

Datenblatt *data sheet*



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N62400 Series Low Voltage High Current DC Electronic Load



Product Introduction

N62400 series is developed based on NGI's years of experience in testing for fuel cell. It is with high accuracy, high reliability and high cost performance. N62400 can load high current under ultra-low voltage. The minimum operating voltage when loading 1200A can be low to 0.2V. It is designed in a 19 inch 3U chassis, which is available for benchtop use or installation in 19 inch rack.

Application Fields

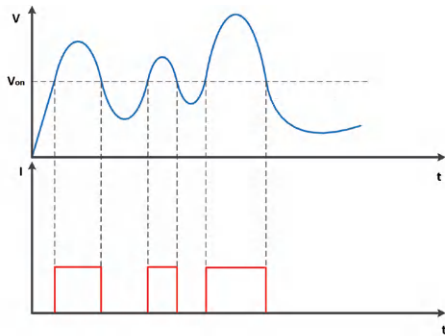
- ▶ Fuel cell test
- ▶ Other low voltage & high current applications

Main Features

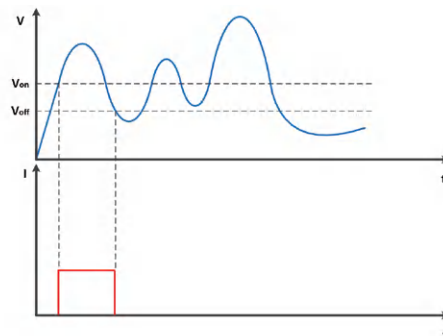
- ▶ Power range: 0-6000W
- ▶ Voltage range: 0-40V
- ▶ Current range: 0-1200A
- ▶ Min. operating voltage as low as 0.2V when loading current 1200A
- ▶ Operation mode: CC, CV, CP, CR
- ▶ Stable and reliable CR/CP function supported by hardware
- ▶ Programmable sequence test function(SEQ), up to 100 groups sequence files, up to 50 steps per file
- ▶ Analog programming interface(APG), current monitoring interface, remote/local trigger function
- ▶ Editable rise and fall slew rate
- ▶ Supporting LAN/RS232/CAN communication
- ▶ Supporting charge & discharge test, OCP test
- ▶ Editable Von/Voff function
- ▶ Built-in ESR test function (Optional)
- ▶ Short-circuit simulation

Settable Von/Voff

The Von latch function has two modes to meet your various test needs: enabled and disabled.



- ▲ Disabled: When the input voltage is higher than V_{on} , N62400 starts to sink current. When the input voltage is lower than V_{on} , it stops sinking current.



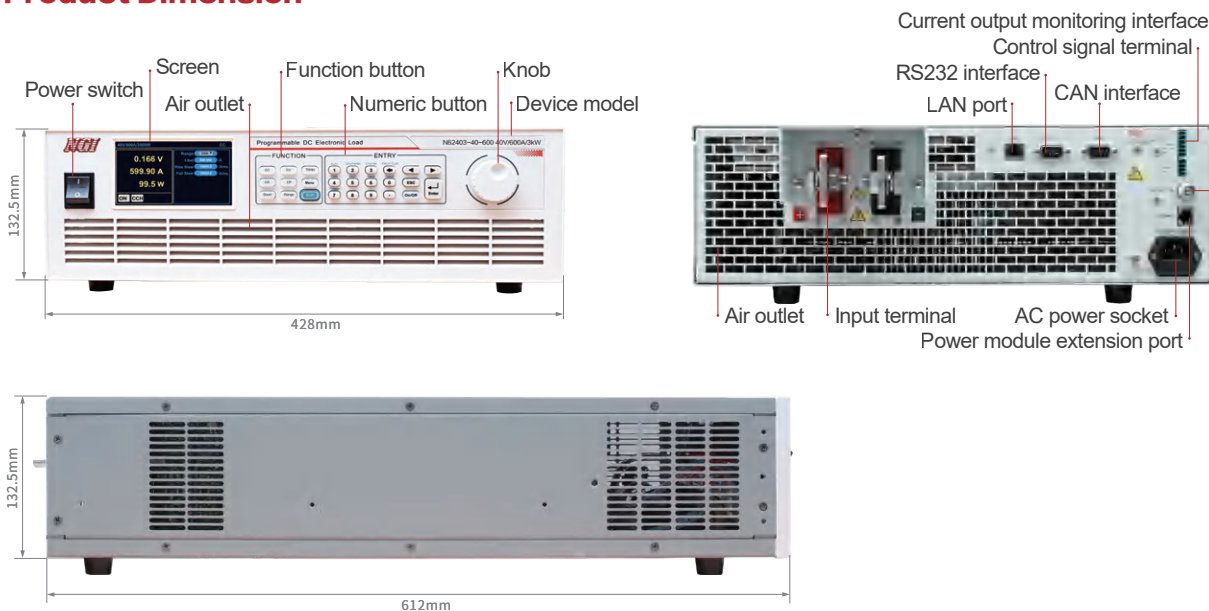
- ▲ Enabled: When the input voltage is higher than V_{on} , N62400 starts to sink current. When the input voltage is lower than V_{off} , N62400 stops sinking current. After that, it will not sink current automatically even the input voltage is higher than V_{on} again.

