

N6200 Series Wide Range Medium Power DC Electronic Load



Product Introduction

N6200 series is a programmable DC electronic load with high accuracy, high reliability and high cost performance. With multiple functions, such as CC/C/CP/CR, SEQ test, dynamic test, discharging test, charging test, DCIR test, MPPT, OCP test, short circuit simulation and so on. It supports local control via screen&button and remote control on PC. It is with built-in LAN port, CAN port and RS232 interface. N6200 series is designed in a 19 inch 2U chassis, which is available for benchtop use or installation in 19 inch rack.

Application Fields

Medium power supplies, battery packs, electric tools, BMS, supercapacitors, etc.

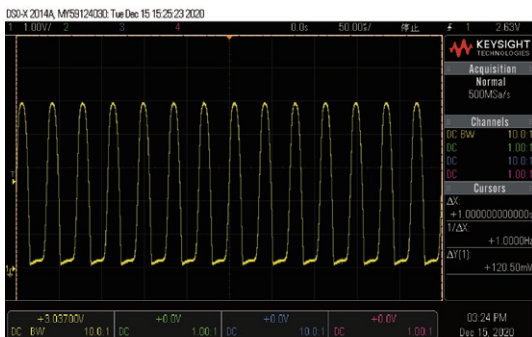
Main Features

- ▶ Power range: 0-600W/0-1200W/0-1800W
- ▶ Voltage range: 0-60V/0-150V/0-600V
- ▶ Current range: 0-50A/0-100A/0-150A
- ▶ Operation mode: CC, CV, CP, CR
- ▶ Stable and reliable CR/CP function supported by hardware
- ▶ Supporting LAN/RS232/CAN communication and SCPI commands
- ▶ Programmable sequence test function(SEQ), up to 100 groups sequence files, up to 50 steps per file
- ▶ Analog programming interface(APG), current monitoring interface, remote/local trigger function
- ▶ Built-in DCIR test function (Optional)
- ▶ Editable rise and fall slew rate
- ▶ Supporting charge & discharge test, OCP test
- ▶ CV, CC, CR dual range
- ▶ Supporting MPPT function
- ▶ Short-circuit simulation, Von/Voff function available

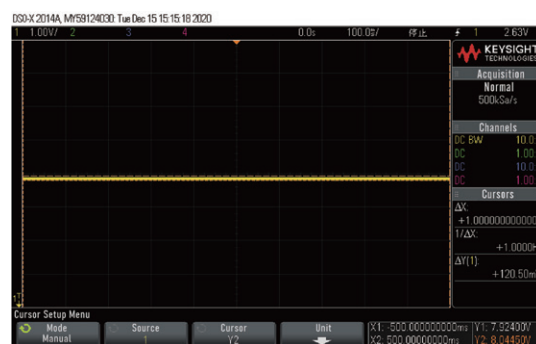
Adjustable CV loop feedback speed

Different voltage response speeds are required in different power applications. When the electronic load does not match with the power supply in response speed, it will cause parameter fluctuation, reduce the measuring accuracy, and even cause numerical oscillation and unsuccessful test.

On both LCD and application software, N6200 provides three options for voltage response speed: high, medium and low, which can match various power supplies. It can not only improve the test efficiency but also reduce the cost of equipment, time and expenses.



▶ Common Load Performance-Self-excitation



▶ NGI Load Performance-Stable Waveform

Equivalent DC internal resistance(Optional)

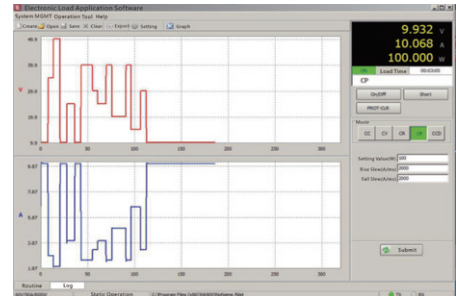
DCIR is a principal parameter of battery or supercapacitor. N6200 series offers professional DCIR measurement function, which can support multiple measurement standards, and possess the advantages of accurate results and stable repeated results.

The DCIR measurement function absorbs current from the DUT under CC mode. When the current changes, the NGI internal resistance sensing circuit can accurately capture the voltage drop of DUT and calculate DCIR value.

