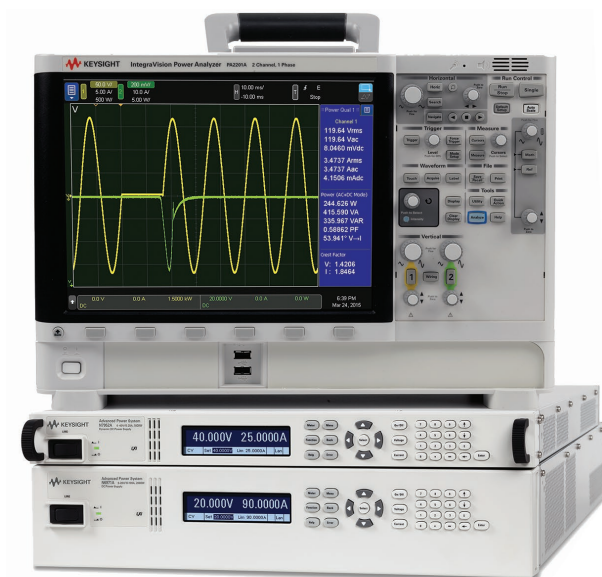


August 2021

Power Products Solutions

A guide to selecting power products to match your test and measurement needs.



Introduction

Power your next insight -

Today, your products are changing the way we all work and play – wearables, electric vehicles, and beyond. For more than 50 years, Keysight system and benchtop DC power supplies have been changing the way engineers prove their design, understand the issues and ensure product quality. On a bench or in a system, our supplies are ready for your application, offering optimal choices in voltage, current, capability and performance. Test with confidence with Keysight – and power your next insight.



PathWave BenchVue Software: Control. Automate. Simplify.

Keysight PathWave BenchVue software for the PC eliminates many of the issues around bench testing. By making it simple to connect, control instruments, and automate test sequences, you can quickly move past the test development phase and access results faster than ever before. Dedicated instrument apps allow you to quickly configure the most commonly used measurements and setups for each instrument family. Rapidly build custom test sequences with the integrated Test Flow app to automate and visualize test results without the need for instrument programming. Powerful BenchVue apps enable you to significantly reduce test development time.

Use PathWave BenchVue apps to:

- Configure the most commonly used controls and measurements from your Keysight instruments
- Visualize multiple measurements simultaneously
- Easily log and export data and screen images in just a few clicks for faster analysis
- Quickly create automated test sequences with minimal instrument knowledge
- Access deeper instrument controls and measurement solutions
- Save time with software that offers multiple instrument apps in one platform

PathWave BenchVue software works with hundreds of Keysight digital multimeters, power supplies, function/waveform generators, spectrum analyzers, data acquisition units, network analyzers, oscilloscopes, power meters, power sensors, electronic loads, universal counters and more – look for the BenchVue enabled icon for compatible products.

Start accelerating your workflow today and download a 30-day trial version at www.keysight.com/find/BenchVue



Look For This Icon

throughout the catalog to identify PathWave BenchVue software enabled products.

Specific PathWave BenchVue software for power products

Software products	Model number	Key features	Link
PathWave BenchVue Power Supply App	BV0003B	Easily set parameters, build automated tests, and visualize power output and voltage/current over time.	https://www.keysight.com/my/en/product/BV0003B/pathwave-benchvue-power-supply-app.html
PathWave BenchVue Electronic Load App	BV0012B	Easily set parameters, build automated tests, and visualize power output and voltage/current over time for better device characterization.	https://www.keysight.com/my/en/product/BV0012B/pathwave-benchvue-electronic-load-app.html
PathWave BenchVue Advanced Power Control and Analysis – Single Instrument Connection	BV9201B	Take full advantage of capabilities built-in to your advance power supply. Characterize voltage and current usage, even generate power arbitrary waveforms. Supported N6705C, N7900 and RP7900 series.	https://www.keysight.com/my/en/product/BV9201B/benchvue-advanced-power-control-analysis-single-instrument-connection.html
PathWave BenchVue Advanced Power Control and Analysis for Multiple Instrument Connections	BV9200B	Take full advantage of capabilities built-in to your advance power supply. Characterize voltage and current usage, even generate power arbitrary waveforms. Control and analyze voltage and current measurements from multiple N6705C, N7900 or RP7900 Series.	https://www.keysight.com/my/en/product/BV9200B/benchvue-advanced-power-control-analysis-for-multiple-instrument-connections.html
PathWave BenchVue Advanced Battery Test And Emulation Software for a Single Instrument	BV9211B	Achieve higher accuracy, repeatability, and safety with an emulation based on a unique battery model. Your model will allow you to determine your device's power consumption, emulate an actual battery, and import existing battery models.	https://www.keysight.com/my/en/product/BV9211B/advanced-battery-test-and-emulation-software-for-a-single-instrument.html
PathWave BenchVue Advanced Battery Test And Emulation Software for Multiple Instruments	BV9210B	Achieve higher accuracy, repeatability, and safety with an emulation based on a unique battery model. Your model will allow you to determine your device's power consumption, emulate an actual battery, and import existing battery models.	https://www.keysight.com/my/en/product/BV9210B/advanced-battery-test-and-emulation-software-for-multiple-instru.html

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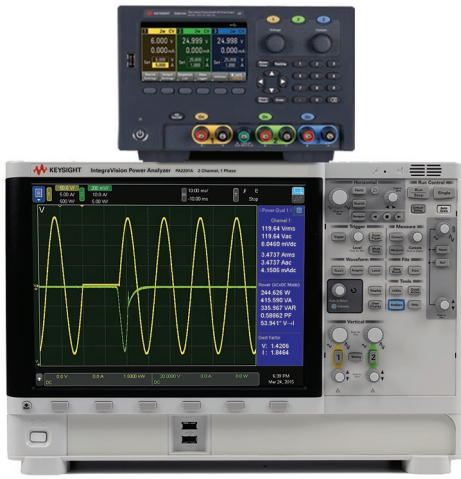
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Power Supply Categories



E36340 DC power supply

Basic

Affordable, quiet and stable power supplies for both manual and simple computer-controlled operation. The Keysight line of basic bench power supplies is optimized to provide DC power in applications where speed and accuracy are a low consideration. These power supplies are a high-value fit for the bench and in a system rack.

Performance

Speed, precision and advanced programming features make the performance power supplies the right choice when the DC power supply is a factor in test performance. With features such as DUT protection, fast programming times and downloadable V and I sequences, these DC power supplies can reduce your risk during test and system development.



N6705C DC power analyzer

Specialty

Sometimes it is best to have a power supply with unique capabilities that are tailored to a specific application. For example, the Keysight 66300 Mobile Communications DC Sources are designed to emulate the unique characteristics of a battery for mobile device testing and maintain those characteristics even when using long load leads, such as in an ATE system. The Keysight E4360 Solar Array Simulator simulates solar panel I-V characteristics for satellite development and testing.



6811C AC power source/analyzer

Modular

Keysight offers fully programmable power supplies in a modular format: the N6700 low-profile modular power system, N6705C DC power analyzer, and 66000 modular power system series. With this feature, you now have an extensive choice of power options—from basic through performance. Additionally, all modules interact in the same way at a single interface node, which simplifies system architecture and reduces cost when the test system inevitably changes.

AC sources

Keysight provides a full line of basic and performance AC sources to help you test a variety of AC-powered devices. Basic sources provide reliable power while performance sources provide advanced measurements and waveform generation.



DC electronic load mainframe

DC electronic loads

Electronic loads sink current and dissipate power in an accurate and controlled manner. Connected to circuit under test, an electronic load provides a convenient way to vary the load on the circuit's output in order to understand the circuit's performance.



N6790 Series DC Electronic Loads

Keysight offers two families of electronic loads, the N3300 family which is a modular, multiple output family; and the new N6790 Series DC Electronic Load. The N6790A Series is available in the N6700C, N6701C, N6702C low profile modular mainframe system and the N6705C DC Power Analyzer mainframe for bench use.

Selecting the Right System and Benchtop DC Power Supply For Your Application

We have designed the selection guide to make easy to pick the correct power supply based on your requirements. If your selection is driven by voltage and current requirements, please visit the tables found on pages 11 and 12. From there you can go to the product page(s) for more detail.

When you have specialized requirements that need features such as source and measure, it is quite easy to select from a set of power supplies that are designed exactly for those requirements. Refer to page 23 for specialty power products.

But when you have more complex requirements and you know the power supply is an important part of your test bench, where do you start and what do you need to consider?

Of course you need to select the right voltage and current, but there are other factors to consider when selecting a benchtop DC power supply for your applications. This guide gives a definition of the feature, states why it's important, and tells you how to use that feature when specifying the right power supply. In addition, the product families are listed so you can quickly see which product best fits your application. With that information, you can go to the product pages for detailed specifications.

Use the following information to help select the features you need in a DC power supply. Then go to the product page(s) for more detail.

Output characteristics

		Ripple and noise < 10 mVp-p		Ripple and noise 10 to 500 mVp-p	
Ripple and noise	Ideally, an output is free from any variations in voltage. In practice, there are periodic variations, called ripple, and random variations, called noise. Typically specified as either Vrms or Vp-p, the most useful spec is Vp-p. With Vp-p you will know the maximum variation away from the DC setpoint.	66309B-32A	p36	E36100 Series	p13
Use the ripple and noise specification to determine what, if any, affects these variations will have on your circuit or device.		B2961B-62B	p17	N5700 Series	p14
		E3600 Series	p13	N6731B-46B	p19
		E36300 Series	p13	N6773A-77A	p19
		N6751A-66A	p19	N6785A-86A	p35
		N6781A-84A	p27	N8700 Series	p14
		N6900 Series	p18	N8900 Series	p15
		N7900 Series	p18	RP7900 Series	p26
		U8031A-32A	p13	U8001A-02A	p13
		Accuracy < 0.03%		Accuracy > 0.05%	
Programming accuracy	Programming accuracy is a measure of how closely the output will be to the setpoint. Specified as a percent of output plus an offset, you can calculate whether or not the power supply has the precision required. In addition, many power supplies have built-in voltmeters and ammeters to measure its output.	B2961B-62B	p17	E3600 Series	p13
Use programming accuracy to determine if the power supply can produce a voltage and current within the precision needed by your device.		E36300 Series	p13	E36100 Series	p13
		N6751A-66A	p19	N5700 Series	p14
		N6781A-82A	p27	N6731B-46B	p19
		N6784A-86A	p35	N6773A-77A	p19
		N6900 Series	p18	N6783A	p35
		N7900 Series	p18	N8700 Series	p15
				N8900 Series	p15
				RP7900 Series	p26
				U8000 Series	p13

Selecting the Right System and Benchtop DC Power Supply For Your Application (Continued)

Output characteristics (Continued)

		FAST output response < 15 ms		MEDIUM output response < 200 ms	
Output response	When the setpoint changes it will take some time before the output reaches the setting. How fast it reaches the setpoint is a result of its regulation design and the output bandwidth. The specifications are typically for a voltage change from 10 to 90% of its rated output or a load change of 50 to 100%.	66300 Series	p36	E36100 Series	p13
Use this specification to select the power supply that is fast enough for your application.		B2961B-62B	p17	E36300 Series	p13
		N6751A-66A	p19	N5700 Series	p14
		N6781A-86A	p27	N6731B-46B	p19
		N6900 Series	p18	N6773A-77A	p19
		N7900 Series	p18	N8700 Series	p14
				N8900 Series	p15
				RP7900 Series	p25
				U8001A-02A	p13

Control

		Manual only		Computer and manual control
Computer interface	Many DC power supplies have both manual and computer control. Some are only manually controlled. Hardware interfaces for DC power supplies include GPIB, USB, and LAN (LXI Core). Software interfaces include the SCPI language and drivers such as IVI-C, IVI-COM, and VXI plug&play.	E3620A-30A	p13	All others
Specify power supplies with the appropriate hardware and software interface for computer control.		U8000 Series	p13	

		WITH analog input		WITHOUT analog input
Analog voltage control signal	Some power supplies provide an analog voltage control input to cause the voltage output to follow this input. Essentially, it amplifies the power since the power supply can provide current up to its rated maximum.	N5700 Series	p14	All others
Specify a power supply with an analog input whenever you need to amplify the power or need to track an analog voltage.		N8700 Series	p14	
		N8900 Series	p15	

Output measurements

		Built-in measurement
Measure V & I output	Many power supplies have a built in voltmeter and ammeter to read back their own output. The measurements can be displayed on the front panel or queried by a computer connected to the interface. These measurements are particularly useful in computer-controlled systems. Measurement (or read back) accuracy is specified as a percent of full scale plus an offset.	All others
Specify power supplies with built-in measurements whenever you need to check the actual voltage and current.		

