It has multiple test functions, multiple protection and wide range, which enables N36100 to be used in different applications.



## CC&CV priority function

N36100 has the function of selecting priority of voltage-control loop or current-control loop, which enables N36100 to adopt the optimal test mode for different DUTs, and thus protect the DUT.

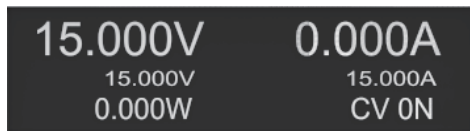


As shown in figure one, when the DUT requires reducing voltage overshoot during test, such as supplying power to a low-voltage processor or FPGA core, voltage priority mode should be selected to obtain fast and smooth rise voltage.

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.

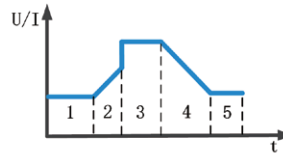
## OLED screen

OLED screen has the advantages of compact size, low power consumption, high brightness and high luminous efficiency.



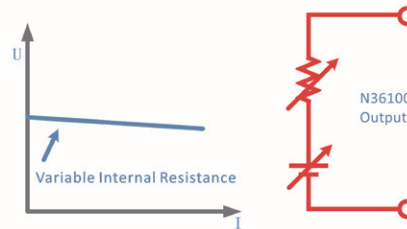
## SEQ test function

N36100's SEQ function supports up to 200 steps. It allows settings of output voltage, output current and dwell time for single step.

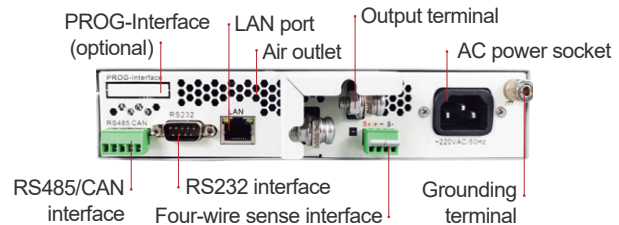
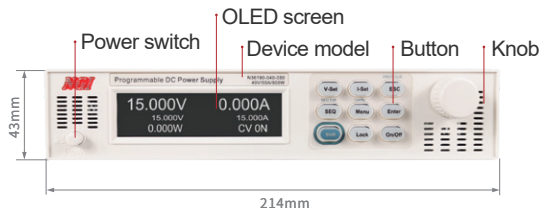


## Internal resistance simulation

N36100 series allows settings of voltage and internal resistance value. According to the corresponding output current, the output voltage is decreased with the set resistance. In this case, the internal resistance of secondary battery, fuel cell and supercapacitor can be simply simulated.