CR/CP function supported by hardware

NGI CP circuit has fast response and high accuracy. Compared with CP function by software, it works more stably and reliably without causing power peak or self-excitation due to voltage transient.

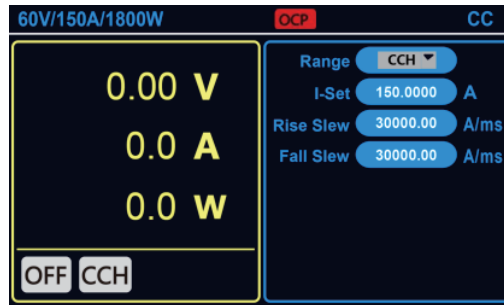
NGI CR circuit can improve the speed and stability of the control loop and prevent the loop from self-excitation, without participation of software for calculation.



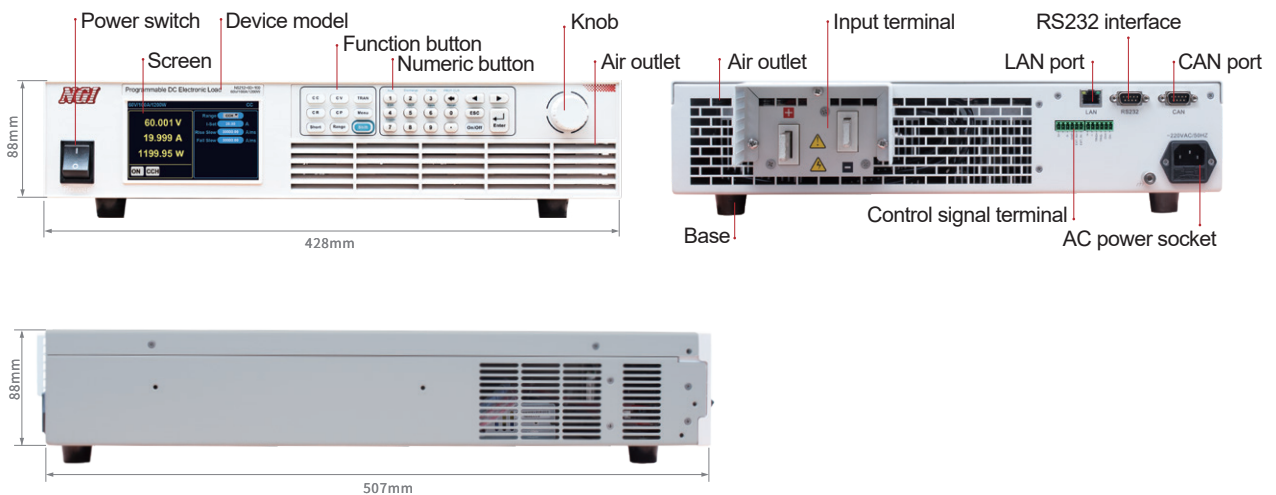
▲ CP by Hardware with Fast Response

Protection function

N6200 series with OCP/OVP/OPP/OTP function. When the input current/voltage/power is higher than the setting value, the corresponding protection will be triggered, and at this time the interface alarm prompts OCP/OVP/OPP/OTP, which can effectively prevent damage to equipment and test instruments when the current/voltage/power/equipment temperature in the circuit exceeds the set value.



Product Dimension



DC Electronic Load

Technical Data Sheet(1)