Selecting the Right System and Benchtop DC Power Supply For Your Application (Continued)

Packaging

		QUARTER rack		HALF rack		FULL rack
Physical size Use the size specification to match bench or system use.	Keysight power supplies have standard EIA 19-inch rack dimensions. The width is either half rack width or full rack width while the height ranges from 1U to 5U (1.75 to 8.57 in). While any size can be used on the bench or in a system rack, the half rack width is generally better for bench applications while the full rack width works well in system racks. Of special note is the 1U height of the N5700 and N6700 Series.	E36100 Series	p13	B2961B-62B E3600 Series E36300 Series U8000 Series	p17 p13 p13 p13	All others
Front or rear output terminals Select the model with its output terminals in the best location for your application on either the bench or in a system rack.	The output terminals can be located on the front of the power supply or the rear. System and high-current power supplies have their outputs located on the rear panel while bench and some low current power supplies have outputs on the front.	FRONT terminals B2961B-62B E3620A-30A E36100 Series N6705C U8000 Series	p17 p13 p13 p20 p13	REAR terminals All others		
Number of outputs Specify multiple outputs per unit when you need to save space on the bench or in a system rack.	Keysight power supplies are configured with 1 to 8 outputs per unit. Multiple output power supplies can save space on the bench or in a rack. Of special note are the 66000 and N6700 modular mainframes that can hold up to 8 and 4 modules respectively.	SINGLE outputs All others		MULTIPLE outputs B2961B-62B E3620-31A E3646A-49A E36300 Series E4360 mfg N6700 mfr N6705C U8031A-32A	p17 p13 p13 p13 p37 p19 p20 p13	



mfr = mainframes for the E4360, N6700, N6707C, N6705C and 66000 modular power supplies

Selecting the Right System and Benchtop DC Power Supply For Your Application (Continued)

Specialty

		WITH DUT protection		WITHOUT DUT protection	
DUT protection	Many power supplies can be set for a maximum voltage and current to protect the device under test (DUT). When set, the power supply will limit the voltage and/or current regardless of the load. This feature provides a margin of safety when something goes wrong.	All others		E3620A-31A	p13
		WITH LIST memory		WITHOUT LIST memory	
Computer Interface	Many DC power supplies have both manual and computer control. Some are only manually controlled. Hardware interfaces for DC power supplies include GPIB, USB, and LAN (LXI Core). Software interfaces include the SCPI language and drivers such as IVI-C, IVI-COM, and VXI plug&play.	B2961B-62B	p17	All others	
Specify power supplies with the appropriate hardware and software interface for computer control.		E4360 Series	p37		
		N6700 Series	p19		
		N6705C	p20		
		N6900 Series	p18		
		N7900 Series	p18		
		RP7900 Series	p26		
		WITH optional relays		WITHOUT optional relays	
Output disconnect or polarity reversal	Automatic connect, disconnect, and polarity reversal can be accomplished with programmable output relays. By doing so, you will eliminate an external relay and have an easy method to programmatically actuate the relay.	66300 Series	p36	All others	
Select power supplies with optional output relays when your application requires power to be physically disconnected from the device.		N6700 Series	p19		
		N7900 Series	p18		



DC Voltage and Current At a Glance

Voltage ranges: 5 to 40 V					
Model numbers	Page	Outputs	5 to 9 V	12 to 20 V	21 to 40 V
66309B-32A	35	1 to 2		0 to 15 V, 3 A (all 663xx)	
E36102B-06B	13	1	0 to 6 V, 5 A (E36102B)	0 to 20 V, 2 A (E36103B)	0 to 35 V, 1 A (E36104B)
E3620A	13	2			0 to 25 V, 1 A (E3620A x2)
E36311A-13A	16	3	0 to 6 V, 5 A (E36311A-12A) 0 to 6 V, 10 A (E36313A)		0 to ± 25 V, 1 A (E36311A x 2) 0 to 25 V, 1 A (E36312A x 2) 0 to 25 V, 2 A (E36313A x 2)
E3630A-31A	13	3	0 to 6 V, 2.5 (E3630A x1) 0 to 6 V, 5 A (E3631A x1)	0 to ± 20 V, 0.5 A (E3630A x2)	0 to ± 25 V, 1 A (E3631A x2)
E3632A-34A ²	13	1	0 to 8 V, 20 A (E3633A r1)	0 to 15 V, 7 A (E3632A r1) 0 to 20 V, 10 A (E3633A r2)	0 to 30 V, 4 A (E3632A r2) 0 to 25 V, 7 A (E3634A r1)
E3640A-45A ²	13	1	0 to 8 V, 3 A (E3640A r1) 0 to 8 V, 5 A (E3642A r1) 0 to 8 V, 8 A (E3644A r1)	0 to 20 V, 1.5 A (E3640A r2) 0 to 20 V, 2.5 A (E3642A r2) 0 to 20 V, 4 A (E3644A r2)	0 to 35 V, 0.8 A (E3641A r1) 0 to 35 V, 1.4 A (E3643A r1) 0 to 35 V, 2.2 A (E3645A r1)
E3646A-49A ²	13	2	0 to 8 V, 3 A (E3646A r1) 0 to 8 V, 5 A (E3648A r1)	0 to 20 V, 1.5 A (E3646A r2) 0 to 20 V, 2.5 A (E3648A r2)	0 to 35 V, 0.8 A (E3647A r1) 0 to 35 V, 1.4 A (E3649A r1)
N5741A-52A	14	1	0 to 6 V, 100 A (N5741A) 0 to 8 V, 90 A (N5742A)	0 to 12.5 V, 60 A (N5743A) 0 to 20 V, 38 A (N5744A)	0 to 30 V, 25 A (N5745A) 0 to 40 V, 19 A (N5746A)
N5761A-72A	14	1	0 to 6 V, 180 A (N5761A) 0 to 8 V, 165 A (N5762A)	0 to 12.5 V, 120 A (N5763A) 0 to 20 V, 76 A (N5764A)	0 to 30 V, 50 A (N5765A) 0 to 40 V, 38 A (N5766A)
N6731B-36B	19	1 to 4 ¹	0 to 5 V, 10 A (N6731B) 0 to 8 V, 6.25 A (N6732B)	0 to 20 V, 2.5 A (N6733B)	0 to 35 V, 1.5 A (N6734B)
N6741B-46B	19	1 to 4 ¹	0 to 5 V, 20 A (N6741B) 0 to 8 V, 12.5 A (N6742B)	0 to 20 V, 5 A (N6743B)	0 to 35 V, 3 A (N6744B)
N6751A-52A N6761A-62A N6773A-77A	19	1 to 4 ¹		0 to 20 V, 15 A (N6773A)	0 to 35 V, 8.5 A (N6774A)
N6753A-56A N6763A-66A	19	2 ¹		0 to 20 V, 50 A (N6753A) 0 to 20 V, 50 A (N6755A) 0 to 20 V, 50 A (N6763A) 0 to 20 V, 50 A (N6765A)	
N6781A-86A	26	1 to 4 ¹	0 to 6 V, ± 3 to -2 A (N6783A-MFG) 0 to 8 V, ± 3 to -2 A (N6783A-BAT)	0 to 20 V, ± 3 A (N6781A-82A) 0 to ± 20 V, ± 3 A (N6784A) 0 to 20V, ± 8 A (N6785-86A)	
N6950A-52A, N6970A-72A	18	1	0 to 9 V, 100 A (N69/N7950A)	0 to 20 V, 50 A (N69/N7951A)	0 to 40 V, 25 A (N69/N7952A)
N7950A-52A, N7970A-72A	18	1	0 to 9 V, 200 A (N69/N7970A)	0 to 20 V, 100 A (N69/N7971A)	0 to 40 V, 50 A (N69/N7972A)
N8731A-42A	14	1	0 to 8 V, 400 A (N8771A)	0 to 10 V, 300 A (N8732A) 0 to 15 V, 220 A (N8733A) 0 to 20 V, 165 A (N8734A)	0 to 30 V, 110 A (N8735A) 0 to 40 V, 85 A (N8736A)
N8754A-62A	14	1		0 to 20 V, 250 A (N8754A)	0 to 30 V, 170 A (N8755A) 0 to 40 V, 125 A (N8756A)
RP7931A-36A	25	21		0-20 V, ± 400 A (RP7931A/41A)	
RP7941A-46A	25	21		0-20 V, ± 800 A (RP7933A/43A)	
U8001A	13	1			0 to 30 V, 3 A
U8002A	13	1			0 to 30 V, 5 A
U8031A	13	3			0 to 30 V, 6 A (Output 1 and 2); 5 V, 3 A (Output 3)
B1500A	31	1 to 10 ³	50 to 80 V: 0 to ± 200 V, ± 0.1 A to ± 1 A	100 to 210 A: 0 to ± 200 V, ± 0.1 A to ± 1 A	
B2901A/02A/11A/12A	27	1 to 2	0 to ± 210 V, ± 0.105 A to ± 3 A	0 to ± 210 V, ± 0.105 A to ± 3 A	
B2901BL	27	1	0 to 21 V, 0 to ± 1.5 A		
B2910BL	27	1	0 to ± 210 V, 0 to ± 1.5 A	0 to ± 210 V, 0 to ± 1.5 A	
B2901B/02B/11B/12B	27	1 to 2	0 to ± 210 V, 0 to ± 3 A	0 to ± 210 V, 0 to ± 3 A	

1. Power modules that require a modular mainframe (66000 Series, N6700 Series, N6705).

2. Dual range power supplies; r1 denotes range 1; r2 denotes range 2.

DC Voltage and Current At a Glance (Continued)

Voltage ranges: 50 to 1500 V					
Model numbers	Page	Outputs	30 to 80 V	100 to 210 V	1500 to 2000 V
EDU36311A	16	3	0 - 6 V, 5 A	0 - 30 V, 1 A	0 - 30 V, 1 A
B2961B-62B	17	1 to 2	0 to ± 210 V, 0 to ± 3 A	0 to ± 210 V, 0 to ± 3 A	
B2961A-62A	17	1 to 2	0 to ± 210 V, ± 0.105 A to ± 3 A	0 to ± 210 V, ± 0.105 A to ± 3 A	
E36102B-06B	13	1	0 to 60 V, 0.6 A (E36105B)	0 to 100 V, 0.4 A (E36106B)	
E3632A-34A ²	13	1	0 to 50 V, 4 A (E3634A r2)		
E3640A-45A ²	13	1	0 to 60 V, 0.5 A (E3641A r2) 0 to 60 V, 0.8 A (E3643A r2) 0 to 60 V, 1.3 A (E3645A r2)		
E3646A-49A ²	13	2	0 to 60 V, 0.5 A (E3647A r2) 0 to 60 V, 0.8 A (E3649A r2)		
E4361A-62A	37	1 to 2 ¹	0 to 65 V, 8.5 A (E4361A)	0 to 130 V, 5 A (E4362A)	
E5260/70	30	1 to 8 ¹	50 to 80V: 0 to ± 200 V, ± 0.1 A to ± 1 A	100 to 210 A: 0 to ± 200 V, ± 0.1 A to ± 1 A	
E5262/63	30	2	50 to 80 V 100 to 210 A	0 to ± 200 V, ± 0.2 A (E5262A); 0 to ± 200 V, ± 0.2 A to ± 1 A (E5263A) 0 to ± 200 V, ± 0.2 A to ± 1 A 0 to ± 200 V, ± 0.2 A (E5262A); 0 to ± 200 V, ± 0.2 A to ± 1 A (E5263A)	
N5741A-52A	14	1	0 to 60 V, 12.5 A (N5747A) 0 to 80 V, 9.5 A (N5748A)	0 to 100 V, 7.5 A (N5749A) 0 to 150 V, 5 A (N5750A)	0 to 300 V, 2.5 A (N5751A) 0 to 600 V, 1.3 A (N5752A)
N5761A-72A	14	1	0 to 60 V, 25 A (N5767A) 0 to 80 V, 19 A (N5768A)	0 to 100 V, 15 A (N5769A) 0 to 150 V, 10 A (N5770A)	0 to 300 V, 5 A (N5771A) 0 to 600 V, 2.6 A (N5772A)
N6731B-36B	19	1 to 4 ¹	0 to 60 V, 0.8 A (N6735B)	0 to 100 V, 0.5 A (N6736B)	
N6741B-46B	19	1 to 4 ¹	0 to 60 V, 1.6 A (N6745B)	0 to 100 V, 1 A (N6746B)	
N6751A-52A N6761A-62A N6773A-77A	19	1 to 4 ¹	0 to 50 V, 5 A (N6751A) 0 to 50 V, 10 A (N6752A) 0 to 50 V, 1.5 A (N6761A) 0 to 50 V, 3 A (N6762A) 0 to 60 V, 5 A (N6775A)	0 to 100 V, 3 A (N6776A) 0 to 150 V, 2 A (N6777A)	
N6753A-56A N6763A-66A	19	2 ¹	0 to 60 V, 20 A (N6754A) 0 to 60 V, 17 A (N6756A) 0 to 60 V, 20 A (N6764A) 0 to 60 V, 17 A (N6766A)		
N6953A-54A N6973A-77A N7953A-54A N7973A-77A	18 18 18 18	1 1 1 1	0 to 60 V, 16.7 A (N69/N7953A) 0 to 60 V, 33.3 A (N69/N7973A) 0 to 80 V, 12.5 A (N69/N7954A) 0 to 80 V, 25 A (N69/N7974A)	0 to 120 V, 16.7 A (N69/N7976A) 0 to 160 V, 12.5 A (N69/N7977A)	
N8731A-42A	14	1	0 to 60 V, 55 A (N8737A) 0 to 80 V, 42 A (N8738A)	0 to 100 V, 33 A (N8739A) 0 to 150 V, 22 A (N8740A)	0 to 300 V, 11 A (N8741A) 0 to 600 V, 5.5 A (N8742A)
N8754-62A	14	1	0 to 60 V, 85 A (N8757A) 0 to 80 V, 42 A (N8738A)	0 to 100 V, 50 A (N8759A) 0 to 150 V, 34 A (N8760A)	0 to 300 V, 17 A (N8761A) 0 to 600 V, 8.5 A (N8762A)
N8920A-57A N8937APV/57APV	15 15	1 1	0 to 80 V, 170 A (N8920A/40A) 0 to 80 V, 340 A (N8925A/45A) 0 to 80 V, 510 A (N8931A/51A)	0 to 200 V, 70 A (N8921A/41A) 0 to 200 V, 140 A (N8926A/46A) 0 to 200 V, 210 A (N8932A/52A)	0 to 500 V, 30 A (N8923A/43A) 0 to 500 V, 60 A (N8928A/48A) 0 to 500 V, 90 A (N8934A/54A) 0 to 750 V, 20 A (N8924A/44A) 0 to 750 V, 40 A (N8929A/49A) 0 to 750 V, 60 A (N8935A/55A) 0 to 1000 V, 30 A (N8930A/50A) 0 to 1500 V, 30 A (N8937A/57A/APV)
RP7931A-36A RP7941A-46A RP7951A-53A RP7961A-63A RP7951A-53A RP7961A-63A	25 25 25 25 25 25	1 1 1 1 1 1	0-80 V, ± 125 A (RP7932A/42A) 0-80 V, ± 250 A (RP7935A/45A)	0-160 V, ± 125 A (RP7936A/46A)	0-500 V, ± 20 A (RP7951A/61A) 0-500 V, ± 40 A (RP7952A/62A) 0-950 V, ± 20 A (RP7953A/63A) 0 to 500 V, ± 20 A (RP7951A/61A) 0 to 500 V, ± 40 A (RP7952A/62A) 0 to 950 V, ± 20 A (RP7953A/63A) 0 to 1000 V \pm 60A 0 to 1000 V \pm 90 A 0 to 2000 V \pm 30 A 0 to 2000 V \pm 30 A
RP7972A RP7982A RP7983A RP7985A	25 25 25 25	1 1 1 1			
U8032A	13	3	0 to 60 V, 3 A (Output 1 and 2); 5 V, 3 A (Output 3)		

1. Power modules that require a modular mainframe (66000 Series, N6700 Series, N6705).

2. Dual range power supplies; r1 denotes range 1; r2 denotes range 2.

3. Maximum number of modules depends on the configuration.

E36300, E36100, E3600 and U8000 Series Bench Power Supplies

When you need reliable power with minimal features, you can rely on the E36300, E36100, E3600 and U8000 Series bench power supplies.

E36100B Series Bench Power Supplies

The E36100B series will impress you from every angle, size, display and I/O.

- Small footprint 2U 1/4 rack
- Up to 100V, up to 5A
- Clean and stable DC power
- Excellent programming and readback accuracy
- LAN (LXI Core), and USB
- Rack mount up to 4 units



E36300 Series Bench Power Supplies

The triple output E36300 Series gives you the performance of system power supplies at an affordable price. Three models (E36311A, E36312A and E36313A) are available.

