Keysight Technologies
E36100 Series
Programmable DC Power Supplies

Data Sheet

KEYSIGHT TECHNOLOGIES

Power Forward

Designs change—and so should your DC power supply. Meet the E36100, engineered by Keysight to power your designs safely and quietly during manual tests or automated sequences. From every angle – size, display, and I/O – the E36100 will impress you. Add one to your bench and power forward.

- Choose the best model for your needs: five models offer up to 5 A or 100 V
- Save space on your bench, 2U ¼-form factor
- Connect for computer control with standard LAN (LXI Core) and USB connectivity
- Perform manual tasks quickly with the intuitive on-screen menu system
- Easily view the high-contrast OLED display from anywhere on your bench, even from a sharp angle
- Protect your device under test (DUT) with overvoltage and over-current detection
- Power your DUT with confidence through excellent accuracy in programming and readback
- Quiet operation

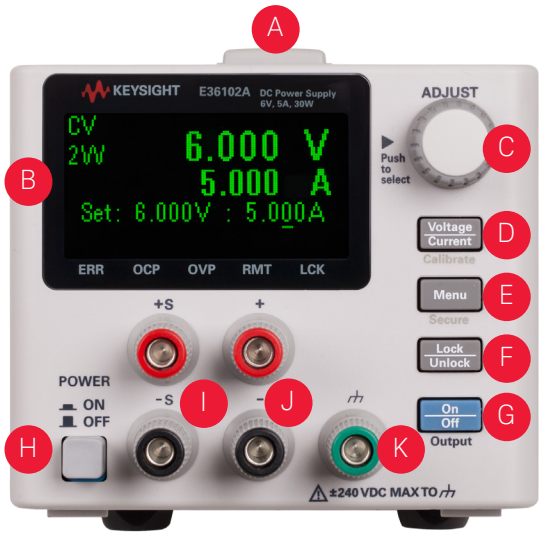
Accurate, Reliable Power

The E36100 Series is the latest addition to Keysight's industry standard family of bench power supplies, backed with Keysight's standard 3-year warranty.

Power your DUT with excellent voltage and current programming and readback accuracy. Use the power supply's highly accurate low-current measurement feature for demanding measurements. Protect your DUT with built-in overvoltage and overcurrent protection, and count on the built-in overtemperature protection to keep your power supply safe.

Excellent Front-Panel Usability

The clean design of the E36100 Series front-panel lets you become productive with the unit very quickly. The easy-to-use rotary knob and keypad interface allows you to set the output at your desired resolution quickly and easily, with digit-by-digit control. You can store and recall up to 10 complete power supply setups from non-volatile memory in order to quickly change instrument states. The output on/off key quickly turns the output on and off.



A Tough carrying handle

B Information-packed, high-contrast OLED display; easily viewable even from sharp angles

C Rotary knob for quick and easy configuration

D Fast voltage/current setting and front-panel electronic calibration

E Menu key opens intuitive user interface

F Front-panel lock prevents accidental changes during tests

G Output enable/disable switch to protect your DUT quickly

H Dual-position power switch

I Sense terminals

J Output terminals

K Earth ground reference point

Fast, Industry-Standard Programming

Every E36100 Series model ships standard with both LAN (LXI Core) and USB (TMC488). The easy-to-use SCPI (Standard Commands for Programmable Instruments) programming language lets you create fast and simple programs with transient response faster than 50 µs and fast command processing time– less than 10 ms. You can also program the instrument with the power supply's Interchangeable Virtual Instruments (IVI) driver.

Use the Keysight IO Libraries Suite (**www.keysight.com/find/iosuite**) to accelerate your programming. The IO Libraries' instrument-centric view and auto-discovery of instruments get you connected to your instrument quickly

Simple, Powerful Soft Front Panel

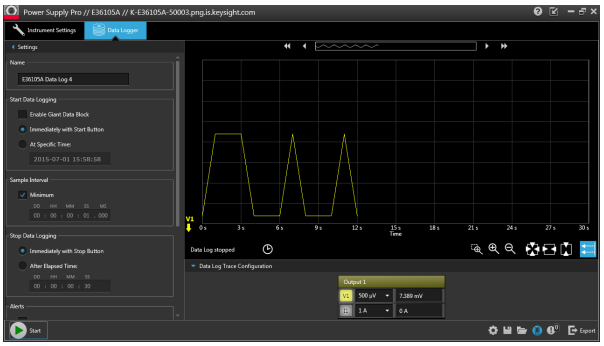
When you cannot be near your DUT, open your browser and control the instrument via the power supply's bullt-in Web interface, with a look and feel that replicates the front-panel experience.