Model	N6206-60-10		N6206-60-50		N6206-150-50		N6206-600-10	
Voltage	60V		60V		150V		600V	
Current	10A		50A		50A		10A	
Power	600W							
Min. Operating Voltage	2V@10A		2V@50A		2V@50A		4.5V@10A	
CC Mode								
Range	0~1A	0~10A	0~5A	0~50A	0~5A	0~50A	0~1A	0~10A
Setting Resolution	0.1mA	1mA	0.1mA	1mA	0.1mA	1mA	0.1mA	1mA
Setting Accuracy (23±5°C)	Low range:0.1%+0.1%F.S., High range:0.1%+0.15%F.S.							
CV Mode								
Range	0~6V	0~60V	0~6V	0~60V	0~15V	0~150V	0~60V	0~600V
Setting Resolution	0.1mV	1mV	0.1mV	1mV	1mV	10mV	1mV	10mV
Setting Accuracy (23±5°C)	0.05%+0.1%F.S.							
CP Mode								
Range	0~600W							
Setting Resolution	10mW							
Setting Accuracy (23±5°C)	0.5%+1%F.S.							
CR Mode								
Range	0.12 ~ 600Ω	2.3Ω~6000Ω	0.03 ~ 120Ω	0.5Ω~1200Ω	0.06Ω~300Ω	1.2Ω~3000Ω	1.12Ω~6000Ω	22.4Ω~60000Ω
Setting Resolution	16bits							
Setting Accuracy (23±5°C)	0.35%+0.5mS	0.35%+0.05mS	0.35%+2.7mS	0.35%+0.27mS	0.35%+1.1mS	0.35%+0.11mS	0.35%+0.1mS	0.35%+0.01mS
Slew Rate								
Current	0.1~10A/ms	10~500A/ms	0.8~50A/ms	50~2500A/ms	0.8~50A/ms	50~2500A/ms	0.1~10A/ms	10~500A/ms
Voltage	0.5~25V/ms	25~250V/ms	0.5~25V/ms	25~250V/ms	10~60V/ms	60~600V/ms	5.0~250V/ms	250~2500V/ms
Power	0.1~10A/ms	10~500A/ms	0.8~50A/ms	50~2500A/ms	0.8~50A/ms	50~2500A/ms	0.1~10A/ms	10~500A/ms
Resistance	0.1~10A/ms	10~500A/ms	0.8~50A/ms	50~2500A/ms	0.8~50A/ms	50~2500A/ms	0.1~10A/ms	10~500A/ms
Accuracy (23±5°C)	(1±35%)*Setting value							
Voltage Measurement								
Range	0~6V	0~60V	0~6V	0~60V	0~15V	0~150V	0~60V	0~600V
Readback Accuracy (23±5°C)	0.05%+0.05%F.S.							
Current Measurement								
Range	0~1A	0~10A	0~5A	0~50A	0~5A	0~50A	0~1A	0~10A
Readback Accuracy (23±5°C)	0.1%+0.1%F.S.							
Power Measurement								
Range	0~600W							
Readback Accuracy (23±5°C)	0.5%+1%F.S.							
Dynamic Mode								
T1&T2	1~60000ms							
Resolution	1ms							
Accuracy (23±5°C)	1ms+100ppm							
Others								
Interface	LAN/RS232/CAN							
AC Input	Single phase, 220V AC±10%, frequency 47Hz~63Hz							
Communication Response Time	≤10ms							
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. 12.7kg							
Dimension	2U, 88.0(H)*482.0(W)with handle*507.0(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	N6212-60-100		N6212-150-100		N6212-600-20	
Voltage	60V		150V		600V	
Current	100A		100A		20A	
Power	1200W					
Min. Operating Voltage	2V@100A		2V@100A		4.5V@20A	
CC Mode						
Range	0~10A	0~100A	0~10A	0~100A	0~2A	0~20A
Setting Resolution	1mA	10mA	1mA	10mA	0.1mA	1mA
Setting Accuracy (23±5°C)	Low range:0.1%+0.1%F.S., High range:0.1%+0.15%F.S.					
CV Mode						
Range	0~6V	0~60V	0~15V	0~150V	0~60V	0~600V
Setting Resolution	0.1mV	1mV	1mV	10mV	1mV	10mV
Setting Accuracy (23±5°C)	0.05%+0.1%F.S.					
CP Mode						
Range	0~1200W					
Setting Resolution	10mW					
Setting Accuracy (23±5°C)	0.5%+1%F.S.					
CR Mode						
Range	0.02 ~ 60Ω	0.3Ω~600Ω	0.03 ~ 150Ω	0.6Ω~1500Ω	0.56Ω~3000Ω	11.2Ω~30000Ω
Setting Resolution	16bits					
Setting Accuracy (23±5°C)	0.35%+5.3mS	0.35%+0.53mS	0.35%+2.1mS	0.35%+0.21mS	0.35%+0.1mS	0.35%+0.01mS
Slew Rate						
Current	1.6~100A/ms	100~5000A/ms	1.6~100A/ms	100~5000A/ms	0.3~20A/ms	20~1000A/ms
Voltage	0.5~25V/ms	25~250V/ms	10~60V/ms	60~600V/ms	5.0~250V/ms	250~2500V/ms
Power	1.6~100A/ms	100~5000A/ms	1.6~100A/ms	100~5000A/ms	0.3~20A/ms	20~1000A/ms
Resistance	1.6~100A/ms	100~5000A/ms	1.6~100A/ms	100~5000A/ms	0.3~20A/ms	20~1000A/ms
Accuracy (23±5°C)	(1±35%)*Setting value					
Voltage Measurement						
Range	0~6V	0~60V	0~15V	0~150V	0~60V	0~600V
Readback Accuracy (23±5°C)	0.05%+0.05%F.S.					
Current Measurement						
Range	0~10A	0~100A	0~10A	0~100A	0~2A	0~20A
Readback Accuracy (23±5°C)	0.05%+0.1%F.S.					
Power Measurement						
Range	0~1200W					
Readback Accuracy (23±5°C)	0.5%+1%F.S.					
Dynamic Mode						
T1&T2	1~60000ms					
Resolution	1ms					
Accuracy (23±5°C)	1ms+100ppm					
Others						
Interface	LAN/RS232/CAN					
AC Input	Single phase, 220V AC±10%, frequency 47Hz~63Hz					
Communication Response Time	≤10ms					
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. 14.4kg					
Dimension	2U, 88.0(H)*482.0(W)with handle*507.0(D)mm					