- 4.3" color LCD Display
- Color-coded channels and display for fast and error-free control
- Individual voltage/current knobs with rotary encoder control for precise setting
- Intuitive, easy-to-use front panel interface
- Meter view to display more info on a selected channel
- Auto series/parallel connection

E3600 and U8000 Series bench power supplies

The E3600 Series offers an extensive choice of voltages, programmability, and number of outputs.

The U8000 Series offers more affordable DC power and provides features typical only found in programmable power supplies (like output sequencing, save/recall, and more).

- 30 to 375 W outputs, 6 to 60 V, and 0.5 to 20 A
- Single- to triple-output models
- Low noise, linear regulation
- Dual range outputs to provide more current at lower voltage settings

Model	Power (W)	Maximum V (V)	Maximum I (A)	Number of outputs		Computer interface	Ripple and noise mV/p-p		Program. or meter res. mV	Size ²
					Number of ranges					
E36311A	80	6 V/+25 V/-25 V	5 A/1 A/1 A	3	1	USB	2	1		½ RU w x 3 RU h
E36312A	80	6 V/25 V/25 V	5 A/1 A/1 A	3	1	LAN, USB, GPIO	2	1		
E36313A	160	6 V/25 V/25 V	10 A/2 A/2 A	3	1		2	1		
E36102B	30	6	5	1	1	LAN, USB	10	1		¼ RU w x 2 RU h
E36103B	40	20	2	1	1		30	1		
E36104B	35	35	1	1	1		60	2		
E36105B	36	60	0.6	1	1		100	3		
E36106B	40	100	0.4	1	1		150	6		
E3632A	120	15 V r1 / 30 V r2	7 A r1 / 4 A r2	1	2	GPIO	2	1		½ RU w x 3 RU h
E3633A	200	8 V r1 / 20 V r2	20 A r1 / 10 A r2	1	2		3	1		
E3634A	200	25 V r1 / 50 V r2	7 A r1 / 4 A r2	1	2		3	3		
E3640A	30	8 V r1 / 20 V r2	3 A r1 / 1.5 A r2	1	2	GPIO	5	5		½ RU w x 2 RU h
E3641A	30	35 V r1 / 60 V r2	0.8 A r1 / 0.5 A r2	1	2		8	5		
E3642A	50	8 V r1 / 20 V r2	5 A r1 / 2.5 A r2	1	2		5	5		
E3643A	50	35 V r1 / 60 V r2	1.4 A r1 / 0.8 A r2	1	2		8	5		
E3644A	80	8 V r1 / 20 V r2	8 A r1 / 4 A r2	1	2		5	5		
E3645A	80	35 V r1 / 60 V r2	2.2 A r1 / 1.3 A r2	1	2	GPIO	8	5		½ RU w x 3 RU h
E3646A	60	8 V r1 / 20 V r2	3 A r1 / 1.5 A r2	2	2		5	5		
E3647A	60	35 V r1 / 60 V r2	0.8 A r1 / 0.5 A r2	2	2		8	5		
E3648A	100	8 V r1 / 20 V r2	5 A r1 / 2.5 A r2	2	2		5	5		
E3649A	100	35 V r1 / 60 V r2	1.4 A r1 / 0.8 A r2	2	2		8	5		
U8001A	90	30	3	1	1	No	12	10		½ RU w x 2 RU h
U8002A	150	30	5	1	1		12	10		
U8031A	375	30	6	3	1	No	10	10		½ RU w x 4 RU h
U8032A	375	60	3	3	1		10	10		

1. Output 1 / Output 2 / Output 3.

2. NOTE: RU refers to rack unit of a standard 19" EIA equipment rack. The width is either 1/2 or full The height is in number of rack units which are 1.75" (44.4 mm) each. For example: a 3 RU h has a height of 5.25" (133.3 mm).



BenchVue software enabled

N5700 and N8700 Series ATE System DC Power Supplies

Space-saving power supplies with modern interfaces

Now get up to 5200 W in a compact, 2U package with the N8700 Series or up to 1560 W in a compact, 1U package with the N5700 Series. Both series offers solid performance and a variety of basic and enhanced capabilities.

- Remote programming via GPIB, LAN and USB interfaces with the SCPI command set (drivers available)
- Analog control and monitoring of output voltage and current
- Connect multiple supplies in parallel or series for greater output current or voltage respectively
- Built-in measurements
- Front panel control and advanced programmable features
- Built-in protection features such as OVP, OCP, UVL, and OTP
- LXI Core compliant



BenchVue software enabled



N8731A: Front/back



N5749A: Front/back

1. RU refers to rack unit of a standard 19" EIA equipment rack. The width is either ½ or full. The height is in number of rack units which are 1.75" (44.4 mm) each. For example: a 3 RU h has a height of 5.25" (133.3 mm).

Model	Power (W)	Maximum V (V)	Maximum I (A)	Number of outputs	Number of ranges	Ripple and noise mV/p-p	Programming accuracy % + mV	Transient response (ms)	Size ¹
N5741A	600	6	100	1	1	60	0.5 + 3	≤ 1.5	Full RU w x 1 RU h
N5742A	720	8	90	1	1	60	0.5 + 4	≤ 1.5	
N5743A	750	12.5	60	1	1	60	0.5 + 6.25	≤ 1.5	
N5744A	760	20	38	1	1	60	0.5 + 10	≤ 1	
N5745A	750	30	25	1	1	60	0.5 + 15	≤ 1	
N5746A	760	40	19	1	1	60	0.5 + 20	≤ 1	
N5747A	750	60	12.5	1	1	60	0.5 + 30	≤ 1	
N5748A	760	80	9.5	1	1	80	0.5 + 40	≤ 1	
N5749A	750	100	7.5	1	1	80	0.5 + 50	≤ 1	
N5750A	750	150	5	1	1	100	0.5 + 75	≤ 2	
N5751A	750	300	2.5	1	1	150	0.5 + 150	≤ 2	
N5752A	780	600	1.3	1	1	300	0.5 + 300	≤ 2	
N5761A	1080	6	180	1	1	60	0.5 + 3	≤ 1.5	Full RU w x 1 RU h
N5762A	1320	8	165	1	1	60	0.5 + 4	≤ 1.5	
N5763A	1500	12.5	120	1	1	60	0.5 + 6.25	≤ 1.5	
N5764A	1520	20	76	1	1	60	0.5 + 10	≤ 1	
N5765A	1500	30	50	1	1	60	0.5 + 15	≤ 1	
N5766A	1520	40	38	1	1	60	0.5 + 20	≤ 1	
N5767A	1500	60	25	1	1	60	0.5 + 30	≤ 1	
N5768A	1520	80	19	1	1	80	0.5 + 40	≤ 1	
N5769A	1500	100	15	1	1	80	0.5 + 50	≤ 1	
N5770A	1500	150	10	1	1	100	0.5 + 75	≤ 2	
N5771A	1500	300	5	1	1	150	0.5 + 150	≤ 2	
N5772A	1560	600	2.6	1	1	300	0.5 + 300	≤ 2	
N8731A	3200	8	400	1	1	60	0.05 + 4	< 1	Full RU w x 2 RU h
N8732A	3300	10	330	1	1	60	0.05 + 5	< 1	
N8733A	3300	15	220	1	1	60	0.05 + 7.5	< 1	
N8734A	3300	20	165	1	1	60	0.05 + 10	< 1	
N8735A	3300	30	110	1	1	60	0.05 + 15	< 1	
N8736A	3400	40	85	1	1	60	0.05 + 20	< 1	
N8737A	3300	60	55	1	1	60	0.05 + 30	< 1	
N8738A	3360	80	42	1	1	80	0.05 + 40	< 1	
N8739A	3300	100	33	1	1	100	0.05 + 50	< 1	
N8740A	3300	150	22	1	1	100	0.05 + 75	< 2	
N8741A	3300	300	11	1	1	300	0.05 + 150	< 2	
N8742A	3300	600	5.5	1	1	500	0.05 + 300	< 2	
N8754A	5000	20	250	1	1	75	0.025 + 15	< 1	Full RU w x 2 RU h
N8755A	5100	30	170	1	1	75	0.025 + 22.5	< 1	
N8756A	5000	40	125	1	1	75	0.025 + 30	< 1	
N8757A	5100	60	85	1	1	75	0.025 + 45	< 1	
N8758A	5200	80	65	1	1	100	0.025 + 60	< 1	
N8759A	5000	100	50	1	1	100	0.025 + 75	< 1	
N8760A	5100	150	34	1	1	120	0.025 + 112.5	< 2	
N8761A	5100	300	17	1	1	300	0.025 + 225	< 2	
N8762A	5100	600	8.5	1	1	500	0.025 + 450	< 2	

N8900 Series Autoranging System DC Power Supplies

High-power, autoranging output does the job of multiple supplies

The N8900 Series autoranging DC power supplies provide unprecedented flexibility by offering a wide range of voltage and current combinations at full power. Just one N8900 does the job of multiple power supplies! It's like having many power supplies in one!

- Up to 1500 V, up to 510 A
- 5 kW, 10 kW and 15 kW models in a small 3U package
- Easily parallel to create “one” power supply with > 100 kW of power
- Protection from over-voltage, over-current and over-temperature
- Control via GPIB, USB, LAN (LXI Core), and analog programming



BenchVue software enabled

	Model	Power (W)	Maximum V (V)	Maximum I (A)	Number of outputs	Number of ranges	Ripple and noise mVp-p	Programming accuracy 0.1% mV	Transient response (ms)	AC input voltage (VAC)	Size ¹
Basic	N8920A	5000	80	170	1	1	200	≤ 80	≤ 1.5	208	Full RU w x 3 RU h
	N8921A	5000	200	70	1	1	300	≤ 200	≤ 1.5	208	
	N8923A	5000	500	30	1	1	350	≤ 500	≤ 1.5	208	
	N8924A	5000	750	20	1	1	800	≤ 750	≤ 1.5	208	
	N8925A	10000	80	340	1	1	200	≤ 80	≤ 1.5	208	
	N8926A	10000	200	140	1	1	300	≤ 200	≤ 1.5	208	
	N8928A	10000	500	60	1	1	350	≤ 500	≤ 1.5	208	
	N8929A	10000	750	40	1	1	800	≤ 750	≤ 1.5	208	
	N8930A	10000	1000	30	1	1	800	≤ 1000	≤ 1.5	208	
	N8931A	15000	80	510	1	1	200	≤ 80	≤ 1.5	208	
	N8932A	15000	200	210	1	1	300	≤ 200	≤ 1.5	208	
	N8934A	15000	500	90	1	1	350	≤ 500	≤ 1.5	208	
	N8935A	15000	750	60	1	1	800	≤ 750	≤ 1.5	208	
	N8937A	15000	1500	30	1	1	1000	≤ 1500	≤ 1.5	208	
	N8940A	5000	80	170	1	1	200	≤ 80	≤ 1.5	400	
	N8941A	5000	200	70	1	1	300	≤ 200	≤ 1.5	400	
	N8943A	5000	500	30	1	1	350	≤ 500	≤ 1.5	400	Full RU w x 3 RU h
	N8944A	5000	750	20	1	1	800	≤ 750	≤ 1.5	400	
	N8945A	10000	80	340	1	1	200	≤ 80	≤ 1.5	400	
	N8946A	10000	200	140	1	1	300	≤ 200	≤ 1.5	400	
	N8948A	10000	500	60	1	1	350	≤ 500	≤ 1.5	400	
	N8949A	10000	750	40	1	1	800	≤ 750	≤ 1.5	400	
	N8950A	10000	1000	30	1	1	800	≤ 1000	≤ 1.5	400	
	N8951A	15000	80	510	1	1	200	≤ 80	≤ 1.5	400	
	N8952A	15000	200	210	1	1	300	≤ 200	≤ 1.5	400	
	N8954A	15000	500	90	1	1	350	≤ 500	≤ 1.5	400	
	N8955A	15000	750	60	1	1	800	≤ 750	≤ 1.5	400	
	N8957A	15000	1500	30	1	1	1000	≤ 1500	≤ 1.5	400	

1. RU refers to rack unit of a standard 19" EIA equipment rack. The width is either ½ or full. The height is in number of rack units which are 1.75" (44.4 mm) each. For example: a 3 RU h has a height of 5.25" (133.3 mm).

NEW EDU36311A Smart Bench Essentials DC Power Supply

Combine Triple Outputs with Powerful Software for Deeper Insights

The Keysight EDU36311A triple-output DC bench power supply comes with a robust design and usability at an affordable price. Its 90 W electrically isolated channels supply clean and reliable power. The 7-inch color wide video graphics array (WVGA) display gives you a clear view – from instrument set up to the output status. You can easily control the E36311A triple-output DC bench power supply remotely via USB or LAN. This solution includes Keysight's PathWave BenchVue power supply application software for the PC.



Key benefits

- Clean, reliable power
- low output ripple and noise
 - excellent programming / readback accuracy
 - exceptional line / load regulation
 - superior overvoltage, overcurrent, and overtemperature protection
- Convenient benchtop capabilities
- independent power supplies (three) in one box
 - low acoustic noise
 - device protection against overvoltage and overcurrent
- Intuitive and easy-to-use interfaces
- 7-inch color display
 - distinctive color-coded channels
 - individual knobs for voltage and current
 - flexible connection using LAN (LXI) or USB

Performance specifications	EDU36311A		
Power output	90 W		
DC output rating (0 to 40°C)	1	2	3
	0 to 6 V	0 to 30 V	0 to 30 V
	0 to 5 A	0 to 1 A	0 to 1 A
Load regulation ± (% of output + offset)			
Voltage	< 0.01% + 2 mV		
Current	< 0.2% + 10 mA		
Line regulation ± (% of output + offset)			
Voltage	< 0.01% + 2 mV		
Current	< 0.2% + 10 mA		
Accuracy 12 months (23 °C ± 5 °C)			
Programming accuracy ± (% of output + offset)			
Voltage	0.1% + 5 mV	0.05% + 10 mV	
Current	0.1% + 10 mA	0.2% + 5 mA	
Readback accuracy ± (% of output + offset)			
Voltage	0.1% + 5 mV	0.05% + 10 mV	
Current	0.1% + 10 mA	0.2% + 5 mA	
Load transient recovery time (Time to recover within the settling band following a load change from 50% to 100% and from 100% to 50% of full load)			
Voltage settling band	15 mV		
Time	< 50 μs		



BenchVue software enabled

B2960 Series 6.5 Digit Low Noise Source Power Supplies

The B2960 Series 6.5 Digit Low Noise Source Power Supplies is an advanced low cost power supply/source offering:

- 6.5 digit precision, wide and bipolar (4-quadrant) output
- Both voltage(100 nV to 210 V) and current(10 fA – 3A DC/10.5 A pulsed) source modes
- 10 μ Vrms (1 nVrms/ $\sqrt{\text{Hz}}$ at 10 kHz) output noise with external ultra-low noise filter
- 100 nV/10 fA sourcing resolution
- Precision arbitrary waveform generation capability (1 MHz to 10 kHz)
- Programmable output resistance and emulation
- Time domain voltage/current monitoring on the front panel



B2962B



BenchVue software enabled

These superior capabilities allow tests and evaluation that conventional power supply/sources cannot do. They make the B2960 series an ideal companion instruments for use with other instruments such as oscilloscopes, network analyzers, spectrum analyzers, frequency counters, digital multi meters, nanovoltmeters, etc. The Keysight B2960 series can support the difficult measurement challenges faced by researchers, electronic development engineers and electronic technicians working on advanced devices and materials.

