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Agilent Power Products

Selection Guide for Distribution

A guide to power product solutions to match your test and measurement needs

Agilent Technologies

Introduction

No surprises from Agilent –

delivering high-quality power products for more than 40 years.

Since power supplies are used in such a wide variety of applications, Agilent offers a full line of DC and AC power supplies to meet your test requirements. Our family starts with high-value basic power supplies and goes up to high-performance products. In addition, we have specialty power supplies and three modular power supplies to give you the flexibility you need in test system development. For whatever application or industry you work in, Agilent power supplies offer excellent performance and high reliability to give you confidence when making your power supply purchase. Because Agilent knows how to make power supplies.

In this guide:

Power Supply Categories / 3

Selecting the Right DC Power Supply / 4 - 7

DC Voltage and Current At a Glance / 8 - 9

DC Power Supply Details

- New **E3600 and U8000 Series Basic Power Supplies** / 10
- **6030 Series Basic Autoranging DC Power Supplies** / 11
- **6500 and 6600 Series High-Performance DC Power Supplies** / 12
- **N5700 and N8700 Series Basic DC Power Supplies** / 13
- **N6700 Low-Profile Modular Power System** / 14
- New **High-Power N6700 DC Power Modules** / 14
- **N6705B DC Power Analyzer** / 15
- **66000 Modular Power System** / 16

DC Electronic Loads / 17

AC Sources / 18

Application-Specific Power Products

- **U2720 USB Modular Source Measure Units /** 19

Power Supply Categories

Basic

Affordable, quiet and stable power supplies for both manual and simple computer-controlled operation. The Agilent line of basic 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, accuracy 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.

Modular

Agilent offers fully programmable power supplies in a modular format: the N6700 low-profile modular power system, N6705B 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

Agilent provides AC power products that provide precise power, accurate measurements, and efficient analysis for AC power applications. These one-box solutions are offered in a variety of power levels to help you test a variety of AC-powered devices.

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. Agilent offers two families of electronic loads—a single output family and a modular, multiple output family.

Selecting the Right DC Power Supply For Your Application

When you need just a **basic power supply**, it's quite easy to pick the right one based on your voltage and current requirements. The voltage and current tables are found on pages 8 – 9. 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 19 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 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

Use the ripple and noise specification to determine what, if any, affects these variations will have on your circuit or device.

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.

LOW ripple and noise <10 mVp-p		MEDIUM ripple and noise 5 - 500 mVp-p	
E3600 Series	*p10*	**6671A-92A**	*p12*
U8031-32A	*p10*	**66101A-06A**	*p16*
6541A-55A	*p12*	**N5700 Series**	*p13*
6611C-55A	*p12*	**N8700 Series**	*p13*
N6751A-66A	*p14*	**N6731B-46B**	*p14*
		N6773A-77A	*p14*
		U8001A-02A	*p10*

PROGRAMMING ACCURACY

Use programming accuracy to determine if the power supply can produce a voltage and current within the precision needed by your device.

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.

HIGH accuracy <0.03%		MEDIUM accuracy >0.05%	
6620 Series	*p12*	**6600 Series**	*p12*
N6751A-66A	*p14*	**66100 Series**	*p16*
		E3600 Series	*p10*
		N5700 Series	*p13*
		N8700 Series	*p13*
		N6731B-46B	*p14*
		N6773A-76A	*p14*
		U8000 Series	*p10*

OUTPUT RESPONSE

Use this specification to select the power supply that is fast enough for your application.

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%.

FAST output response <15 ms		MEDIUM output response <200 ms	
6610A-55A	*p12*	**6671A-92A**	*p12*
N6751A-66A	*p14*	**66100 Series**	*p16*
		E3600 Series	*p10*
		N5700 Series	*p13*
		N8700 Series	*p13*
		N6731B-46B	*p14*
		N6773-77A	*p14*
		U8000 Series	*p10*

CONTROL

COMPUTER INTERFACE

Specify power supplies with the appropriate hardware and software interface for computer control.

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-C). Software interfaces include the SCPI language and drivers such as IVI-C, IVI-COM, and VX*plug&play*.

Manual only		Computer and manual control
6500 Series	*p12*	**All others**
U8000 Series	*p10*	
E3610A-30A	*p10*	

ANALOG VOLTAGE CONTROL SIGNAL

Specify a power supply with an analog input whenever you need to amplify the power or need to track an analog voltage.

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.

WITH analog input		WITHOUT analog input
6540 Series	*p12*	**All others**
6550 Series	*p12*	
6640 Series	*p12*	
6650 Series	*p12*	
N5700 Series	*p13*	
N8700 Series	*p13*	

OUTPUT MEASUREMENTS

MEASURE V & I OUTPUT

Specify power supplies with built-in measurements whenever you need to check the actual voltage and current.

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.

Built-in measurement
All models

PACKAGING

PHYSICAL SIZE

Use the size specification to match bench or system use.