Note 1: For other specifications, please contact NGI.

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

Technical Data Sheet(3)

Model	N6218-60-150		N6218-150-150		N6218-600-30	
Voltage	60V		150V		600V	
Current	150A		150A		30A	
Power			1800W			
Min. Operating Voltage	2V@150A		2V@150A		4.5V@30A	
CC Mode						
Range	0~15A	0~150A	0~15A	0~150A	0~3A	0~30A
Setting Resolution	1mA	10mA	1mA	10mA	0.1mA	1mA
Setting Accuracy (23±5°C)	Low range:0.1%+0.1%F.S., High range:0.1%+0.15%F.S.					
CV Mode						
Range	0~6V	0~60V	0~15V	0~150V	0~60V	0~600V
Setting Resolution	0.1mV	1mV	1mV	10mV	1mV	10mV
Setting Accuracy (23±5°C)	0.05%+0.1%F.S.					
CP Mode						
Range	0~1800W					
Setting Resolution	10mW					
Setting Accuracy (23±5°C)	0.5%+1%F.S.					
CR Mode						
Range	0.01 ~ 40Ω	0.2Ω~400Ω	0.02 ~ 100Ω	0.4Ω~1000Ω	0.38Ω~2000Ω	7.5Ω~20000Ω
Setting Resolution	16bits					
Setting Accuracy (23±5°C)	0.35%+8mS	0.35%+0.8mS	0.35%+3.2mS	0.35%+0.32mS	0.35%+0.2mS	0.35%+0.02mS
Slew Rate						
Current	2.5~150A/ms	150~7500A/ms	2.5~150A/ms	150~7500A/ms	0.5~30A/ms	30~1500A/ms
Voltage	0.5~25V/ms	25~250V/ms	10~60V/ms	60~600V/ms	5.0~250V/ms	250~2500V/ms
Power	2.5~150A/ms	150~7500A/ms	2.5~150A/ms	150~7500A/ms	0.5~30A/ms	30~1500A/ms
Resistance	2.5~150A/ms	150~7500A/ms	2.5~150A/ms	150~7500A/ms	0.5~30A/ms	30~1500A/ms
Accuracy (23±5°C)	(1±35%)*Setting value					
Voltage Measurement						
Range	0~6V	0~60V	0~15V	0~150V	0~60V	0~600V
Readback Accuracy (23±5°C)	0.05%+0.05%F.S.					
Current Measurement						
Range	0~15A	0~150A	0~15A	0~150A	0~3A	0~30A
Readback Accuracy (23±5°C)	0.05%+0.1%F.S.					
Power Measurement						
Range	0~1800W					
Readback Accuracy (23±5°C)	0.5%+1%F.S.					
Dynamic Mode						
T1&T2	1~60000ms					
Resolution	1ms					
Accuracy (23±5°C)	1ms+100ppm					
Others						
Interface	LAN/RS232/CAN					
AC Input	Single phase, 220V AC±10%, frequency 47Hz~63Hz					
Communication Response Time	≤10ms					
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. 16.1kg					
Dimension	2U, 88.0(H)*482.0(W)with handle*507.0(D)mm					

Note 1: For other specifications, please contact NGI.

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