Since the Keysight B2960 series instruments are highly stable current/voltage sources, ideal for evaluating the physical properties of materials and many types of samples, they ensure that you can detect all tiny signal variations emanating from materials under test.

Model				B2961A/62A	B2961A/62A with HC-ULNF (High current ultra low noise filter)	B2961A/62A with ULNF (Ultra low noise filter)	B2961A/62A with LNF (Low noise filter)
Performance	Number of channels			1 or 2	1 or 2	1 or 2	1 or 2
	Max output	Voltage		± 210 V	± 21 V	± 42 V	± 210 V
		Current	DC	± 3.03 A	± 500 mA	± 105 mA	± 3.03 A
			Pulsed	± 10.5 A	± 500 mA	± 105 mA	± 10.5 A
		Power		31.8 W	10.5 W	4.4 W	31.8 W
	Source	Max digits	Digits	6 ½	6 ½	6 ½	6 ½
		Min resolution	Voltage	100 nV	100 nV	100 nV	100 nV
			Current	10 pA	1 nA	10 pA	10 pA
	Noise	0.1 Hz to 10 Hz		< 5 μ Vpp	< 5 μ Vpp	< 5 μ Vpp	< 5 μ Vpp
				< 1 pApp	< 1 pApp	< 1 pApp	< 1 pApp
		10 Hz to 20 MHz		3 mVrms	10 μ Vrms 1 nVrms/ $\sqrt{\text{Hz}}$ at 10 kHz	10 μ Vrms 1 nVrms/ $\sqrt{\text{Hz}}$ at 10 kHz	350 μ Vrms
	Measurement	Max digits	Digits	4 ½	4 ½	4 ½	4 ½
	Min programmable interval for arbitrary waveform			10 μ s (100,000 pts/s)	10 μ s (100,000 pts/s)	10 μ s (100,000 pts/s)	10 μ s (100,000 pts/s)

N6900 and N7900 Advanced Power System (APS)

Overcome your toughest power test challenges

With Advanced Power System (APS) 1 kW and 2 kW system power supplies, you get a new level of power supply performance. VersaPower architecture delivers industry-leading specifications and innovative features for today's advanced ATE power testing needs—the fastest, most accurate, integrated power system.

- Accelerate test-system throughput with industry-leading speed
- Capture your DUT's current profile with accurate measurements
- Reduce your ATE development time and cost with highly integrated capabilities



BenchVue software enabled

Need high performance in your ATE system?

Choose the Keysight N6900 Series APS DC Power Supply.

Need high speed dynamic sourcing and measurement?

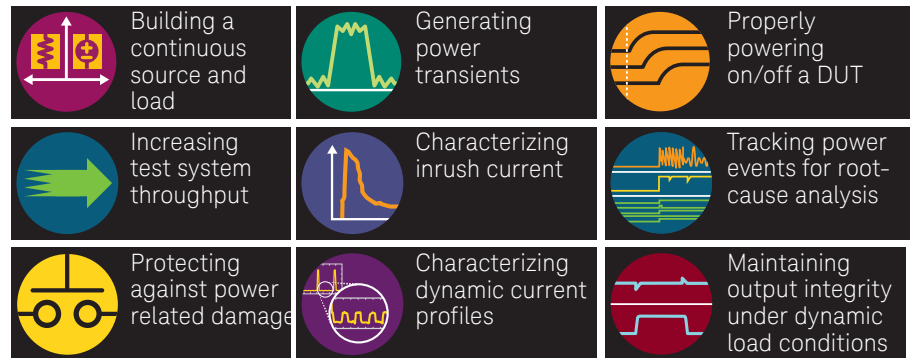
Choose the Keysight N7900 Series APS Dynamic DC Power Supply.

Get lots of power in a small test-system footprint

Two power ranges deliver a large amount of power in a small test-system footprint.



Overcome a wide variety of power test challenges with the APS.



	Model	Power (W)	Maximum V (V)	Maximum I (A)	Number of outputs	Number of ranges	Ripple and noise mVp-p	Programming accuracy % mV	Transient response (µs)	Size ¹
Performance	N6950A	1000	9	100	1	1	9	0.03 + 1.5	100	Full RU w x 1 RU h
	N6951A	1000	20	50	1	1	9	0.03 + 3	100	
	N6952A	1000	40	25	1	1	9	0.03 + 6	100	
	N6953A	1000	60	16.7	1	1	9	0.03 + 9	100	
	N6954A	1000	80	12.5	1	1	9	0.03 + 12	100	
	N6970A	2000	9	200	1	1	9	0.03 + 1.5	100	Full RU w x 2 RU h
	N6971A	2000	20	100	1	1	9	0.03 + 3	100	
	N6972A	2000	40	50	1	1	9	0.03 + 6	100	
	N6973A	2000	60	33	1	1	9	0.03 + 9	100	
	N6974A	2000	80	25	1	1	9	0.03 + 12	100	
	N6976A	2000	120	16.7	1	1	30	0.03 + 17	100	Full RU w x 1 RU h
	N6977A	2000	160	12.5	1	1	30	0.03 + 24	100	
	N7950A	1000	9	100	1	1	9	0.03 + 1	100	
	N7951A	1000	20	50	1	1	9	0.03 + 2	100	Full RU w x 2 RU h
	N7952A	1000	40	25	1	1	9	0.03 + 4	100	
	N7953A	1000	60	16.7	1	1	9	0.03 + 6	100	
	N7954A	1000	80	12.5	1	1	9	0.03 + 8	100	
	N7970A	2000	9	200	1	1	9	0.03 + 1	100	Full RU w x 2 RU h
	N7971A	2000	20	100	1	1	9	0.03 + 2	100	
	N7972A	2000	40	50	1	1	9	0.03 + 4	100	
	N7973A	2000	60	33	1	1	9	0.03 + 6	100	
	N7974A	2000	80	25	1	1	9	0.03 + 8	100	
	N7976A	2000	120	16.7	1	1	30	0.03 + 11	100	Full RU w x 2 RU h
	N7977A	2000	160	12.5	1	1	30	0.03 + 14	100	

1. RU refers to rack unit of a standard 19" EIA equipment rack. The width is either 1 or 2 or full. The height is in number of rack units which are 1.75" (44.4 mm) each. For example: a 3 RU h has a height of 5.25" (133.3 mm).

N6700 Low-Profile Modular Power System

Extensive family of modular power in a 1U package

The N6700 Series 1U-high, multiple-output programmable DC power supply and DC electronic load systems which give you the flexibility to optimize performance, power and price to match your test needs.

- Small size: Up to 4 outputs in 1U of rack space
- Mainframes are available with 400 W, 600 W, or 1200 W capability
- DC electronic load modules available with 60 to 200 W capability
- Mix and match from 36 different DC power modules, ranging 50 W, 100 W, 300 W, or 500 W
- Streamline your tasks with built-in measurements, output sequencing, and optional LIST mode, built-in digitizer and disconnect relays
- Ultra fast command processing time (< 1 ms) reduces test time
- Computer control via GPIB, USB, and LAN (LXI Core)



BenchVue software enabled



N6702C

N6700 low-profile modular power system mainframe

Model	Power (W)	Max # modules	Physical size ¹
N6700C	400	4	Full RU w x 1 RU h
N6701C	600	4	
N6702C	1200	4	

	Model	Power (W)	Maximum V (V)	Maximum I (A)	Number of outputs	Number of slots occupied	Number of ranges	Ripple and noise mVp-p	Programming accuracy % + mV	Transient response (μs)
Basic	N6731B	50	5	10	1	1	1	10	0.1 + 19	< 200
	N6732B	50	8	6.25	1	1	1	12	0.1 + 19	< 200
	N6733B	50	20	2.5	1	1	1	14	0.1 + 20	< 200
	N6734B	50	35	1.5	1	1	1	15	0.1 + 35	< 200
	N6735B	50	60	0.8	1	1	1	25	0.1 + 60	< 200
	N6736B	50	100	0.5	1	1	1	30	0.1 + 100	< 200
	N6741B	100	5	20	1	1	1	11	0.1 + 19	< 200
	N6742B	100	8	12.5	1	1	1	12	0.1 + 19	< 200
	N6743B	100	20	5	1	1	1	14	0.1 + 20	< 200
	N6744B	100	35	3	1	1	1	15	0.1 + 35	< 200
	N6745B	100	60	1.6	1	1	1	25	0.1 + 60	< 200
	N6746B	100	100	1	1	1	1	30	0.1 + 100	< 200
	N6773A	300	20	15	1	1	1	20	0.1 + 20	< 250
	N6774A	300	35	8.5	1	1	1	22	0.1 + 35	< 250
Performance	N6775A	300	60	5	1	1	1	35	0.1 + 60	< 250
	N6776A	300	100	3	1	1	1	45	0.1 + 100	< 250
	N6777A	300	150	2	1	1	1	68	0.1 + 150	< 250
	N6751A	50	50	5	1	1	Autoranging	4.5	0.06 + 19	< 100
	N6752A	100	50	10	1	1	Autoranging	4.5	0.06 + 19	< 100
	N6753A	300	20	50	1	2	Autoranging	5	0.06 + 10	< 100
Precision	N6754A	300	60	20	1	2	Autoranging	6	0.06 + 25	< 100
	N6755A	500	20	50	1	2	Autoranging	5	0.06 + 10	< 100
	N6756A	500	60	17	1	2	Autoranging	6	0.06 + 25	< 100
	N6761A	50	50	1.5	1	1	Autoranging	4.5	0.016 + 6	< 100
	N6762A	100	50	3	1	1	Autoranging	4.5	0.016 + 6	< 100
	N6763A	300	20	50	1	2	Autoranging	5	0.03 + 5	< 100
Specialty	N6764A	300	60	20	1	2	Autoranging	6	0.03 + 12	< 100
	N6765A	500	20	50	1	2	Autoranging	5	0.03 + 5	< 100
	N6766A	500	60	17	1	2	Autoranging	6	0.03 + 12	< 100

Specialty

Additional N6780 series source measure unit modules and application specific modules available, see page 23.

DC Electronic Loads

Additional N6790 Series DC electronic loads, see page 19

N6705C DC Power Analyzer

Quickly understand your device’s power consumption

Gain insight into your device’s power consumption in minutes without writing a single line of code. The N6705C combines one to four DC power supplies, or DC electronic loads, a DMM, an oscilloscope, an arbitrary waveform generator, and a data logger in one integrated package.

- Saves time—no programming required and it eliminates the need to gather multiple instruments
- Flexible, modular system—mix and match power modules to optimize your testing
- Uses the same modules as the N6700 Series low-profile modular power supply—see page 17
- DC electronic load modules available with 60 to 200 W capability
- Computer control via GPIB, USB, and LAN (LXI Core)



BenchVue software enabled

Function	Description
Output speed	Voltage changes as fast as 160 μ s per step voltage change
Voltmeter accuracy	Up to 0.025% + 50 μ V, up to 18-bit resolution
Ammeter accuracy	Up to 0.025% + 8 nA, up to 18-bit resolution
Arbitrary waveform	Bandwidth up to 100 kHz, output power up to 300 W
Scope function	Digitizes voltage and current at up to 200 kHz, up to 512 k points, up to 18-bits resolution
Data logger function	Measurement interval from 20 μ s to 60 s, maximum of 500 Mreadings per data log
Non-volatile data storage	4 GB



N6790 Series DC Electronic Loads

Programmable loads with measurements

The N6790 Series DC electronic loads give you flexibility for testing power supplies in a 1U footprint. The built-in measurement system provides both accuracy and convenience and eliminates the need for a DMM, external shunts and wiring. The N6790 multiple-input models are fast, accurate, and ideal for high-volume manufacturing.



- High speed digitizing capability
- Increase test throughput with short command processing time
- Test multiple power supply outputs with up to 4 modules with 60 to 200 W capability
- Operate in constant current, constant voltage, constant resistance and constant power modes
- Measure voltage and current simultaneously
- Use in parallel for greater current sinking capability
- Built-in arbitrary waveform generator



BenchVue software enabled

N6700 mainframes

Model	Max # modules	Physical size ¹
N6791A in N6700 Low Profile Mainframe	4	1 RU h
N6791A in N6705C Power Analyzer	4	4 RU h
N6792A in N6700 Low Profile Mainframe	2	1 RU h
N6792A in N6705C DC Power Analyzer	2	4 RU h

N6790 modules

Loads	Model	Input power, W	Maximum input, V	Maximum input, I	Constant current accuracy, % + mA	Constant voltage accuracy, % + mV	Current measurement accuracy, % + mA	Voltage measurement accuracy, % + mV	Width, slot
	N6791A	100	60	20	0.04 + 0.46	0.03 + 7.2	0.04 + 0.40	0.03 + 7.2	1
	N6792A	200	60	40	0.04 + 0.92	0.03 + 7.2	0.04 + 0.82	0.03 + 7.2	2

1. RU refers to rack unit of a standard 19" EIA equipment rack. The width is either ½ or full. The height is in number of rack units which are 1.75" (44.4 mm) each. For example, a 3 RU h has a height of 5.25" (133.3 mm).

NEW EL30000 Series Bench Electronic Loads

Visualize Your Test Insights in Real Time

The Keysight EL30000 Series Bench electronic load with a built-in data logger provides new levels of test insights for your devices like power supplies, batteries, DC to DC converters, and more. View voltage and current trends to make real-time decisions, rather than waiting hours for a test to complete. At the heart of the EL30000 is a highly accurate measurement system that provides real-time updates to the large display. Single and dual-channel models are available with up to 600 W for measurements that require more power. Start your test with confidence and finish with results you trust.