	HALF rack	FULL rack
Agilent 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 in 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.	**E3600 Series** *p10* **6611C-14C** *p12* **U8000 Series** *p10*	**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.

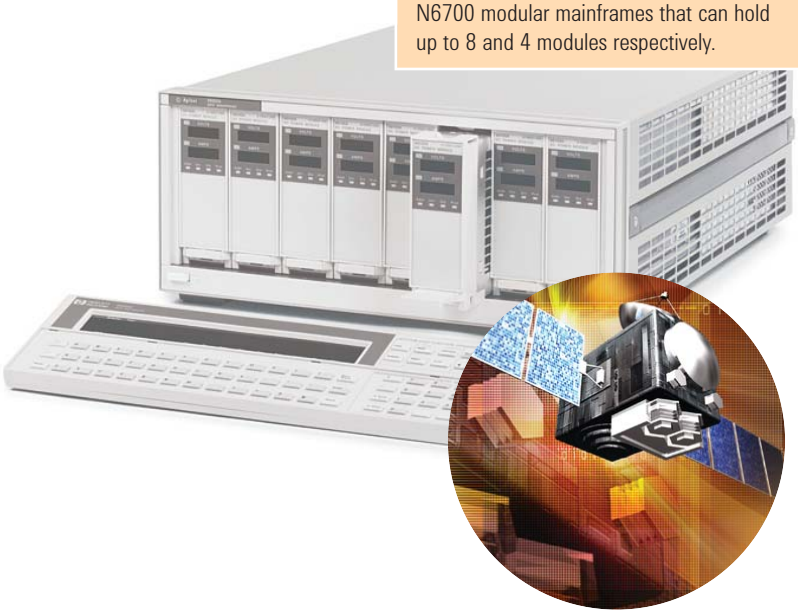
	FRONT terminals	REAR terminals
The output terminals can be located on the front of the power supply or the rear. System and high-current power supplies have their outputs located on the rear panel while bench and some low current power supplies have outputs on the front.	**E3600 Series** *p10* **U8000 Series** *p10* **6611C-14C** *p12* **N6705B** *p15*	**All others**

NUMBER OF OUTPUTS

Specify multiple outputs per unit when you need to save space on the bench or in a system rack.

	SINGLE outputs	MULTIPLE outputs
Agilent 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.	**All others**	**E3620A-31A** *p10* **E3646A-49A** *p10* **U8031A-32A** *p10* **N6700 mfr** *p14* **66000 mfr** *p16* **6620 Series** *p12*

mfr = mainframes for the N6700 and 66000 modular power supplies



SPECIALTY

DUT PROTECTION

Select power supplies with DUT protection whenever your load may be damaged by over voltage or over current.

	WITH DUT protection	WITHOUT 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**	**E3610A-12A, E3620A-31A** *p10*

POWER ARBITRARY WAVEFORMS

Select power supplies with a LIST feature whenever your device requires the power input to change over time.

	WITH LIST memory	WITHOUT LIST memory
To produce an output that changes over time, some power supplies have a built-in memory that can be pre-programmed with a list of set-points. This eliminates a step-by-step interaction between the host computer and the power supply while simplifying the test program.	**N6705B** *p15* **N6700 Series** *p14* **66000 Series** *p16*	**All others**

OUTPUT DISCONNECT OR POLARITY REVERSAL

Select power supplies with optional output relays when your application requires power to be physically disconnected from the device.

	WITH optional relays	WITHOUT optional relays
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.	**N6700 Series** *p14* **66000 Series** *p16* **6630 Series** *p12*	**All others**