BenchVue Control and Visualization

BenchVue software for the PC makes it simple to connect, control, and view Keysight power supplies simultaneously with other Keysight bench instruments without programming.

- Visualize the outputs of multiple power supplies simultaneously
- Log data, capture screen shots, and save a system state
- Recall a past state of your bench to replicate results
- Export measurement data in desired format fast
- Quickly access manuals, drivers, FAQs and videos
- Monitor and control bench from mobile devices

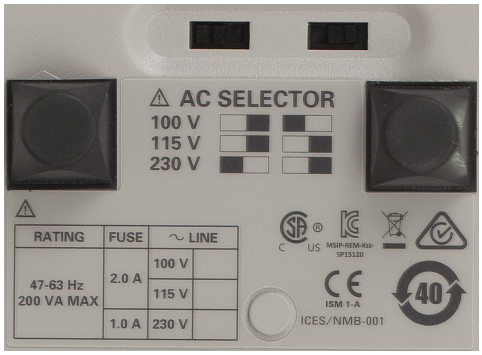
The power supply app within BenchVue lets you control power supplies, visualize voltage and current output, log data, and annotate captured data (included in BV0000A, available as a free download at www.keysight.com/find/BenchVue). Upgrade to the Pro version (BV0003A) for unrestricted data logging with limit checking and status alerts. Use the companion BenchVue Mobile app to monitor and respond to long-running tests from anywhere.



Easy Power and I/O Connection

Connect for computer control with standard LAN (LXI Core) and USB connectivity. Use the security slot to keep the supply on your bench.

Do you need to convert the power supply for different mains power? The two switches on the bottom of the instrument make it straightforward. See the product manual for details.



Option J01 recessed binding posts

Performance Specifications

	Tolerance %	E36102A	E36103A	E36104A	E36105A	E36106A
DC output rating (0 to 40 °C)						
Max. voltage		6 V	20 V	35 V	60 V	100 V
Max. current		5 A	2 A	1 A	0.6 A	0.4 A
Load regulation ± (% of output + offset)						
Voltage	<0.01% +	2 mV	3 mV	6 mV	10 mV	20 mV
Current	<0.02% +	250 µA	100 µA	50 µA	30 µA	20 µA
Line regulation ± (% of output + offset)						
Voltage	<0.01% +	1 mV	2 mV	4 mV	7 mV	12 mV
Current	<0.02% +	250 µA	100 µA	50 µA	30 µA	20 µA
Output ripple and noise (20 Hz to 20 MHz)						
Voltage	RMS	350 µV	2 mV	4 mV	5 mV	15 mV
	Pk-Pk	10 mV	30 mV	60 mV	100 mV	150 mV
Accuracy 12 months (23 °C ± 5 °C)						
Programming accuracy ± (% of output + offset)						
Voltage	0.05% +	3 mV	7 mV	12 mV	20 mV	40 mV
Current	0.05% +	5 mA	1 mA	0.6 mA	0.4 mA	0.3 mA
Readback accuracy ± (% of output + offset)						
Voltage	0.05% +	3 mV	5 mV	8 mV	12 mV	20 mV
Current	0.05% +	4 mA	1 mA	0.5 mA	0.3 mA	0.2 mA
Low range current	0.25% +	40 µA (0-20 mA)	40 µA (0-8 mA)	40 µA (0-4 mA)	40 µA (0-3 mA)	40 µA (0-2 mA)
Load transient recovery time (Time to recover to 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	50 mV	87.5 mV	150 mV	250 mV
Time		<50 µs	<50 µs	<50 µs	<50 µs	<50 µs