## Product Dimension



## Technical Data Sheet(1)

Model	N36150-40-50	N36150-80-25	N36150-150-12	N36150-300-8
Voltage	40V	80V	150V	300V
Current	50A	25A	12A	8A
Power	500W			
Channels	1CH			
Setting Resolution-Voltage	1mV		10mV	
Setting Resolution-Current	1mA			
Setting Accuracy-Voltage (23±5°C)	0.05%+0.05%F.S.			
Setting Accuracy-Current (23±5°C)	0.1%+0.1%F.S.			
Setting Temperature Coefficient	50ppm/°C			
Readback Resolution-Voltage	1mV		10mV	
Readback Resolution-Current	1mA			
Readback Accuracy-Voltage (23±5°C)	0.05%+0.05%F.S.			
Readback Accuracy-Current (23±5°C)	0.1%+0.1%F.S.			
Readback Temperature Coefficient	50ppm/°C			
Long-term Stability	≤50ppm/1000h			
Voltage Ripple Noise (20Hz-20MHz)	≤100mVp-p	≤150mVp-p	≤150mVp-p	≤200mVp-p
Dynamic Characteristics				
Voltage Rise Time (no load) (10%-90%F.S. Variation Time)	≤100ms			
Voltage Rise Time (full load) (10%-90%F.S. Variation Time)	≤300ms	≤300ms	≤500ms	≤600ms
Voltage Fall Time (no load) (90%-10%F.S. Variation Time)	≤200ms	≤200ms	≤400ms	≤500ms
Voltage Fall Time (full load) (90%-10%F.S. Variation Time)	≤50ms	≤50ms	≤50ms	≤100ms
Transient Recovery Time	≤20ms			
Line Regulation-Voltage	≤0.05%			
Line Regulation-Current	≤0.1%			
Load Regulation-Voltage	≤0.05%			
Load Regulation-Current	≤0.1%			
Others				
Isolation (Output to Ground)	1000V DC			
Communication Response Time	≤10ms			
Interface	LAN/RS232/RS485/CAN			
AC Input	Single phase, 220V AC±10%, frequency 47Hz~63Hz			
Temperature	Operating temperature: 0°C~40°C, storage temperature: -20°C~60°C			
Operating Environment	Altitude <2000m, relative humidity: 5%~90%RH(non-condensing), atmospheric pressure: 80~110kPa			
Net Weight	Approx. 3kg			
Dimension	1U, 43.00(H)*214.00(W)*420.00(D)mm			

Note 1: For other specifications, please contact NGI.

Note 2: All specifications are subject to change without notice.

**Technical Data Sheet(2)**

Model	N36190-40-50	N36190-80-25	N36190-150-12	N36190-300-8
Voltage	40V	80V	150V	300V
Current	50A	25A	12A	8A
Power	900W			
Channels	1CH			
Setting Resolution-Voltage	1mV		10mV	
Setting Resolution-Current	1mA			
Setting Accuracy-Voltage (23±5°C)	0.05%+0.05%F.S.			
Setting Accuracy-Current (23±5°C)	0.1%+0.1%F.S.			
Setting Temperature Coefficient	50ppm/°C			
Readback Resolution-Voltage	1mV		10mV	
Readback Resolution-Current	1mA			
Readback Accuracy-Voltage (23±5°C)	0.05%+0.05%F.S.			
Readback Accuracy-Current (23±5°C)	0.1%+0.1%F.S.			
Readback Temperature Coefficient	50ppm/°C			
Long-term Stability	≤50ppm/1000h			
Voltage Ripple Noise (20Hz-20MHz)	≤100mVp-p	≤150mVp-p	≤150mVp-p	≤200mVp-p
<b>Dynamic Characteristics</b>				
Voltage Rise Time (no load) (10%-90%F.S. Variation Time)	≤100ms			
Voltage Rise Time (full load) (10%-90%F.S. Variation Time)	≤300ms	≤300ms	≤500ms	≤600ms
Voltage Fall Time (no load) (90%-10%F.S. Variation Time)	≤200ms	≤200ms	≤400ms	≤500ms
Voltage Fall Time (full load) (90%-10%F.S. Variation Time)	≤50ms	≤50ms	≤50ms	≤100ms
Transient Recovery Time	≤20ms			
Line Regulation-Voltage	≤0.05%			
Line Regulation-Current	≤0.1%			
Load Regulation-Voltage	≤0.05%			
Load Regulation-Current	≤0.1%			
<b>Others</b>				
Isolation (Output to Ground)	1000V DC			
Communication Response Time	≤10ms			
Interface	LAN/RS232/RS485/CAN			
AC Input	Single phase, 220V AC±10%, frequency 47Hz~63Hz			
Temperature	Operating temperature: 0°C~40°C, storage temperature: -20°C~60°C			
Operating Environment	Altitude <2000m, relative humidity: 5%~90%RH(non-condensing), atmospheric pressure: 80~110kPa			
Net Weight	Approx. 3kg			
Dimension	1U, 43.00(H)*214.00(W)*420.00(D)mm			

Note 1: For other specifications, please contact NGI.

Note 2: All specifications are subject to change without notice.