DC Voltage and Current At a Glance

			Voltage ranges: 5 V to 40 V		
Model numbers	**Page**	**Outputs**	**5 to 8 V**	**12 to 20 V**	**21 to 40 V**
6611C-14C	**12**	1	0-8 V, 5 A (6611C)	0-20 V, 2 A (6612C)	
6621A-24A, 6627A	**12**	2 to 4	0-7 V, 5 A or 0-20 V, 2 A	0-7 V, 10 A or 0-20 V, 4 A	0-20 V, 2 A or 0-50 V, 0.8 A
6625A-26A, 6628A-29A	**12**	2 to 4	0-7 V, 15 mA or 0-50 V, 500 mA	0-16 V, 200 mA or 0-50 V, 1 A	
6631B-34B	**12**	1	0-8 V, 10 A (6631B)	0-20 V, 5 A (6632B)	
6541A-45A and 6641A-45A	**12**	1	0-8 V, 20 A (65/6641A)	0-20 V, 10 A (65/6642A)	0-35 V, 6 A (65/6643A)
6551A-55A and 6651A-55A	**12**	1	0-8 V, 50 A (65/6651A)	0-20 V, 25 A (65/6652A)	0-35 V, 15 A (65/6653A)
6571A-75A and 6671A-75A	**12**	1	0-8 V, 220 A (65/6671A)	0-20 V, 100 A (65/6672A)	0-35 V, 60 A (65/6673A)
6680A-84A	**12**	1	0-5 V, 875 A (6680A) 0-8 V, 580 A (6681A)	0-21 V, 240 A (6682A)	0-32 V, 160 A (6683A) 0-40 V, 128 A (6684A)
6690A-92A	**12**	1		0-15 V, 440 A (6690A)	0-30 V, 220 A (6691A)
66001A-6A	**16**	1 to 8*	0-8 V, 16 A (66601A)	0-20 V, 7.5 A (66602A) 0-20, 5 A (66603A)	0-35, 4.5 A (66603A)
E3610A-12A	**10**	1	0-8 V, 3 A (E3610A)	0-15 V, 2 A (E3610A) 0-20 V, 1.5 A (E3611A)	0-35 V, 0.85 A (E3611A)
E3614A-17A	**10**	1	0-8 V, 6 A (E3614A)	0-20 V, 3 A (E3615A	0-35 V, 1.7 A (E3616A)
E3620A	**10**	2			0-25 V, 1 A (E3620A x2)
E3630A-31A	**10**	3	0-6 V, 2.5 (E3630A x1) 0-6 V, 5 A (E3631A x1)	0-±20 V, 0.5 A (E3630A x2)	0-±25 V, 1 A (E3631A x2)
E3632A-34A **	**10**	1	0-8 V, 20 A (E3633A r1)	0-15 V, 7 A (E3632A r1) 0-20 V, 10 A (E3633A r2)	0-30 V, 4 A (E3632A r2) 0-25 V, 7 A (E3634A r1)
E3640A-45A **	**10**	1	0-8 V, 3 A (E3640A r1) 0-8 V, 5 A (E3642A r1) 0-8 V, 8 A (E3644A r1)	0-20 V, 1.5 A (E3640A r2) 0-20 V, 2.5 A (E3642A r2) 0-20 V, 4 A (E3644A r2)	0-35 V, 0.8 A (E3641A r1) 0-35 V,1.4 A (E3643A r1) 0-35 V, 2.2 A (E3645A r1)
E3646A-49A **	**10**	2	0-8 V, 3 A (E3646A r1) 0-8 V, 5 A (E3648A r1)	0-20 V, 1.5 A (E3646A r2) 0-20 V, 2.5 A (E3648A r2)	0-35 V, 0.8 A (E3647A r1) 0-35 V, 1.4 A (E3649A r1)
N5741A-52A	**13**	1	0-6 V, 100 A (N5741A) 0-8 V, 90 A (N5742A)	0-12.5 V, 60 A (N5743A) 0-20 V, 38 A (N5744A)	0-30 V, 25 A (N5745A) 0-40 V, 19 A (N5746A)
N5761A-72A	**13**	1	0-6 V, 180 A (N5761A) 0-8 V, 165 A (N5762A)	0-12.5 V, 120 A (N5763A) 0-20 V, 76 A (N5764A)	0-30 V, 50 A (N5765A) 0-40 V, 38 A (N5766A)
N6731B-36B	**14**	1 to 4*	0-5 V, 10 A (N6731B) 0-8 V, 6.25 A (N6732B)	0-20 V, 2.5 A (N6733B)	0-35 V, 1.5 A (N6734B)
N6741B-46B	**14**	1 to 4*	0-5 V, 20 A (N6741B) 0-8 V, 12.5 A (N6742B)	0-20 V, 5 A (N6743B)	0-35 V, 3 A (N6744B)
N6751A-52A N6761A-62A N6773A-77A	**14**	1 to 4*		0-20 V, 15 A (N6773A)	0-35 V, 8.5 A (N6774A)
N6753A-56A N6763A-66A	**14**	2*		0-20 V, 50 A (N6753A) 0-20 V, 50 A (N6755A) 0-20 V, 50 A (N6763A) 0-20 V, 50 A (N6765A)	
N8731A-42A	**13**	1	0- 8 V, 400 A (N8771A)	0-10 V, 300 A (N8732A) 0-15 V, 220 A (N8733A) 0-20 V, 165 A (N8734A)	0-30 V, 110 A (N8735A) 0-40 V, 85 A (N8736A)
N8754A-62A	**13**	1		0-20 V, 250 A (N8754A)	0-30 V, 170 A (N8755A) 0-40 V, 125 A (N8756A)
U8001A	**10**	1			0-30 V, 3 A
U8002A	**10**	1			0-30 V, 5 A
U8031A	**10**	3			0-30 V, 6 A (Output 1 & 2); 5 V, 3 A (Output 3)
U8032A	**10**	3			