- Test voltages up to 150 V
- Sink current up to 60 or 120 A
- Use operating modes: constant voltage (CV), constant current (CC), constant resistance (CR), constant power (CP)
- Save data internally or to an external USB flash drive
- Improve load regulation with four-wire remote sense
- Create dynamic load profiles with device's LIST function
- Connect with USB, LAN (LXI Core), and optional GPIB



BenchVue software enabled

Performance specifications (23 °C ± 5 °C)		EL33133A	EL34143A	EL34243A	
Maximum input power		250 W	350 W	300 W	300 W
Channel		1	1	1	2
Input ratings (0 to 43 °C)		0 to 150 V	0 to 150 V	0 to 150 V	0 to 150 V
		0 to 40 A	0 to 60 A	0 to 60 A	0 to 60 A
Parallel mode current ¹		NA	NA	120A	120 A
Programming accuracy ± (% of output + offset)					
Constant current mode ²	Low	0.05% + 820 µA	0.04% + 130 µA		
	Medium	—	0.04% + 2 mA		
	High	0.05% + 7.2 mA	0.04% + 12 mA		
Constant voltage mode	Low, 15 V	0.03% + 4.2 mV	0.02% + 3 mV		
	High, 150 V	0.03% + 15 mV	0.02% + 15 mV		
Readback accuracy ± (% of output + offset)					
Current ²	Low	0.05% + 820 µA	0.04% + 120 µA		
	Medium	—	0.04% + 1.8 mA		
	High	0.05% + 7.2 mA	0.04% + 9.6 mA		
Voltage	Low, 15 V	0.03% + 4.2 mV	0.02% + 3 mV		
	High 150 V	0.03% + 15 mV	0.02% + 15 mV		

1. Do not connect the dual inputs on EL34243A in series, parallel mode is only allowed for CC, CR, and CP.
2. Current ranges:
 EL33133A – Low = 4 A; High = 40 A
 EL34143A/EL34243A – Low = 0.6 A; Medium = 6 A; High = 60 A



N3300 Series DC Electronic Loads

Programmable loads with measurements

The N3300 Series DC electronic loads give you flexibility for testing power supplies and other devices requiring a load. The built-in measurement system provides both accuracy and convenience and eliminates the need for a DMM, external shunts and wiring. The N3300 multiple-input models are fast, accurate, and ideal for high-volume manufacturing.



- Increase test throughput with short command processing time and stored command sequences
- Test multiple power supply outputs with up to 6 modules with 150 to 600 W capability
- Operate in constant current, constant voltage, or constant resistance modes
- Measure voltage and current simultaneously
- Use in parallel for greater current sinking capability
- Computer control with GPIB

N3300 mainframes		
Model	Max # modules	Physical size ¹
N3300A	6	Full RU w x 4 RU h
N3301A	2	½ RU w x 4 RU h



BenchVue software enabled

N3300 modules									
Loads	Model	Input power, W	Maximum input, V	Maximum input, I	Constant current accuracy, % + mA	Constant voltage accuracy, % + mV	Current measurement accuracy, % + mA	Voltage measurement accuracy, % + mV	Width, slot
	N3302A	150	60	30	0.1 + 10	0.1 + 8	0.05 + 6	0.05 + 8	1
	N3303A	250	240	10	0.1 + 7.5	0.1 + 40	0.05 + 5	0.05 + 20	1
	N3304A	300	60	60	0.1 + 15	0.1 + 8	0.05 + 10	0.05 + 8	1
	N3305A	500	150	60	0.1 + 15	0.1 + 20	0.05 + 10	0.05 + 16	2
	N3306A	600	60	120	0.1 + 37.5	0.1 + 8	0.05 + 20	0.05 + 8	2
	N3307A	250	150	30	0.1 + 15	0.1 + 20	0.05 + 6	0.05 + 16	1

1. RU refers to rack unit of a standard 19" EIA equipment rack. The width is either ½ or full. The height is in number of rack units which are 1.75" (44.4 mm) each. For example, a 3 RU h has a height of 5.25" (133.3 mm).

AC Power Sources

An integrated AC power solution

Keysight offers two families of AC power sources to meet your AC test challenges –from basic to complex. The AC6800 Series of basic AC sources offer stable, reliable power with models available up to 4000 VA. The 6800C series of performance AC sources provide a complete AC test solution with built in arbitrary waveform generator to simulate many types of power waveforms, at power levels up to 1750 VA. Both families may also be used to produce DC power, either alone or as a DC offset to an AC waveform. All models are backed with global support.

AC6800B Series Basic AC Power Sources

The quality and capability you need.

- Models up to 4000 VA are available to meet your basic AC power source and measurement requirements
- An intuitive user interface tested over time
- LAN/LXI Core and USB (standard), and GPIB (optional plug-in card)
- Built-in remote sensing

6800C Series Performance AC Power Sources/Analyzers

The complete AC power test solution.

- Models up to 1750 VA are available to meet your performance AC source requirements
- Extensive built-in power measurement capabilities
- LAN, USB and GPIB
- Integrated transient waveform generation and harmonic capabilities to simulate and analyze your AC environment



6800C Series



AC6800B Series

Performance	Model	RMS power	RMS voltage	RMS current	Output frequency	Peak current	DC power	DC voltage
	AC6801B	500 VA	310 V	5 A	500 Hz	7.5 A	400 W	380 V
	AC6802B	1000 VA	310 V	10 A	500 Hz	15 A	800 W	380 V
	AC6803B	2000 VA	310 V	20 A	500 Hz	30 A	1600 W	380 V
	AC6804B	4000 VA	310 V	40 A	500 Hz	60 A	3200 W	380 V
	6811C	375 VA	300 V	3.25 A	1 kHz	40 A	285 W	425 V
	6812C	750 VA	300 V	6.5 A	1 kHz	40 A	575 W	425 V
	6813C	1750 VA	300 V	13 A	1 kHz	80 A	1350 W	425 V



BenchVue software enabled

New AC6900 Series Three-Phase AC Power Solution

A Complete Three-Phase AC Power Solution

Keysight's AC6900 Series AC power sources provide a complete AC and DC power solution by combining the capabilities of a multimeter, harmonic analyzer, and power analyzer in one instrument. You can easily produce DC power, either alone or as a DC offset to an AC waveform, in a compact form factor.



NEW AC6900 Series

- AC, DC, or AC plus DC mode
- maximum AC voltage at 320 Vrms
- frequency up to 5 kHz
- single-phase, single-phase three-wire, or three-phase four-wire connections
- power line disturbance tests
- harmonic analysis
- built-in waveform generation
- USB, LAN (LXI Core), and optional GPIB connectivity

Performance	Model	RMS power VA	AC voltage (L/H) V	RMS current/ Ph A	Maximum frequency Hz	Max DC current A	DC voltage V
	AC6903H	3000	160 / 320	10 / 5	5000	30 / 15	± 226 / ± 452
	AC6903L	3000	160 / 320	10 / 5	550	30 / 15	± 226 / ± 452
	AC6906H	6000	160 / 320	20 / 10	5000	60 / 30	± 226 / ± 452
	AC6906L	6000	160 / 320	20 / 10	550	60 / 30	± 226 / ± 452
	AC6912H	12000	160 / 320	40 / 20	5000	120 / 60	± 226 / ± 452
	AC6912L	12000	160 / 320	40 / 20	550	120 / 60	± 226 / ± 452
	AC6918H	18000	160 / 320	60 / 30	5000	180 / 90	± 226 / ± 452
	AC6918L	18000	160 / 320	60 / 30	550	180 / 90	± 226 / ± 452



BenchVue software enabled

RP7900 Series Regenerative Power System

The RP7900 Series regenerative power system reduces the cost of test with highly integrated capabilities. The regenerative function enables the energy consumed to be put back onto the grid cleanly.

- Operate in a two-quadrant mode as a power source and regenerative electronic load.
- Up to 2000 V, up to ± 800 A, up to 30 kW per instrument.
- Fast output speed and sub-millisecond command processing time.
- Create up to 600 kW power or loading through easy parallel connection.
- Regeneration returns 90% of power to the grid, reducing cooling costs.
- RP7970 & RP7980 Series offer photovoltaic simulation capability.
- Connectivity includes LAN (LXI Core), USB, and GPIB.
- Compact 3U-high size



RP7952A Regenerative Power System

	Model	Power (W)	Maximum V (V)	Maximum I (A)	Number of outputs	Number of ranges	Ripple and noise mVp-p	Programming accuracy % + mV	Transient response (ms)	AC input voltage (VAC)	Size ¹
Performance	RP7951A	5000	500	± 20	1	-	500	0.03 + 60	≤ 0.5	200/208	Full RU w x 3 RU h
	RP7952A	10000	500	± 40			500	0.03 + 60			
	RP7953A	10000	950	± 20			1000	0.03 + 120			
	RP7961A	5000	500	± 20	1	-	500	0.03 + 60	≤ 0.5	400/480	Full RU w x 3 RU h
	RP7962A	10000	500	± 40			500	0.03 + 60			
	RP7963A	10000	950	± 20			1000	0.03 + 120			
	RP7931A	5000	20	± 400	1	1	30	0.02 + 2	≤ 0.3	200/208	Full RU w x 3 RU h
	RP7932A	5000	80	± 125			80	0.02 + 8			
	RP7933A	10000	20	± 800			30	0.02 + 2			
	RP7935A	10000	80	± 250			80	0.02 + 8			
	RP7936A	10000	160	± 125			200	0.02 + 16			
	RP7941A	5000	20	± 400	1	1	30	0.02 + 2	≤ 0.3	400/480	Full RU w x 3 RU h
	RP7942A	5000	80	± 125			80	0.02 + 8			
	RP7943A	10000	20	± 800			30	0.02 + 2			
	RP7945A	10000	80	± 250			80	0.02 + 8			
	RP7946A	10000	160	± 125			200	0.02 + 16			
	RP7972A	20000	1000	± 60	1	1	1500	0.04% + 75	≤ 0.3	400/480	ATE / 3U
	RP7973A	20000	2000	± 30			3000	0.04% + 150			
	RP7982A	30000	1000	± 90			1500	0.03% + 75			
	RP7983A	30000	2000	± 30			3000	0.03% + 150			

1. RU refers to rack unit of a standard 19" EIA equipment rack. The width is either $\frac{1}{2}$ or full. The height is in number of rack units which are 1.75" (44.4 mm) each. For example: a 3 RU h has a height of 5.25" (133.3 mm).

N6780 Series Source Measure Units (SMUs)

Deliver exceptional battery life

The N6781A and N6785A are 2-quadrant SMUs for battery drain analysis. They offer advance features to accurately capture the power consumption of portable, battery-powered devices from 20 to 80 W. Whether the DUT is a mobile phone, “phablet,” tablet, or pacemaker, the N6781A and N6785A’s seamless measurement ranging, programmable output resistance, and auxiliary DVM helps you deliver exceptional battery life.

The N6782A and N6786A are 2-quadrant SMUs for function test of a device from 20 to 80 W. It has the ability to modulate its output up to 100 kHz along with the capability to source and sink current.

The N6784A is a 4-quadrant SMU that provides precise sourcing and measurement for general purpose applications.

The N6780 source measure units (SMUs) are modules for the N6705C DC power analyzer mainframe for R&D, and the N6700 low-profile mainframes for ATE.

- Seamless, dynamic measurements down to nA and μV (N6781A/82 and N6785A/86 only)
- Glitch-free operation—change sourcing ranges or measurement ranges without any glitches
- Excellent transient response for stable output voltage with dynamic loads
- 2 or 4-quadrant operation: use as a DC power supply or electronic load
- Fast modulation of DC output to create arbitrary waveforms up to 100 kHz
- Computer control via GPIB, USB, and LAN (LXI Core)



BenchVue software enabled



N6705C DC power analyzer	
	Flexible/reconfigurable
Available slots	Mainframe accepts up to 4 DC power modules
Power	600 W total DC module output power
Instrument control	GPIB, USB, LAN (LXI Class C Compliant)

Specialty	N6780 SMU modules						
	Model	Power (W)	Max voltage (V)	Max current (A)	Ripple and noise (mVp-p)	Programming accuracy % + μV	Transient response (μs)
	N6781A	20	20	± 3	12	0.025 + 1800	≤ 35
	N6782A	20	20	± 3	12	0.025 + 1800	≤ 35
	N6784A	20	± 20	± 3	12	0.025 + 1800	≤ 35
	N6785A	80	20	± 8	15	0.025 + 1800	≤ 35
	N6786A	80	20	± 8	15	0.025 + 1800	≤ 35

14585A control and analysis software

The software for the DC power analyzer compliments the front panel of the N6705 mainframe, offering advanced functionality and PC control. It is a flexible R&D tool for any application. When used to control an N6781A or N6785A SMU, it can be used for advanced battery drain analysis applications.

- Control and analyze data from up to four N6705 DC power analyzer and any installed modules at once
- Easily create complex waveforms to stimulate or load down a DUT by inputting a formula, choosing from built-in, or importing waveform data.
- Data log (gapless) measurements directly to a PC
- Perform statistical analysis of power consumption

B2900 Series Precision Source / Measure Units (SMU)

The Keysight B2900 Series of Precision Source/Measure Units are compact and cost-effective bench-top Source/Measure Units (SMUs). The SMU combines the capabilities of a current source, a voltage source, a current meter and a voltage meter along with the capability to switch easily between these various functions into a single instrument. It offers:

- Test capability up to 210 V and 3 A (DC) or 10.5 A (pulsed) with a single instrument
- Best-in-class 6.5 digit source and measurement resolution down to 10 fA and 100 nV
- 10 μ s digitizing capability
- Innovative GUI facilitate fast bench-top test, debug and characterization
- Ultrafast throughput for lower cost-of-test
- Four software control options

These capabilities are ideal for a wide variety of IV (current versus voltage) measurement tasks that require both high resolution and accuracy. The innovative graphical user interface with four viewing modes (single view, dual view, graph view and roll view) improves usability and productivity of bench-top tests, debug and characterization dramatically. The Keysight B2900 series of SMU is also well-suited for production with the fast measurement speed.

