

# Keysight Technologies

## E36100 Series

### Programmable DC Power Supplies

Data Sheet



## 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 or in the rack with the compact, 2U ¼-rack 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 overcurrent detection
- Power your DUT with confidence through excellent accuracy in programming and readback

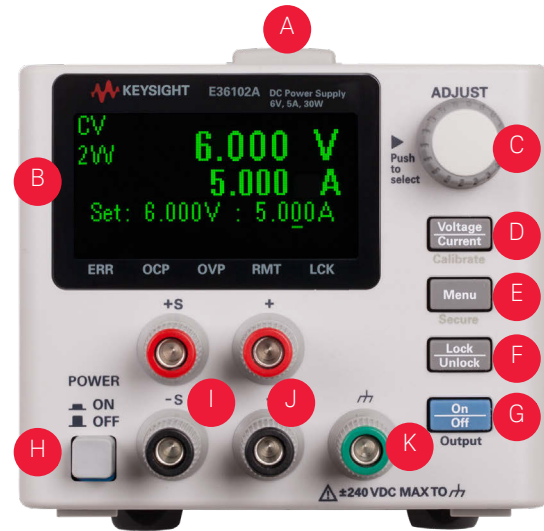
## Accurate, reliable power

The E36100 Series is the latest addition to Keysight’s industry standard family of bench power supplies.

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  $\mu$ s 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.

## Simple, powerful soft front panel

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



## 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.

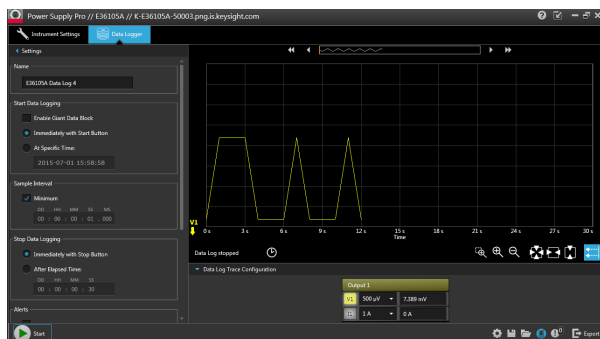


## BenchVue control and visualization

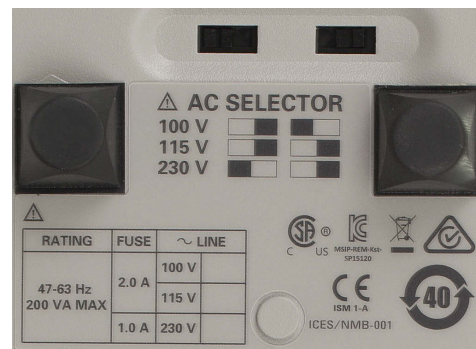
BenchVue software for the PC makes it simple to connect, control, and view Keysight power supplies simultaneously with other Keysight bench instruments without programming.

- 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. 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.



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.



## 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
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
Current	RMS	2 mA	1 mA	400 µA	200 µA	160 µA
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
Small Current	0.25% +	40 µA	40 µA	40 µA	40 µA	40 µA
Max Small Current		20 mA	8 mA	4 mA	3 mA	2 mA
Transient Response		<50 µs				

## Typical Characteristics

		E36102A	E36103A	E36104A	E36105A	E36106A
Resolution						
Program	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)	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
	Small Current	1 μA	1 μA	1 μA	1 μA	1 μA
Ripple and Noise (20 Hz to 20 MHz)						
Current	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 power consumption				
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  $\pm$  10%

Opt. 0EM 115 VAC  $\pm$  10%

Opt. 0E9 100 VAC  $\pm$  10%

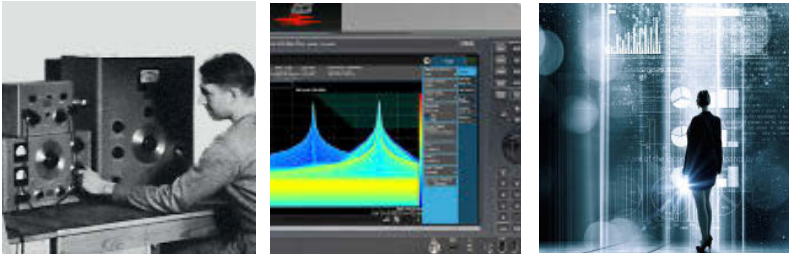
Opt. UK6 Commercial calibration with test result data

E3600A-100 Test lead kit

## Evolving Since 1939

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Accelerate Technology Adoption.  
Lower costs.