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

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

DC Voltage and Current At a Glance *CONTINUED*

			Voltage ranges: 50 V to 600 V		
Model numbers	**Page**	**Outputs**	**50 to 80 V**	**100 to 150 V**	**200 to 600 V**
6611C-14C	**12**	1	0-50 V, 1 A (6613C)	0-100 V, 0.5 A (6614C)	
6621A-24A, 6627A	**12**	2 to 4	0-20 V, 4 A or 0-50 V, 2 A		
6625A-26A, 6628A-29A	**12**	2 to 4			
6631B-34B	**12**	1	0-50 V, 2 A (6633B)	0-100 V, 1 A (6634B)	
6541A-45A and 6641A-45A	**12**	1	0-60 V, 3.5 A (65/6644A)	0-120 V, 1.5 A (65/6645A)	
6551A-55A and 6651A-55A	**12**	1	0-60 V, 9 A (65/6654A)	0-120 V, 4 A (65/6655A)	
6571A-75A and 6671A-75A	**12**	1	0-60 V, 35 A (65/6674A)	0-120 V, 18 A (65/6675A)	
6680A-84A	**12**	1			
6690A-92A	**12**	1	0-60 V, 110 A (6692A)		
66101A-6A	**16**	1 to 8*	0-60 V, 2.5 A (66104A)	0-120 V, 1.25 A (66105A)	0-200 V, 0.75 A (66106A)
E3610A-12A	**10**	1	0-60 V, 0.5 A (E3612A)	0-120 V, 0.25 A (E3612A)	
E3614A-17A	**10**	1	0-60 V, 1 A (E3617A)		
E3620A	**10**	2			
E3630A-31A	**10**	3			
E3632A-34A **	**10**	1	0-50 V, 4 A (E3634A r2)		
E3640A-45A **	**10**	1	0-60 V, 0.5 A (E3641A r2) 0-60 V, 0.8 A (E3643 r2) 0-60 V, 1.3 A (E3645A r2)		
E3646A-49A **	**10**	2	0-60 V, 0.5 A (E3647A r2) 0-60 V, 0.8 A (E3649A r2)		
N5741A-52A	**13**	1	0-60 V, 12.5 A (N5747A) 0-80 V, 9.5 A (N5748A)	0-100 V, 7.5 A (N5749A) 0-150 V, 5 A (N5750A)	0-300 V, 2.5 A (N5751A) 0-600 V, 1.3 A (N5752A)
N5761A-72A	**13**	1	0-60 V, 25 A (N5767A) 0-80 V, 19 A (N5768A)	0-100 V, 15 A (N5769A) 0-150 V, 10 A (N5770A)	0-300 V, 5 A (N5771A) 0-600 V, 2.6 A (N5772A)
N6731B-36B	**14**	1 to 4*	0-60 V, 0.8 A (N6735B)	0-100 V, 0.5 A (N6736B)	
N6741B-46B	**14**	1 to 4*	0-60 V, 1.6 A (N6745B)	0-100 V, 1 A (N6746B)	
N6751A-52A **N6761A-62A** **N6773A-77A**	**14**	1 to 4*	0-50 V, 5 A (N6751A) 0-50 V, 10 A (N6752A) 0-50 V, 1.5 A (N6761A) 0-50 V, 3 A (N6762A) 0-60 V, 5 A (N6775A)	0-100 V, 3 A (N6776A) 0-150 V, 2 A (N6777A)	
N6753A-56A **N6763A-66A**	**14**	2*	0-60 V, 20 A (N6754A) 0-60 V, 17 A (N6756A) 0-60 V, 20 A (N6764A) 0-60 V, 17 A (N6766A)		
N8731A-42A	**13**	1	0-60 V, 55 A (N8737A) 0-80 V, 42 A (N8738A)	0-100 V, 33 A (N8739A) 0-150 V, 22 A (N8740A)	0-300 V, 11 A (N8741A) 0-600 V, 5.5 A (N8742A)
N8754-62A	**13**	1	0-60 V, 85 A (N8757A) 0-80 V, 42 A (N8738A)	0-100 V, 50 A (N8759A) 0-150 V, 34 A (N8760A)	0-300 V, 17 A (N8761A) 0-600 V, 8.5 A (N8762A)
U8001A	**10**	1			
U8002A	**10**	1			
U8031A	**10**	3			
U8032A	**10**	3	0-60 V, 3 A (Output 1 & 2); 5 V, 3 A (Output 3)		

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

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

E3600 and U8000 Series Basic Power Supplies

Essential features for a tight budget

When you need reliable power with minimal features, you can rely on the E3600 and U8000 Series basic 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 in programmable power supplies, such as output sequencing capability, fully integrated overvoltage and overcurrent protection, capability to save and recall up to three memory states, keypad lock and more.