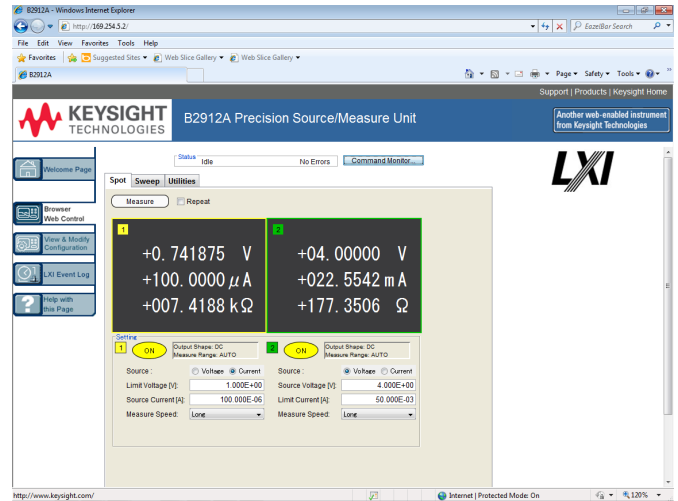


BenchVue software enabled

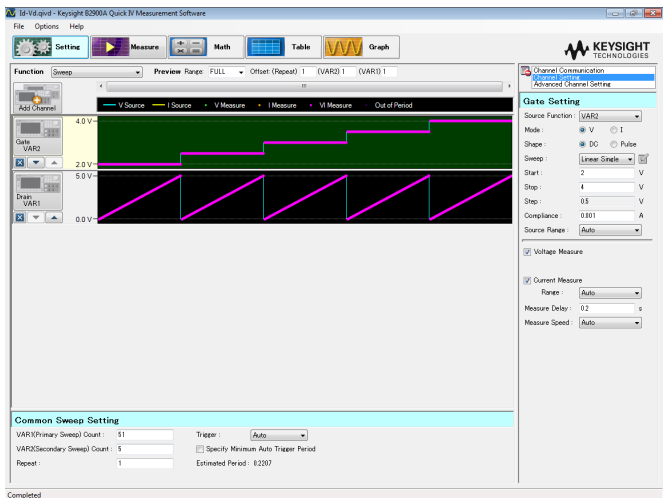
				B2901A	B2901BL	B2902A	B2910BL	B2911A	B2912A	
Specialty	Number of channels			1	1	2	1	1	2	
	Max output	Voltage		± 210 V	±21 V	± 210 V	±210 V	± 210 V	± 210 V	
		Current	DC	± 3.03 A	±1.5 A	± 3.03 A	±1.5 A	± 3.03 A	± 3.03 A	
			Pulsed	± 10.5 A	N/A	± 10.5 A	N/A	± 10.5 A	± 10.5 A	
		Power		31.8 W	31.8 W	31.8 W	31.8 W	31.8 W	31.8 W	
	Source	Max digits	Digits	5 ½	5 ½	5 ½	5 ½	6 ½	6 ½	
		Min resolution	Voltage	1 µV	1 µV	1 µV	1 µV	100 nV	100 nV	
			Current	1 pA	10 pA	1 pA	100 fA	10 fA	10 fA	
	Measurement	Max digits	Digits	6 ½	5 1/2	6 ½	5 1/2	6 ½	6 ½	
		Max resolution	Voltage	100 nV	100 nV	100 nV	100 nV	100 nV	100 nV	
			Current	100 fA	1 pA	100 fA	10 fA	10 fA	10 fA	
	Min programmable interval for List sweep/AWG waveform				20 µs		20 µs		10 µs	10 µs
	Min trigger interval for digitizing (Max sample rate)				20 µs (50,000 pts/s)	200 µs (5,000 pts/s)	20 µs (50,000 pts/s)	50 µs (20,000 pts/s)	10 µs (100,000 pts/s)	10 µs (100,000 pts/s)



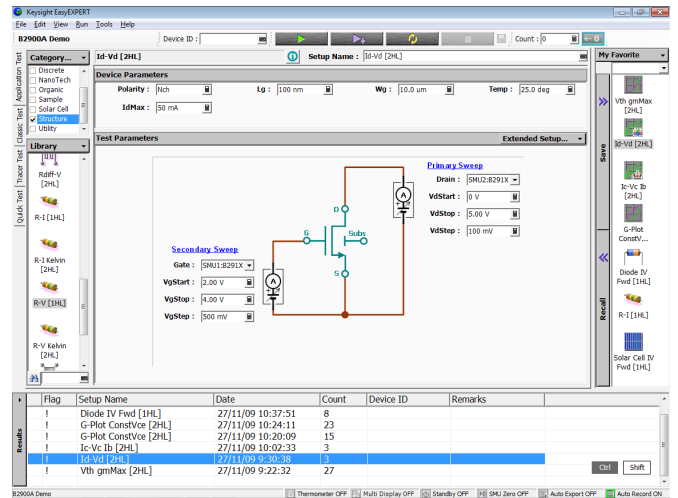
BenchVue



Graphical Web Interface



Quick I/V Measurement Software



EasyEXPERT group+

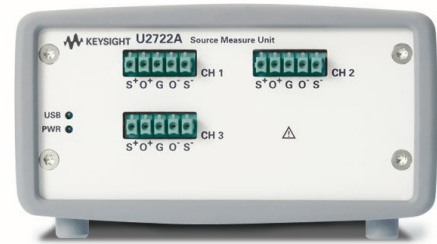
U2720 USB Modular Source Measure Units

Source and measure DC voltage/current reliably

The Keysight USB modular source measure unit (SMU) allows you to perform sweeps and make measurements using a single device. The SMU offers voltage and current programming/readback with high accuracy measurement capabilities. You can configure each of the three channels separately or in a matrix—in series or parallel—for increased power. It comes bundled with Keysight Measurement Manager (AMM) software that includes a command logger function to help you convert SCPI commands into snippets of VEE, V, C+ and C# code.



- Three-channel, four-quadrant operation ($\pm 20\text{ V}$, $\pm 120\text{ mA}$)
- High measurement sensitivity of 100 pA with 16-bit resolution
- 0.1% basic accuracy
- Low current measurement capability down to nA levels
- Embedded test script able to support three channels with coherent source and measurement capabilities (for U2723A)
- IV Curve support in the Keysight BenchVue USB Modular SMU software application (for U2723A)
- Faster rise/fall time (for U2723A)
- Hi-Speed USB 2.0 (480 Mbps)



U2722A

Model	U2722A/23A
Number of outputs	3
Output ratings (at 0 to 50 °C)	
Voltage	-20 to 20 V per channel
Current	-120 to 120 mA per channel

Model		U2722A/23A		
Specialty	Voltage programming/ readback	Range	Accuracy ¹	Resolution
		$\pm 2\text{ V}$	$0.075\% + 1.5\text{ mV}$	0.1 mV
		$\pm 20\text{ V}$	$0.05\% + 10\text{ mV}$	1 mV
	Current programming/ readback	$\pm 1\text{ }\mu\text{A}$	$0.085\% + 0.85\text{ nA}$	100 pA
		$\pm 10\text{ }\mu\text{A}$	$0.085\% + 8.5\text{ nA}$	1 nA
		$\pm 100\text{ }\mu\text{A}$	$0.075\% + 75\text{ nA}$	10 nA
		$\pm 1\text{ mA}$	$0.075\% + 750\text{ nA}$	100 nA
		$\pm 10\text{ mA}$	$0.075\% + 7.5\text{ }\mu\text{A}$	$1\text{ }\mu\text{A}$
		$\pm 120\text{ mA}$	$0.1\% + 100\text{ }\mu\text{A}$	$20\text{ }\mu\text{A}$

Specialty	Model	U2722A	U2723A	
	Rise/fall time (ms) ¹	Accuracy ¹	Accuracy ¹	
	For resistive measurement ²	± 1 μA	170.0	15.0
		± 10 μA	18.0	5.0
		± 100 μA	6.0	1.0
		± 1 mA	1.0	1.0
		± 10 mA	1.0	1.0
		± 120 mA	1.0	1.0

1. Drive 50% of 1 V or 10 V output with a resistive load. Rise time is from 10 to 90% of program voltage change at maximum current. Fall time is from 90 to 10% of program voltage change at maximum current.

2. Measurements obtained are per default bandwidth setting.

E5260A/E5270B Precision IV Analyzer/Source Monitor Unit Mainframe Series

Keysight Precision IV Analyzer Series (E5262A, E5263A, E5260A and E5270B) is the complete solution for current-voltage characterization. It supports multiple SMUs (Source/Monitor Units) for voltage/current sourcing and voltage/current measurement with the best in the class current measurement performance. It's modular architecture allows you to configure or upgrade SMU modules for available eight slots (E5260A/E5270B)

The EasyEXPERT group+ GUI based characterization software is furnished and available on your PC. It supports efficient and repeatable device characterization in the entire characterization process from measurement setup and execution to analysis and data management either by interactive manual operation or automation across a wafer in conjunction with a semiautomatic wafer prober. EasyEXPERT group+ makes it easy to perform current-voltage characterization immediately with the ready-touse measurements (application tests) furnished, and allows you the option of storing test condition and measurement data automatically after each measurement in a unique built-in database (workspace), ensuring that valuable information is not lost and that measurements can be repeated at a later date.

Powerful integration of SMU's versatile measurement capabilities and GUI based characterization software makes it the best solution for characterization and evaluation of devices, materials, semiconductors, active/passive components, or virtually any other type of electronic device with uncompromised measurement reliability and efficiency.

The Precision IV Analyzer Series is also available as a system component SMU for a rack and stuck test system. It provides the scalability and the highest measurement accuracy in the class for current-voltage measurement. It can be controlled remotely by the FLEX command set supporting the powerful measurement capabilities.



8 slot mainframe SMU configurable model (E5260A/E5270B)



Two SMU pre-fixed configuration model (E5262A/E5263A)

		Precision IV analyzer series			
		E5262A	E5263A	E5260A	E5270B
MPSMU (Medium Power SMU)	Max. output	100 V/200 mA	100 V/200 mA	100 V/200 mA	100 V/100 mA
	Min. resolution	5 pA/100 μ V	5 pA/100 μ V	5 pA/100 μ V	10 fA/0.5 μ V
HPSMU (High Power SMU)	Max. output	NA	200 V/1 A	200 V/1 A	200 V/1 A
	Min. resolution	NA	5 pA/100 μ V	5 pA/100 μ V	10 fA/2 μ V
HRSMU (High Resolution SMU)	Max. output	NA	NA	NA	100 V/100 mA
	Min. resolution	NA	NA	NA	1 fA/0.5 μ V
ASU (1) (Atto-sense Switch Unit)	Max. output	NA	NA	NA	100 V/100 mA
	Min. resolution	NA	NA	NA	0.1 fA/0.5 μ V

1. One ASU requires one HRSMU module to connect it.

B1500A Semiconductor Device Analyzer

Keysight B1500A Semiconductor Device Analyzer of Precision Current-Voltage Analyzer Series is an all in one analyzer supporting IV, CV, pulse/dynamic IV and more, which is designed for all-round characterization from basic to cutting-edge applications. It provides a wide range of measurement capabilities to cover the electrical characterization and evaluation of devices, materials, semi-conductors, active/passive components, or virtually any other type of electronic device with uncompromised measurement reliability and efficiency.

In addition, the B1500A's modular architecture with ten available slots allows you to add or upgrade measurement modules if your measurement needs change over time.

Keysight EasyEXPERT group+ GUI based characterization software is available either on the B1500A's embedded Windows 10 platform with 15-inch touch screen or on your PC to accelerate the characterization tasks. It supports efficient and repeatable device characterization in the entire characterization process from measurement setup and execution to analysis and data management either interactive manual operation or automation across a wafer in conjunction with a semiautomatic wafer prober. EasyEXPERT group+ makes it easy to perform complex device characterization immediately with hundreds of ready-to-use measurements (application tests) furnished, and allows you the option of storing test condition and measurement data automatically after each measurement in a unique built-in database (workspace), ensuring that valuable information is not lost and that measurements can be repeated at a later date. Keysight B1500A provides the complete solution for device characterization with these versatile capabilities.



B1500A

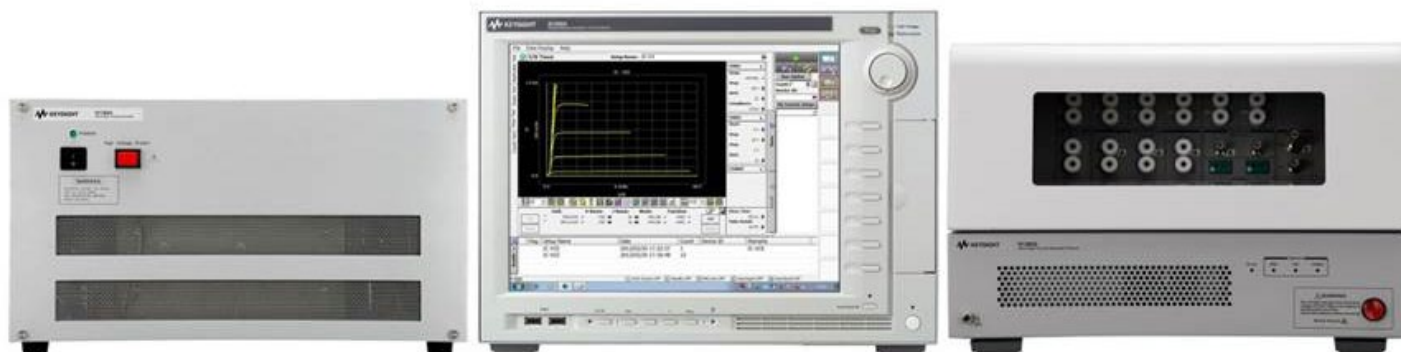
	Test coverage	Supported module	Key specifications	Key features
Specialty	For DC and pulsed IV measurement	B1510A High Power Source/Measure Unit (HPSMU) B1511B Medium Power Source/Measure Unit (MPSMU) B1517A High Resolution Source/Measure Unit (HRSMU) B1514A 50 μ s Pulse Medium Current Source/Measure Unit (MCSMU)	<ul style="list-style-type: none"> Up to 200 V/1 A Min 10 fA/2 μV resolution Up to 100 V/0.1 A Min 10 fA/0.5 μV resolution Optional ASU for 0.1 fA and IV/CV switching Up to 100 V/0.1 A Min 1 fA/0.5 μV resolution Optional ASU for 0.1 fA and IV/CV switching Up to 30 V/1 A (0.1 A DC) 	<ul style="list-style-type: none"> Min 100 μs Sampling (time domain) measurement Min 500 μs pulse width with 100 μs resolution Quasi-static capacitance voltage (QSCV) measurement with leakage current compensation Min 50 μs pulse width with 2 μs resolution Oscilloscope view for precision pulsed measurement
	For capacitance measurement	B1520A Multi-Frequency Capacitance Measurement Unit (MFCMU)	<ul style="list-style-type: none"> 1 kHz to 5 MHz frequency range 25 V built-in DC bias and 100 V DC bias with SMU and SCUU 	<ul style="list-style-type: none"> AC impedance measurement (C-V, C-f, C-t) Easy, fast and accurate IV and CV measurements with automated switching via SCUU
	For ultra-fast pulsed and transient IV measurement	B1530A Waveform Generator/Fast Measurement Unit (WGFMU)	<ul style="list-style-type: none"> 10 ns programmable resolution for waveform generation 200 Msa/s simultaneous high-speed measurement 10 V peak-to-peak output 	<ul style="list-style-type: none"> No load line effects; accurate pulsed IV measurement using SMU-based technology Enabled for advanced applications, such as NBTI/PBTI, RTN, etc.
	For pulse generation	B1525A High Voltage Semiconductor Pulse Generator Unit (HV-SPGU)	<ul style="list-style-type: none"> Up to \pm 40 V high voltage output 	<ul style="list-style-type: none"> Two-level and three-level pulsing and arbitrary waveform generation capability on each channel Ideal for non-volatile memory testing
	For ultra-fast pulsed high-k/SOI evaluation	B1542A 10 ns pulsed IV parametric test solution	<ul style="list-style-type: none"> Min 10 ns gate pulse width with 2 ns rise and fall times 1 μs current measurement resolution 	<ul style="list-style-type: none"> Accurate Id-Vd and Id-Vg measurement Easy switching between DC and pulsed measurements

B1505A Power Device Analyzer/Curve Tracer

The B1505A Power Device Analyzer/Curve Tracer is a single box solution for power device evaluation. Its broad measurement range from sub-pA to 10 kV/1500 A enables precise $\mu\Omega$ on-resistance measurements. Additionally, its 10 μ s fast pulse capability enables complete power device characterization. This allows evaluation of new power devices such as IGBT and wide band-gap materials such as silicon carbide (SiC) and gallium nitride (GaN).