Loading current at ultra-low voltage

The output voltage of a single fuel cell gradually decreases as the current increases, which requires the test equipment to be able to load high current at ultra-low voltage. N62400 3U standalone supports a maximum input of 600A, and the minimum operating voltage is 0.2V@600A, which can realize the characteristic test for almost all voltage points in the single fuel cell test process, and can fully display the current of fuel cell in the entire voltage range, so as to provide sufficient data for the performance study of fuel cells.



Product Dimension



Technical Data Sheet(1)

Model	N62401-40-200		N62402-40-400		N62403-40-600	
Voltage	40V		40V		40V	
Current	200A		400A		600A	
Power	1000W		2000W		3000W	
Min. Operating Voltage	0.1V@100A	0.2V@200A	0.1V@200A	0.2V@400A	0.1V@300A	0.2V@600A
CC Mode						
Range	0~20A	0~200A	0~40A	0~400A	0~60A	0~600A
Setting Resolution	1mA	10mA	1mA	10mA	1mA	10mA
Setting Accuracy (23±5°C)	Low range: 0.1%+0.1%F.S., High range: 0.1%+0.15%F.S.					
CV Mode						
Range	0~4V	0~40V	0~4V	0~40V	0~4V	0~40V
Setting Resolution	0.1mV	1mV	0.1mV	1mV	0.1mV	1mV
Setting Accuracy (23±5°C)	0.05%+0.05%F.S.					
CP Mode						
Range	0~1000W		0~2000W		0~3000W	
Setting Resolution	0.1W					
Setting Accuracy (23±5°C)	0.5%+1%F.S.					
CR Mode						
Range	0.004Ω~20Ω	0.08Ω~200Ω	0.002Ω~10Ω	0.04Ω~100Ω	0.002Ω~6.6Ω	0.03Ω~66Ω
Setting Resolution	16bits					
Setting Accuracy (23±5°C)	0.35%+0.156S	0.35%+15.6mS	0.35%+0.312S	0.35%+31.2mS	0.35%+0.468S	0.35%+46.8mS
Slew Rate						
Current	3.3~200A/ms	200~1000A/ms	6.6~400A/ms	400~2000A/ms	10~600A/ms	600~3000A/ms
Voltage	0.334~16.7V/ms	16.7~166.7V/ms	0.334~16.7V/ms	16.7~166.7V/ms	0.334~16.7V/ms	16.7~166.7V/ms
Power	3.3~200A/ms	200~1000A/ms	6.6~400A/ms	400~2000A/ms	10~600A/ms	600~3000A/ms
Resistance	3.3~200A/ms	200~1000A/ms	6.6~400A/ms	400~2000A/ms	10~600A/ms	600~3000A/ms
Accuracy (23±5°C)	(1±35%) * Setting value					
Voltage Measurement						
Range	0~4V	0~40V	0~4V	0~40V	0~4V	0~40V
Readback Accuracy (23±5°C)	0.05%+0.05%F.S.					
Current Measurement						
Range	0~20A	0~200A	0~40A	0~400A	0~60A	0~600A
Readback Accuracy (23±5°C)	0.1%+0.1%F.S.					
Power Measurement						
Range	0~1000W		0~2000W		0~3000W	
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 Temperature	Altitude <2000m, relative humidity: 5%~90%RH(non-condensing), atmospheric pressure: 80~110kPa					
Net Weight	Approx. 20 kg		Approx. 24 kg			
Dimension	3U,132.5(H)*482.0(W)with handle*612.0(D)mm Approx. 28 kg					