Typical Characteristics

		E36102A	E36103A	E36104A	E36105A	E36106A
Resolution						
Program (Average)	Voltage	360 µV	1.2 mV	2.1 mV	3.6 mV	6.0 mV
	Current	300 µA	120 µA	60 µA	36 µA	24 µA
Readback	Voltage	240 µV	800 µV	1.4 mV	2.4 mV	4 mV
	Current	200 µA	80 µA	40 µA	24 µA	16 µA
	Small current	5 µA	960 nA	280 nA	180 nA	120 nA
Program (Meter) Minimum perceivable change	Voltage	1 mV	1 mV	2 mV	3 mV	6 mV
	Current	1 mA	1 mA	1 mA	1 mA	1 mA
Readback (Meter)	Voltage	1 mV	1 mV	1 mV	3 mV	6 mV
	Current	1 mA	1 mA	1 mA	1 mA	1 mA
	Low range current	1 µA	1 µA	1 µA	1 µA	1 µA
Output ripple and noise (20 Hz to 20 MHz)						
	RMS	2 mA	1 mA	400 µA	200 µA	160 µA
Overvoltage protection (OVP) ± (% of output + offset)						
Accuracy	0.20%	0.5 V	1.5 V	3 V	5 V	8 V
Activation time (average time for the output to start to drop after OVP or OCP condition occurs)						
Overvoltage (OVP)	< 1.5 ms when the trip voltage is greater than or equal to 3 V					
Overcurrent (OCP)	< 1.5 ms					
Command processing time						
	< 10 ms					
Programming temperature coefficient per °C (% of output + offset)						
Voltage	0.005%	180 µV	600 µV	1.05 mV	1.8 mV	3.0 mV
Current	0.01%	250 µA	100 µA	50 µA	60 µA	40 µA
Readback temperature coefficient per °C (% of output + offset)						
Voltage	0.005%	12 µV	40 µV	70 µV	120 µV	200 µV
Current	0.01%	250 µA	100 µA	50 µA	30 µA	20 µA
Remote sense (max. voltage in load lead)						
Output can function as described with up to a 1-V drop per load lead						
Up/down programming settling time to within 1% of total excursion						
Up, full load		25 ms	50 ms	50 ms	50 ms	100 ms
Up, no load		25 ms	50 ms	50 ms	50 ms	100 ms
Down, full load		25 ms	25 ms	25 ms	30 ms	35 ms
Down, no load		100 ms	150 ms	150 ms	250 ms	300 ms
I/O Interfaces						
	LAN (LXI Core) and USB 2.0 FS (TMC488)					

Typical Characteristics

		E36102A	E36103A	E36104A	E36105A	E36106A
Environmental conditions						
Operating environment	Indoor use, installation category II (for AC input), pollution degree 2					
Operating temperature range	0 °C to 40 °C					
Storage temperature	–20 to 70 °C					
Relative humidity	Up to 95%					
Altitude	Up to 2000 meters					
Electromagnetic compatibility	Compliant with EMC Directive (2004/108/EC)					
	IEC 61326-1:2012/EN 61326-1:2013 Group 1 Class A					
	Canada: ICES-001:2004 Australia/New Zealand: AS/NZS					
	South Korea KC mark					
Safety	UL 61010-1 3rd edition, CAN/CSA-C22.2 No. 61010-1-12, IEC 61010-1:2010 3rd edition					
AC input	100, 115, or 230 V input (± 10%), 47 to 63 Hz, 200 VA					
Net weight	3.7 kg or 8.1 lbs. (approx.)					
Dimensions	2U, ¼ rack (98.5 mm (H), 106.4 mm (W), 367.7 mm (D))					

Ordering Information

Keysight E36100 Series Power Supplies

E36102A	DC power supply, single-output, 6 V, 5 A, 30 W
E36103A	DC power supply, single-output, 20 V, 2 A, 40 W
E36104A	DC power supply, single-output, 35 V, 1 A, 35 W
E36105A	DC power supply, single-output, 60 V, 0.6 A, 36 W
E36106A	DC power supply, single-output, 100 V, 0.4 A, 40 W

Standard Shipped Accessory

AC power cord (based on destination country)

Ordering Options

Opt. 0E3	230 VAC ± 10%
Opt. 0EM	115 VAC ± 10%
Opt. 0E9	100 VAC ± 10%
Opt. UK6	Commercial calibration with test result data
Opt. J01	Recessed binding posts
J1520AC	Universal shelf rack
J1526AC	Metal sliding shelf

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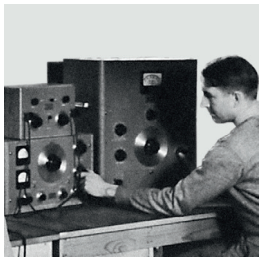
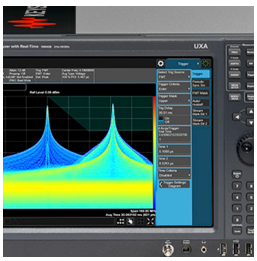


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