- Very wide current, voltage operating range up to 1500 A, 10 kV
- Supporting package and on-wafer device
- Accurate sub-picoamp level current measurement and $\mu\Omega$ on-resistance measurement
- 10 μ s high power narrow pulse measurement
- Three-terminal capacitance (Ciss, Coss, Crss) measurement at up to 3000 V DC bias voltages and independent terminal capacitance (Cgs, Cgd, Cds) measurement
- Gate charge (Qg) measurement for Nch MOSFET and IGBT
- GaN current collapse measurement
- Automated thermal test from -50 °C to +250 °C
- Upgradable and scalable hardware architecture
- Oscilloscope View for current and voltage pulse verification
- EasyEXPERT group+ software simplifies data management and data analysis

B1505A modules	Description	Key specification	Max number
B1510A	High power SMU	200 V, 1 A (DC) 10 fA resolution	4
B1511B	Medium power SMU	100 V, 100 mA (DC) 10 fA resolution	10
B1512A	High current SMU	20 V, 20 A (pulsed) 30 V, 1 A (DC)	2
B1513C	High voltage SMU	3000 V, 8 mA (pulse and DC)	5
B1514A	Medium current SMU	30 V, 1 A (pulsed) 30 V, 100 mA (DC)	5
B1520A	Multi-frequency CMU	1 kHz to 5 MHz, ± 25 V (internal bias)	1
External modules	Description	Key specification	
N1265A	Ultra high current expander/Fixture	± 1500 A/60 V (pulsed)	
N1266A	HVSMU current expander	± 1500 V/2.5 A (pulsed) ± 2200 V/1.1 A (pulsed)	
N1267A	High voltage/high current fast switch	± 3000 V, ± 20 A (pulsed) Minimum transition (OFF to ON): 20 μ s	
N1268A	Ultra high voltage unit	10 kV/10 mA (DC) 10 kV/20 mA (pulsed)	
Accessories	Description		
N1258A	Module selector		
N1259A	Test fixture		
N1260A	High voltage bias-T		
N1271A	Thermal test enclosure		
N1272A	Device capacitance selector		
N1273A	Capacitance test fixture		
N1274A	On-wafer gate charge measurement adapter for 20 A/3 kV		
N1275A	On-wafer gate charge measurement adapter for N1265A		



B1506A Power Device Analyzer for Circuit Design

The B1506A Power Device Analyzer for Circuit Design is a complete solution that can help power electronic circuit designers maximize the value of their power electronics products by enabling them to select the correct power devices. It can evaluate all relevant device parameters under a wide range of operating conditions, including IV parameters such as breakdown voltage and on-resistance, as well as three terminal FET capacitances, gate charge and power loss.

The prices of the IV packages (H20, H50, H70) are comparable to those of conventional curve tracers, and with the B1506A you get additional advanced features. You can also upgrade any of the B1506A IV packages (H20, H50, H70) to either increase the current range or add CV/Qg measurement capability (options H21, H51, H71).

- Wide current and voltage operating range up to 1500 A, 3000 V
- 10 μ s high power narrow pulse measurement
- Automated thermal test from -50 °C to +250 °C
- Three-terminal capacitance (Ciss, Coss, Crss) measurement at up to 3000 V DC bias voltages and independent terminal capacitance (Cgs, Cgd, Cds) measurement
- Gate charge (Qg) measurement for NcH MOS and IGBT
- Power loss calculation
- Menu driven easy-to-use user interface (Easy Test Navigator – ETN)
- Quick and automatic device datasheet generation
- Oscilloscope view for current and voltage pulse verification
- Cost effective IV package (H20, H50, H70)

Category	Parameters
Threshold voltage	V(th), Vge(th)
Transfer characteristics	Id-Vgs, Ic-Vge, gfs
On resistance	Rds-on, Vce(sat)
Gate leakage current	Igss, Igcs
Output leakage current	Idss, Ices
Output characteristics	Id-Vds, Ic-Vce
Breakdown voltage	BVds, BVces
Gate charge (for NcH MOS and IGBT) ¹	Qg, Qg(th), Qgs, Qgd, Qsw, Qsync, Qoss
Device capacitance ¹	Ciss, Coss, Crss, Cgs, Cgd, Cies, Coes, Cres
Power loss calculation ¹	Driving loss, Switching loss, Conduction loss

1. Only available on B1506A-H21/H51/H71.



Model number	Option	Description
B1506A		Power Device Analyzer for Circuit Design
	H20	Opt H20 - 20 A/3 kV/Thermal Fixture Package
	H50	Opt H50 - 500 A/3 kV/Thermal Fixture Package
	H70	Opt H70 - 1500 A/3 kV/Thermal Fixture Package
	H21	Opt H21 - 20 A/3 kV/C-V/Gate Charge/Thermal Fixture Package
	H51	Opt H51 - 500 A/3 kV/C-V/Gate Charge/Thermal Fixture Package
	H71	Opt H71 - 1500 A/3 kV/C-V/Gate Charge/Thermal Fixture Package
	T01	Thermal Test Enclosure (Thermostream Compatible)

N6783A Application-Specific Modules

The Keysight N6783A-BAT Battery Charge/Discharge Module is a basic, 2-quadrant module designed to be used by battery-powered (mobile) device designers. The N6783A-BAT's 2-quadrant operation allows it to act as a power supply to charge the battery or as an electronic load to discharge the battery. When used in the N6705C DC Power Analyzer mainframe along with the 14585A Control and Analysis software, short-and long-term measurements for battery validation are made easy.

The Keysight N6783A-MFG Mobile Communications DC Power Module offers advanced features specifically for testing battery-powered (mobile) devices in manufacturing. The N6783A-MFG offers fast, accurate measurements and excellent voltage transient response to address the unique challenges associated with testing mobile wireless devices.

The N6783A-BAT and N6783A-MFG modules can be used with the N6700 low-profile mainframes for ATE and with the N6705C DC power analyzer mainframe for R&D.

- Optimized for basic battery charge/discharge application (N6783A-BAT)
- Optimized for mobile device manufacturing test (N6783A-MFG)
- Fast transient response ensures stable power supply output voltage
- Digitizing measurement system for flexible, accurate current measurements
- USB, LAN (LXI Core), and GPIB interfaces



N6700C

N6700 modular power system mainframe		
Model	Power, (W)	Max # modules
N6700C low-profile (ATE)	400	4
N6701C low-profile (ATE)	600	4
N6702C low-profile (ATE)	1200	4
N6705C DC power analyzer (R&D)	600	4

N6783 application-specific modules							
Specialty	Model	Power (W)	Max voltage (V)	Max current (A)	Ripple and noise (mVp-p)	Programming accuracy % + μ V	Transient response (μ s)
	N6783A-BAT	24	8	+3 to -2 A	8	0.1 + 10000	≤ 45
	N6783A-MFG	18	6	+3 to -2 A	8	0.1 + 10000	≤ 45



N6705C

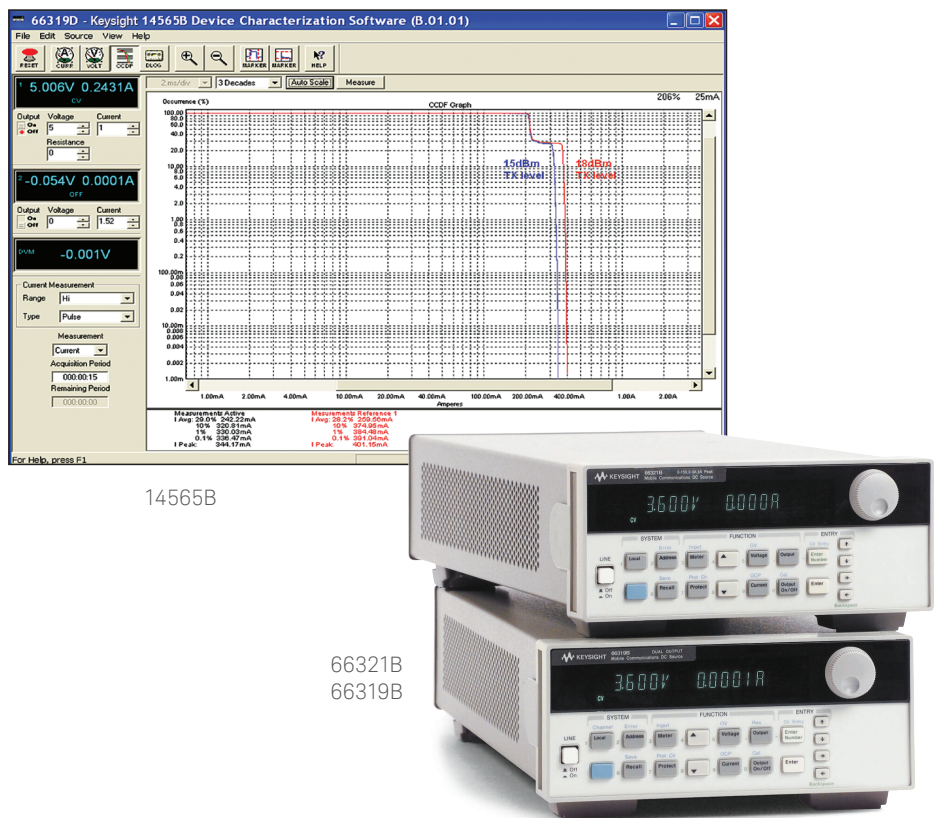


BenchVue software enabled

66300 Mobile Communications DC Sources

66300 mobile communications power supplies are designed and optimized to help you test mobile wireless devices. They provide the DC sourcing, current sinking, and measurement capabilities to address the unique challenges of simulating batteries and battery packs and measuring the current drawn by your device under test.

- Fast DC power source to replace and simulate the battery during testing
- Fast voltage transient response ensures maximum test-system throughput by minimizing device shutdowns
- Dynamic measurement system enables accurate current measurement from μA to A
- When the 66319B/D and 66321B/D are coupled with the 14565B Software, it gives you a powerful analysis tool to optimize your device designs for long battery life



Keysight 14565B device characterization software

- Graphical user software—no programming required
- 3 modes of operation: waveform capture, data logging, CCDF statistical analysis
- Visualization and analysis tools to help you identify anomalies and characterize and quantify battery drain to optimize your design
- Automation capability allows you to control the 14565B from other programs to automate and synchronize DUT activity with current drain measurements

Specialty	Model	Power (W)	Maximum V (V)	Maximum I (A)	Number of outputs		Number of ranges		Ripple and noise mVp-p	Programming accuracy % + mV	Transient response (μs)	Size ¹ $\frac{1}{2}$ RU w x 2 RU h
	66309B/D	45	15	3 (5 A peak)	2	1	6	1	6	0.05 + 10	< 35	
	66311B	45	15	3 (5 A peak)	1	1	6	1	6	0.05 + 10	< 35	
	66319B/D	45	15	3 (5 A peak)	2	1	6	1	6	0.05 + 10	< 20	
	66321B/D	45	15	3 (5 A peak)	1	1	6	1	6	0.05 + 10	< 20	
	66332A	100	20	5	2	1	3	1	3	0.05 + 10	< 100	

1. RU refers to rack unit of a standard 19" EIA equipment rack. The width is either $\frac{1}{2}$ or full. The height is in number of rack units which are 1.75" (44.4 mm) each. For example: a 3 RU h has a height of 5.25" (133.3 mm).

NEW PV8900 Series Photovoltaic Array Simulator

Maximize the performance of your inverter

Keysight's photovoltaic (PV) simulator includes the hardware and software to test a single maximum power point tracking (MPPT) inverter accurately. Test PV voltages up to 2000 V and 60 A with a single supply. DG9000 Series software licenses are available to test string inverter with 4-, 8-, or 12-MPPT channels. Most string inverter solutions test one MPPT channel at a time – leading to test inaccuracies. Keysight's DG9000 advanced PV inverter software can test up to 12 MPPT channels simultaneously.

- Output up to 2000 V and 30 kW in a 3U package
- Test up to 600 kW channels with parallel units
- Select built-in curves or create a custom table using up to 1024 points
- DG9000 Series software simplifies single and multi-MPPT inverter tests
- Use as a standard 30 kW autoranging supply for DC sourcing
- Connectivity includes LAN (LXI Core), USB, and GPIB



Characteristic		PV8921A / PV8922A	PV8931A / PV8932A
AC input ratings	Phase and range	3 phase; 380 – 480 VAC ±10%	
	Frequency	50 / 60 Hz	
	Input VA	23 kVA	34 kVA
	Connections	L1, L2, L3, N, PE	
	Power factor ⁶	0.99	
Output terminal isolation	No output terminal may be more than ±2000 VDC from any other terminal or chassis ground.		
Typical weight		82 lbs. (37.3 kg)	126 lbs. (57.2 kg)

Specification		PV8921A	PV8922A	PV8931A	PV8932A
DC output ratings	Voltage	1500 V	2000 V	1500 V	2000 V
	Current	30 A	30 A	60 A	30 A
	Power	20 kW	20 kW	30 kW	30 kW
Output voltage ripple and noise	CV p-p ¹	3 V	3 V	2.25 V	3 V
	CV rms ²	400 mV	400 mV	300 mV	400 mV
Load regulation	Voltage ³	100 mV	100 mV	75 mV	100 mV
	Current	4 mA	4 mA	8 mA	4 mA
Programming & measurement accuracy ⁴	Voltage	0.04%+150mV	0.04%+150mV	0.03%+100mV	0.03%+150mV
	Current	0.03%+3mA	0.03%+3mA	0.03%+6mA	0.03%+3mA
Transient response ⁵					
Recovery time		300 μ s	300 μ s	300 μ s	300 μ s
Settling band		15 V	20 V	15 V	20 V

1. From 20 Hz to 20 MHz (-3 dB bandwidth) with resistive load, terminals ungrounded, or either terminal grounded
2. From 20 Hz to 10 MHz (-3 dB bandwidth) with resistive load, terminals ungrounded, or either terminal grounded
3. Also applies when remote sensing with a ≤ 1 V drop per load lead
4. Percent of value + offset; at $25^\circ\text{C} \pm 5^\circ\text{C}$ after a 30 minute warm-up; measurement NPLC=1; valid for 1 year
5. Time to recover to within the settling band following a step change from 40% to 90% and 90% to 40% of full load at Comp 0, with a 40 μ s current rise and fall time
6. At nominal input and rated power

E4360 Modular Solar Array Simulation

The modular solar array simulator (SAS) is a DC power source that simulates the output characteristics of a solar array. The SAS is primarily a current source with very low output capacitance. It is capable of simulating the I-V curve of different arrays under different environmental conditions (temperature, age, etc.). You can set the I-V curve from the front panel or program it over GPIB, LAN (LXI Core) or USB.