- **30 W to 375 W outputs, 6 V to 120 V, and 0.25 A to 20 A**
- **Single- to triple-output models in half-rack width size**
- **Low noise, linear regulation**
- **Dual range outputs to provide more current at lower voltage settings**
- **Computer control via GPIB on most E3600 models. Manual control only on the U8000 Series and some E3600 models.**

E3631A

E3633A
E3632A

U8001A, U8002A, U8031A, U8032A

	Model	Power (W)	Maximum V (V)	Maximum I (A)	Number of outputs	Number of ranges	Computer interface	Ripple and noise mVp-p	Program. or meter res. mV	Size**
Basic	**U8001A**	90	30	3	1	1	No	12	10	½ RU w x 2 RU h
	U8002A	150	30	5	1	1		12	10	
	New U8031A	375	30	6	3	1	No	10	10	½ RU w x 4 RU h
	New U8032A	375	60	3	3	1		10	10	
	E3610A	30	8 V r1 / 15 V r2	3 A r1 / 2 A r2	1	2	No	2	10	½ RU w x 2 RU h
	E3611A	30	20 V r1 / 35 V r2	1.5 A r1 / 0.85 A r2	1	2		2	100	
	E3612A	30	60 V r1 / 120 V r2	0.5 A r1 / 0.25 A r2	1	2		2	100	
	E3614A	48	8 V	6 A	1	1		1	10	
	E3615A	60	20 V	3 A	1	1		1	10	
	E3616A	60	35 V	1.7 A	1	1		1	10	
	E3617A	60	60 V	1 A	1	1		1	10	
	E3620A	50	25 V / 25 V*	1 A / 1 A*	2	1		1.5	10	
	E3630A	35	6 V / +20 V / –20 V*	2.5 A / 0.5 A / 0.5 A*	3	1		1.5	10	
	E3631A	80	6 V / +25 V / –25 V	5 A / 1 A / 1 A	3	1	GPIB	2	1.5	½ RU w x 3 RU h
	E3632A	120	15 V r1 / 30 V r2	7 A r1 / 4 A r2	1	2		2	1	
	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	GPIB	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		8	5	
	E3646A	60	8 V r1 / 20 V r2	3 A r1 / 1.5 A r2	2	2	GPIB	5	5	½ RU w x 3 RU h
	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	

* Output 1 / Output 2 / Output 3

** 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" (1.33.3 mm)

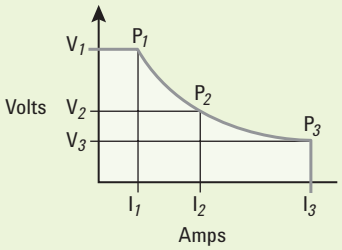
6030 Series Basic Autoranging DC Power Supplies

Auto-ranging to do the job of multiple power supplies

The 6030 Series basic power supplies offer autoranging outputs that give you maximum power at a variety of operating voltages. This enables you to use one power supply to do the job of multiple power supplies, saving rack space and reducing your system complexity.

- **240 W to 1200 W outputs, up to 500 V, and up to 120 A**
- **Built-in measurements and advance programming features simplify system design**
- **Full protection from over voltage and over current**
- **Computer control via GPIB**

Autoranging Output



6032A

	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	Size*
Basic	**6030A**	1200	200	17	1	Autoranging	50	0.035 + 145	2	Full RU w x 3 RU h
	6031A	1064	20	120			50	0.035 + 15	2	
	6032A	1200	60	50			40	0.035 + 40	2	
	6033A	242	20	30			30	0.035 + 9	1	½ RU w x 4 RU h
	6035A	1050	500	5			160	0.25 + 400	5	Full RU w x 3 RU h
	6038A	240	60	10			30	0.035 + 40	1	½ RU w x 4 RU h

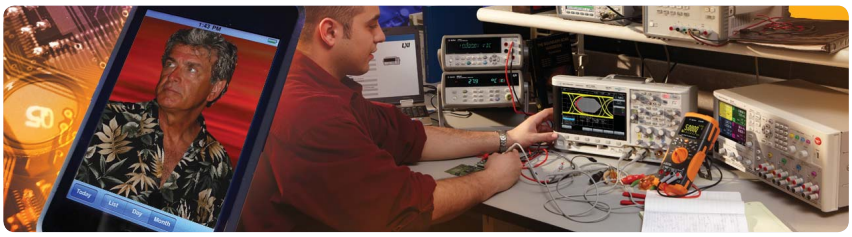
* NOTE: RU refers to rack unit of a standard 19" EIA equipment rack. The width is either 1/2 or full. The height is in number of rack units which are 1.75" (44.4 mm) each. For example: a 3 RU h has a height of 5.25" (1.33.3 mm)

6500 and 6600 Series High-Performance DC Power Supplies

High-performance when the power supply matters to test

The 6500 and 6600 Series high-performance power supplies are designed to meet your most demanding requirements. With an extensive feature set, the 6600 Series can help you reduce test time and simplify your test system design.