Note 1: For other specifications, please contact us.

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

Technical Data Sheet(2)

Model	N62404-40-800		N62405-40-1000		N62406-40-1200	
Voltage	40V		40V		40V	
Current	800A		1000A		1200A	
Power	4000W		5000W		6000W	
Min. Operating Voltage	0.1V@400A	0.2V@800A	0.1V@500A	0.2V@1000A	0.1V@600A	0.2V@1200A
CC Mode						
Range	0~80A	0~800A	0~100A	0~1000A	0~120A	0~1200A
Setting Resolution	1mA	10mA	10mA	100mA	10mA	100mA
Setting Accuracy (23±5°C)	Low range: 0.1%+0.1%F.S., High range: 0.1%+0.15%F.S.					
CV Mode						
Range	0~4V	0~40V	0~4V	0~40V	0~4V	0~40V
Setting Resolution	0.1mV	1mV	0.1mV	1mV	0.1mV	1mV
Setting Accuracy (23±5°C)	0.05%+0.05%F.S.					
CP Mode						
Range	0~4000W		0~5000W		0~6000W	
Setting Resolution	0.1W					
Setting Accuracy (23±5°C)	0.5%+1%F.S.					
CR Mode						
Range	0.001Ω~5Ω	0.02Ω~50Ω	0.001Ω~4Ω	0.02Ω~40Ω	0.001Ω~3.3Ω	0.02Ω~33.3Ω
Setting Resolution	16bits					
Setting Accuracy (23±5°C)	0.35%+0.625S	0.35%+62.5mS	0.35%+0.781S	0.35%+78.1mS	0.35%+0.937S	0.35%+93.7mS
Slew Rate						
Current	13.3~800A/ms	800~4000A/ms	16.7~1000A/ms	1000~5000A/ms	20~1200A/ms	1200~6000A/ms
Voltage	0.334~16.7V/ms	16.7~166.7V/ms	0.334~16.7V/ms	16.7~166.7V/ms	0.334~16.7V/ms	16.7~166.7V/ms
Power	13.3~800A/ms	800~4000A/ms	16.7~1000A/ms	1000~5000A/ms	20~1200A/ms	1200~6000A/ms
Resistance	13.3~800A/ms	800~4000A/ms	16.7~1000A/ms	1000~5000A/ms	20~1200A/ms	1200~6000A/ms
Accuracy (23±5°C)	(1±35%) * Setting value					
Voltage Measurement						
Range	0~4V	0~40V	0~4V	0~40V	0~4V	0~40V
Readback Accuracy (23±5°C)	0.05%+0.05%F.S.					
Current Measurement						
Range	0~80A	0~800A	0~100A	0~1000A	0~120A	0~1200A
Readback Accuracy (23±5°C)	0.1%+0.1%F.S.					
Power Measurement						
Range	0~4000W		0~5000W		0~6000W	
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 Temperature	Altitude <2000m, relative humidity: 5%~90%RH(non-condensing), atmospheric pressure: 80~110kPa					
Net Weight	Approx. 32kg		Approx. 37kg		Approx. 41kg	
Dimension	6U, 265.0(H)*482.0(W)with handle*612.0(D)mm					

Note 1: For other specifications, please contact us.

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