- Accurate simulation of any type of solar array
- Small size: up to 2 outputs in 2U of rack space
- High output power—up to 600 W per output
- Fast I-V curve changes to simulate eclipse or spin
- 14360A System Control Tools software included to simplify control of multiple solar array simulators in a system
- Custom turn-key system or individual instruments available



E4360 modular solar array simulator mainframes					
Specialty	Model	Power, W	Modules	Max # of modules	Physical size ¹
	E4360A	1200	Choose from E4361A and E4362A	2	Full RU w x 2 RU h
	E4367A	1200	Pre-configured with 2x E4361A	2	Full RU w x 1 RU h
	E4368A	1200	Pre-configured with 2x E4362A	2	Full RU w x 1 RU h

1. RU refers to rack unit of a standard 19" EIA equipment rack. The width is either ½ or full. The height is in number of rack units which are 1.75" (44.4 mm) each. For example: a 3 RU h has a height of 5.25" (133.3 mm).

E4360 modules							
Specialty	Model	Power, W	Max Voc	Max Isc	Number of outputs	Ripple and noise mVp-p	Programming accuracy % + mV
	E4361A	510	65	8.5	1	125	0.075 + 10
	E4362A	600	130	5	1	195	0.075 + 20

PA2201A and PA2203A IntegraVision Power Analyzers

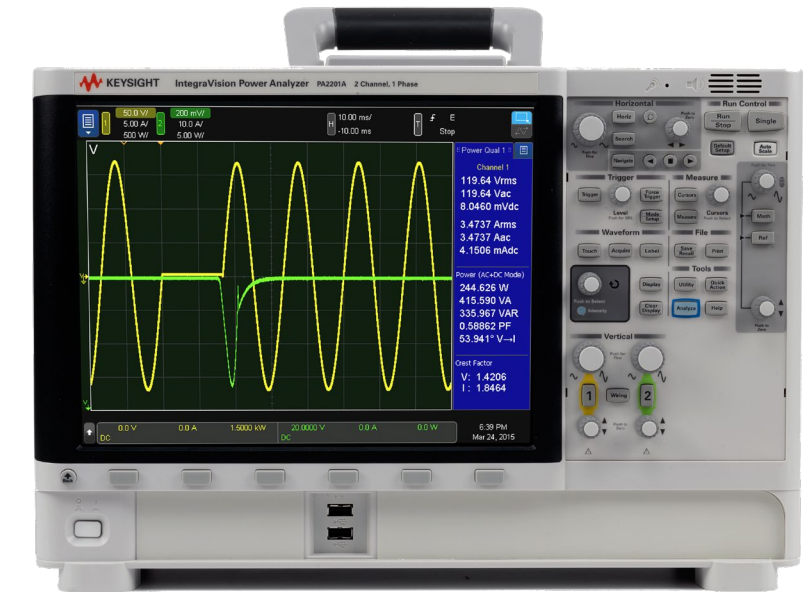
PA2201A 2-channel

PA2203A 4-channel

The Keysight IntegraVision power analyzer is an intuitive combination of accurate power measurements and touch-driven oscilloscope visualization. Within a single instrument, it delivers the dynamic views you need to see, measure and prove the performance of your design.

Make all of your critical power measurements with one instrument

- Achieve power analyzer accuracies and scope-like waveform visualization with reduced setup time
- Address multiple test scenarios with the flexibility of wide-ranging, isolated inputs
- Visualize transients, in-rush currents and state changes with a high-speed digitizer that captures voltage, current and power in real-time
- Analyze voltage, current and power in the time and frequency domains
- Explore your design and gain new insights through the 12.1"/310 mm high-resolution display with touch interface
- Save space on your bench with minimum-depth form factor



Function	Description
Basic power accuracy (50/60 Hz)	0.05% of reading + 0.05% of range
Power channels (voltage and current)	PA2201A: 2 channels PA2203A: 4 channels
Voltage measurement bandwidth (-3 dB)	2.5 MHz (-3 dB)
Current measurement bandwidth (2 A or 50 A Input)	100 kHz (-3 dB)
Current measurement Bandwidth (External Input)	2.5 MHz (-3 dB)
Maximum voltage	1000 Vrms (2000 V peak)
Maximum current	Direct input: 2 Arms (6 A peak) or 50 Arms (100 A peak) External transducer: 10 Vrms (30 V peak)
Record size	Maximum 1.5 M points on each waveform simultaneously
Digitizing speed	Maximum 5 M samples/second at 16 bits on each waveform simultaneously
Display size and type	12.1-inch capacitive multi-touch/gesture enabled display



BenchVue software enabled

CX3300A Series Device Current Waveform Analyzers

Measure dynamic current and voltage with confidence

The Keysight CX3300A series is an all-in-one measurement and analysis solution to solve your power rail, power delivery network, and power integrity challenges. The CX3300A series integrates an oscilloscope's bandwidth and sampling rate, a DMM's sensitivity, and data logger's extended duration measurement recording with waveform analytics to reveal accurate current and voltage waveforms.

- Wide bandwidth at 200 MHz
- High-resolution/high-speed sampling at 14-bit (1GSa/s)/ 16-bit(75MSa/s)
- Low noise and a wide dynamic range with high sensitivity from sub-nA and sub-μV
- Long-duration measurement capabilities up to 100 hours maximum
- Waveform analytics, current profiler and more efficient analysis functions on mainframe and PC



		CX3322A	CX3324A
Number of analog channels		2	4
Number of digital channels		N/A	8 with CX1152A
Maximum analog bandwidth ¹		50 MHz, 100 MHz, or 200 MHz	
Maximum memory depth ¹		4 Mpts, 16 Mpts, 64 Mpts, or 256 Mpts	
Measurement mode	Scope mode	Default	
	Data logger mode	Option ²	

1. Maximum bandwidth and memory depth are selectable at ordering, upgradable by license.
2. Data logger mode is optional, upgradable by license

DC Power Supply Discontinuance and Replacement Products

Keysight power products have been available for more than 50 years, and DC power supplies have been changing the way engineers prove their design, understand the issues and ensure product quality. Our power products are continually upgraded and ready for your application – and we are now offering optimal replacement choices in voltage, current, capability and performance.

6060 Series Move to the N3300 DC Electronic Load Mainframe and Modules

If you have a **6060B** or **6063B**, your replacement product is the **N3301A** with **N3303/4A**

6030 Series Move to the N8700 basic performance, N6900/7900 series advanced capabilities or N6700 multiple output capabilities

If you have any 6030/1/2/3/4/5/8A models, your replacement product is:

- **6030A** – recommended substitute products are **N8761A**, **N8921A**, **N8941A**, **N6977A**, **N7977A**
 - **6031A** – recommended substitute products are **N8920A**, **N8940A**, **N8734A**, **N8756A**, **N6971A**, **N7971A**
 - **6032A** – recommended substitute products are **N8737A**, **N6972A**, **N6973A**, **N7972A**, **N7973A**
 - **6033A** – recommended substitute products are **N5744A**, **N6700C** w/1 x **N6753A**
 - **6035A** – recommended substitute product is **N8742A**
 - **6038A** – recommended substitute products are **N5747A**, **N6700C** w/1 x **N6754A**
-

6620 Series Move to the N6700 series offers a multiple output capability with range of performance with modern I/O – LAN, USB, GPIB

If you have any 6621/2/3/4/5/6/7/8/9A models, your replacement product is:

- **6621A** – recommended substitute products are **N6700C** w/2 x **N6752A**
 - **6622A** – recommended substitute products are **N6700C** w/2 x **N6752A**
 - **6623A** – recommended substitute products are **N6700C** w/2 x **N6751A** and **N6752A**
 - **6624A** – recommended substitute products are **N6700C** w/4 x **N6751A**
 - **6625A** – recommended substitute products are **N6700C** w/1 x **N6761A** and 1 x **N6762A**
 - **6626A** – recommended substitute products are **N6700C** w/2 x **N6761A** and 2 x **N6762A**
 - **6627A** – recommended substitute products are **N6700C** w/4 x **N6751A**
 - **6628A** – recommended substitute products are **N6700C** w/2 x **N6762A**
 - **6629A** – recommended substitute products are **N6700C** w/4 x **N6762A**
-

DC Power Supply Discontinuance and Replacement Products (Continued)

66000 Series	Move to the N6700 series offers a multiple output capability with range of performance with modern I/O – LAN, USB, GPIB
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If you have any 66101A/102A/103A/104A/105A/106A models, your replacement product is:

- **66101A** - recommended substitute products are **N6700C** w/N6753A, N6754A, N6763A or N6764A
- **66102A** - recommended substitute products are **N6700C** w/N6753A, N6754A, N6763A, N6764A, N6773A or N6774A
- **66103A** - recommended substitute products are **N6700C** w/N6754A, N6764A, N6774A or N6775A
- **66104A** - recommended substitute products are **N6700C** w/N6754A, N6764A or N6775A
- **66105A** - recommended substitute products are **N6700C** w/N6777A
- **66106A** - recommended substitute products are **N6700C** w/2 x N6776A in series

6600 Series (661X, 663X, 664X, 665X)	Move to the N6700 series offers a multiple output capability with range of performance with modern I/O – LAN, USB, GPIB
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If you have any 661X/2X/3X/4X/5X models, your replacement product is:

- **6611C** - recommended substitute products are **N6700C** w/**N6732B, N6751A**
- **6612C** - recommended substitute products are **N6700C** w/**N6733B, N6751A**
- **6613C** - recommended substitute products are **N6700C** w/**N6735B, N6751A**
- **6614C** - recommended substitute products are **N6700C** w/**N6776A**
- **6631B** - recommended substitute products are **N6700C** w/**N6742B** or **N6752A**
- **6632B** - recommended substitute products are **N6700C** w/N6743B or **N6752A**
- **6633B** - recommended substitute products are **N6700C** w/**N6752A**
- **6634B** - recommended substitute products are **N6700C** w/**N6776A**
- **6641A** - recommended substitute products are **N6700C** w/**N6754A** or **N6764A**
- **6642A** - recommended substitute products are **N6700C** w/**N6753A, N6754A, N6763A, N6764A, N6773A** or **N6774A**
- **6643A** - recommended substitute products are **N6700C** w/**N6754A, N6764A, N6774A** or **N6775A**
- **6644A** - recommended substitute products are **N6700C** w/**N6754A, N6764A** or **N6775A**
- **6645A** - recommended substitute products are **N6700C** w/**N6777A**
- **6651A** - recommended substitute products are **N6700C** w/**N6755A** or **N6765A**
- **6652A** - recommended substitute products are **N6700C** w/**N6755A** or **N6765A**
- **6653A** - recommended substitute products are **N6700C** w/**N6756A** or **N6766A** (500 W only)
- **6654A** - recommended substitute products are **N6700C** w/**N6756A** or **N6766A** (500 W only)
- **6655A** - recommended substitute products are **N6700C** w/2 x **N6777A** in parallel

DC Power Supply Discontinuance and Replacement Products (Continued)

6600 Series (667X, 668X, 669X) Move to: **N8700 Series** offering basic performance at lower cost with modern I/O - LAN, USB, GPIB; or the **N6900/7900 Series** offers advanced capabilities and higher performance; or the **N8900 Series** offers high power and basic performance with modern I/O - LAN, USB and GPIB

If you have any 667X/8X/9X or E4356A models, your replacement product is:

- **6671A** - recommended substitute products are **N8731A, N8732A, N8733A, N8925A, N8945A, N6970A** or **N7970A**
- **6672A** - recommended substitute products are **N8734A, N8920A, N8940A, N6971A** or **N7971A**
- **6673A** - recommended substitute products are **N8736A, N8920A, N8940A, N6972A** or **N7972A**
- **6674A** - recommended substitute products are **N8737A, N8920A, N8940A, N6973A** or **N7973A**
- **6675A** - recommended substitute products are **N8740A, N8921A, N8941A, N6976A** or **N7976A**
- **6680A** - recommended substitute products are 2 x **N8931A** or 2 x **N8951A** in parallel
- **6681A** - recommended substitute products are 2 x **N8925A** or 2 x **N8945A** in parallel
- **6682A** - recommended substitute products are **N8754A, N8925A** or **N8945A**
- **6683A** - recommended substitute products are **N8755A, N8920A** or **N8940A**
- **6684A** - recommended substitute products are **N8756A, N8920A** or **N8940A**
- **6690A** - recommended substitute products are **N8931A** or **N8951A**
- **6691A** - recommended substitute products are **N8925A** or **N8945A**
- **6692A** - recommended substitute products are **N8920A** or **N8940A**
- **E4356A** - recommended substitute products are **N6974A** or **N7974A**

6800B Series Move to the **6800C series** of performance AC sources that provides a complete AC test solution at power levels up to 1750 VA with additional I/O - USB and LAN

If you have any 6811B, 6812B or 6813B models, your replacement product is:

- **6811B** - recommended substitute product is **6811C**
- **6812B** - recommended substitute product is **6812C**
- **6813B** - recommended substitute product is **6813C**

AC6800A Series Move to the **AC6800B series** of basic AC sources that meet your basic AC power needs with stable, reliable power levels up to 4000 VA

If you have any AC6801A, AC6802A, AC6803A or AC6804A models, your replacement product is:

- **AC6801A** - recommended substitute product is **AC6801B**
- **AC6802A** - recommended substitute product is **AC6802B**
- **AC6803A** - recommended substitute product is **AC6803B**
- **AC6804A** - recommended substitute product is **AC6804B**

E36100A Series Move to the **E36100B series** of DC power supply that has improved ripple noise performance and is rackmount-able

If you have any E36102A, E36103A, E36104A, E36105A or E36106A models, your replacement product is

- **E36102A** - recommended substitute product is **E36102B**
- **E36103A** - recommended substitute product is **E36103B**
- **E36104A** - recommended substitute product is **E36104B**
- **E36105A** - recommended substitute product is **E36105B**
- **E36106A** - recommended substitute product is **E36106B**

For more product information, visit www.keysight.com/find/PowerDiscontinuance.

Learn more at: www.keysight.com

For more information on Keysight Technologies' products, applications or services, please contact your local Keysight office. The complete list is available at: www.keysight.com/find/contactus