- **40 W to 6600 W outputs, up to 120 V, and up to 875 A**
- **Fast, low-noise outputs increase your test throughput**
- **Extensive programming capability for flexible system design (6600 only)**
- **Built-in measurements and advance programming features simplify system design**
- **Computer control via GPIB on the 6600 Series. GPIB not available on the 6500 Series.**



	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**
Performance	6611C	40	8	5	1	1	3	0.05 + 5	<100	½ RU w x 2 RU h
	6612C	40	20	2			3	0.05 + 10		
	6613C	50	50	1			4	0.05 + 20		
	6614C	50	100	0.5			5	0.05 + 50		
	6621A	80	20 / 7	4 / 10	2	2	3	0.06 + 19	<75	Full RU w x 3 RU h
	6622A	100	20 / 50	4 / 2	2			0.06 + 50		
	6623A	80	20 / 50 / 20*	5 / 2 / 10*	3			0.06 + 50		
	6624A	40	20/20/50/50*	5/5/2/2*	4			0.06 + 50		
	6627A	40	50	2	4			0.06 + 50		
Precision	6625A	40	50/50*	0.5/2*	2	2	3	0.016 + 10	<75	Full RU w x 3 RU h
	6626A	50	50/50/50/50*	0.5/0.5/2/2*	4					
	6628A	50	50	2	2					
	6629A	50	50	2	4					
Performance	6631B	80	8	10	1	1	3	0.05 + 5	<100	Full RU w x 2 RU h
	6632B	100	20	5				0.05 + 10		
	6633B	100	50	2				0.05 + 20		
	6634B	100	100	1				0.05 + 50		
	65/6641A	160	8	20	1	1	3	0.06 + 5	<100	Full RU w x 2 RU h
	65/6642A	200	20	10			3	0.06 + 10		
	65/6643A	210	35	6			4	0.06 + 15		
	65/6644A	210	60	3.5			5	0.06 + 26		
	65/6645A	180	120	1.5			7	0.06 + 51		
	65/6651A	400	8	50	1	1	3	0.06 + 5	<100	Full RU w x 3 RU h
	65/6652A	500	20	25			3	0.06 + 10		
	65/6653A	525	35	15			4	0.06 + 15		
	65/6654A	540	60	9			5	0.06 + 26		
	65/6655A	480	120	4			7	0.06 + 51		
	65/6671A	1760	8	220	1	1	7	0.04 + 8	<900	Full RU w x 3 RU h
	65/6672A	2000	20	100			9	0.04 + 20		
	65/6673A	2100	35	60			9	0.04 + 35		
	65/6674A	2100	60	35			11	0.04 + 60		
	65/6675A	2160	120	18			16	0.04 + 120		
	6680A	4375	5	875	1	1	10	0.04 + 5	<900	Full RU w x 5 RU h
	6681A	4640	8	580				0.04 + 8		
	6682A	5040	21	240				0.04 + 21		
	6683A	5120	32	160				0.04 + 32		
	6684A	4800	40	128				0.04 + 40		
	6690A	6600	15	440	1	1	15	0.04 + 15	<900	Full RU w x 5 RU h
	6691A	6600	30	220			25	0.04 + 30		
	6692A	6600	60	110			25	0.04 + 60		

6623A

6631B

6680A

* Output 1 / Output 2 / Output 3 / Output 4

** 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" (1.33.3 mm)

N5700 Series and N8700 Series Basic DC Power Supplies

Space-saving basic power 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, UVL, and OT**
- **LXI Class C compliant**

	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)	Size*
Basic	**N5741A**	600	6	100	1	1	60	0.5 + 3	≤1.5	Full RU w x 1 RU h
	N5742A	720	8	90			60	0.5 + 4	≤1.5	
	N5743A	750	12.5	60			60	0.5 + 6.25	≤1.5	
	N5744A	760	20	38			60	0.5 + 10	≤1	
	N5745A	750	30	25			60	0.5 + 15	≤1	
	N5746A	760	40	19			60	0.5 + 20	≤1	
	N5747A	750	60	12.5			60	0.5 + 30	≤1	
	N5748A	760	80	9.5			80	0.5 + 40	≤1	
	N5749A	750	100	7.5			80	0.5 + 50	≤1	
	N5750A	750	150	5			100	0.5 + 75	≤2	
	N5751A	750	300	2.5			150	0.5 + 150	≤2	
	N5752A	780	600	1.3			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			60	0.5 + 4	≤1.5	
	N5763A	1500	12.5	120			60	0.5 + 6.25	≤1.5	
	N5764A	1520	20	76			60	0.5 + 10	≤1	
	N5765A	1500	30	50			60	0.5 + 15	≤1	
	N5766A	1520	40	38			60	0.5 + 20	≤1	
	N5767A	1500	60	25			60	0.5 + 30	≤1	
	N5768A	1520	80	19			80	0.5 + 40	≤1	
	N5769A	1500	100	15			80	0.5 + 50	≤1	
	N5770A	1500	150	10			100	0.5 + 75	≤2	
	N5771A	1500	300	5			150	0.5 + 150	≤2	
	N5772A	1560	600	2.6			300	0.5 + 300	≤2	
Basic	**N8731A**	3200	8	400	1	1	60	0.05 + 4	<1	Full RU w x 2 RU h
	N8732A	3300	10	330			60	0.05 + 5	<1	
	N8733A	3300	15	220			60	0.05 + 7.5	<1	
	N8734A	3300	20	165			60	0.05 + 10	<1	
	N8735A	3300	30	110			60	0.05 + 15	<1	
	N8736A	3400	40	85			60	0.05 + 20	<1	
	N8737A	3300	60	55			60	0.05 + 30	<1	
	N8738A	3360	80	42			80	0.05 + 40	<1	
	N8739A	3300	100	33			100	0.05 + 50	<1	
	N8740A	3300	150	22			100	0.05 + 75	<2	
	N8741A	3300	300	11			300	0.05 + 150	<2	
	N8742A	3300	600	5.5			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			75	0.025 + 22.5	<1	
	N8756A	5000	40	125			75	0.025 + 30	<1	
	N8757A	5100	60	85			75	0.025 + 45	<1	
	N8758A	5200	80	65			100	0.025 + 60	<1	
	N8759A	5000	100	50			100	0.025 + 75	<1	
	N8760A	5100	150	34			120	0.025 + 112.5	<2	
	N8761A	5100	300	17			300	0.025 + 225	<2	
	N8762A	5100	600	8.5			500	0.025 + 450	<2	

N8731A: front/back

N5749A: front/back

* 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" (1.33.3 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 system gives 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**
- **Mix and match from 29 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-C)**
- **New high-power DC modules: N6755A-56A, N6763A-66A, N6777A**

N6702A

N6700 low-profile modular power system mainframe

Model	Power (W)	Max # modules	Physical size*
N6700B	400	4	Full RU w x 1 RU h
N6701A	600		
N6702A	1200		

	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)
Basic	**N6731B**	50	5	10	1	1	10	0.1 + 19	<200
	N6732B	50	8	6.25			12	0.1 + 19	
	N6733B	50	20	2.5			14	0.1 + 20	
	N6734B	50	35	1.5			15	0.1 + 35	
	N6735B	50	60	0.8			25	0.1 + 60	
	N6736B	50	100	0.5			30	0.1 + 100	
	N6741B	100	5	20			11	0.1 + 19	
	N6742B	100	8	12.5			12	0.1 + 19	
	N6743B	100	20	5			14	0.1 + 20	
	N6744B	100	35	3			15	0.1 + 35	
	N6745B	100	60	1.6			25	0.1 + 60	
	N6746B	100	100	1			30	0.1 + 100	
	N6773A	300	20	15			20	0.1 + 20	<250
	N6774A	300	35	8.5			22	0.1 + 35	
	N6775A	300	60	5			35	0.1 + 60	
	N6776A	300	100	3			45	0.1 + 100	
	New N6777A	300	150	2			68	0.1 + 150	
Performance	**N6751A**	50	50	5	1	Autoranging	4.5	0.06 + 19	<100
	N6752A	100	50	10			4.5	0.06 + 19	
	N6753A	300	20	50			5	0.06 + 10	
	N6754A	300	60	20			6	0.06 + 25	
	New N6755A	500	20	50			5	0.06 + 10	
	New N6756A	500	60	17			6	0.06 + 25	
Precision	**N6761A**	50	50	1.5	1	Autoranging	4.5	0.016 + 6	<100
	N6762A	100	50	3			4.5	0.016 + 6	
	New N6763A	300	20	50			5	0.03 + 5	
	New N6764A	300	60	20			6	0.03 + 12	
	New N6765A	500	20	50			5	0.03 + 5	
	New N6766A	500	60	17			6	0.03 + 12	

* 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" (1.33.3 mm)

N6705B 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 N6705B combines one to four DC power supplies, 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 14**
- **Computer control via GPIB, USB, and LAN (LXI-C)**

Function	Description
Output speed	Voltage changes as fast as 160 µs per step voltage change
Voltmeter accuracy	Up to 0.025% + 50 µV, 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 µs to 60 s, maximum of 500 Mreadings per data log
Non-volatile data storage	4 GB

66000 Modular Power System

Speed and accuracy with up to eight outputs

The 66000 Series modular DC power supplies give you up to eight outputs per mainframe. The modular design conserves rack space and simplifies system cabling and assembly.

- **Modular system permits up to 8 outputs of 150 W per output in 4U of rack space**
- **Modules are available with 150 W, 8 V to 200 V, 0.75 A to 16 A**
- **Simplify reconfiguration or repair with easily swappable modules**
- **Streamline your tasks with built-in measurements, LIST mode, and optional keyboard for manual control**
- **Full protection from over voltage and over current**
- **Computer control via GPIB**

66000 modular power system mainframe

Model	Power, W	Max # modules	Physical size*
66000A	1200	8	Full RU w x 4 RU h

	66000 modules 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)
Performance	**66101A**	128	8	16	1	1	5	0.03 + 3	<1
	66102A	150	20	7.5			7	0.03 + 8	
	66103A	150	35	4.5			10	0.03 + 13	
	66104A	150	60	2.5			15	0.03 + 27	
	66105A	150	120	1.25			25	0.03 + 54	
	66106A	150	200	0.75			50	0.03 + 90	

* 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" (1.33.3 mm)

N3300 and 6060 Series DC Electronic Loads

Programmable loads with measurements

The N3300 and 6060 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, while single input 6060 models are ideal for evaluation of DC power sources and power components on your bench.

N3300 Multiple Input Electronic Loads

- **Increase test throughput with shor command processing time and stor command sequences**
- **Test multiple power supply outputs with up to 6 modules with 150 W 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*
N3300A	6	Full RU w x 4 RU h
N3301A	2	½ RU w x 4 RU h

N3300 modules

	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
Loads	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

6060 Single Input Electronic Loads

- **Cost effective load for single input applications**
- **Ideal for bench applications, provides optional front panel connection**
- **Computer control via GPIB**

6060 loads

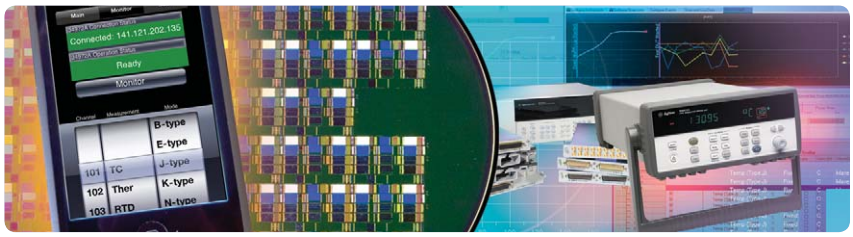
	Model	Input power, W	Maximum input, V	Maximum input, I	Constant current accuracy, % + mA	Constant voltage accuracy, % + mV	Current measurement accuracy, % + mA	Voltage measurement accuracy, % + mV	Size*
Loads	6060B	300	60	60	0.1 + 75	0.1 + 50	0.05 + 65	0.05 + 45	Full RU w x 4 RU h
	6063B	250	240	10	0.15 + 10	0.12 + 120	0.12 + 10	0.1 + 150	

* 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" (1.33.3 mm)

Agilent AC Power Source/Power Analyzer

An integrated AC power solution

The Agilent AC power source/power analyzer provides precise, accurate measurements and efficient analysis of AC power. These "one-box" solutions let you generate, measure and analyze AC power. Agilent's AC power sources are ideal for power-supply testing, AC-mains CE-mark testing, UPS testing and much more.



- **Variety of power levels: 375 VA, 750 VA, and 1750 VA**
- **Built in measurements for power analysis**
- **GPIB computer interface included**

6813B

6813B AC power source/power analyzer

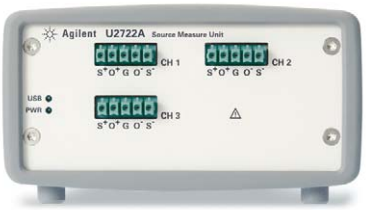
	Model	RMS power	RMS current	RMS voltage	Peak current	DC voltage
AC Sources	**6811B**	375 VA	3.25 A	300 V	40 A	40 V
	6812B	750 VA	6.5 A	300 V	40 A	750 V
	6813B	1750 VA	13 A	300 V	80 A	1750 V

USB Modular Source Measure Unit

Source and measure DC voltage/current reliably

The Agilent 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 Agilent 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 (± 20 V, ± 120 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 application support in the Agilent Measurement Manager Software (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 °C to 50 °C)	
Voltage	-20 V to 20 V per channel
Current	-120 mA to 120 mA per channel

	Model	U2722A/23A		
		Range	**Accuracy [1]**	**Resolution**
Specialty	**Voltage programming/ readback**	± 2 V	0.075% + 1.5 mV	0.1 mV
		± 20 V	0.05% + 10 mV	1 mV
	Current programming/ readback	± 1 µA	0.085% + 0.85 nA	100 pA
		± 10 µA	0.085% + 8.5 nA	1 nA
		± 100 µA	0.075% + 75 nA	10 nA
		± 1 mA	0.075% + 750 nA	100 nA
		± 10 mA	0.075% + 7.5 µA	1 µA
		± 120 mA	0.1% + 100 µA	20 µA

	Model		U2722A	U2723A
	Rise/fall time (ms) [1]	**Range**	**Accuracy [1]**	**Accuracy [1]**
Specialty	**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.

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