# E36100 Series

## Programmable DC Power Supplies

#### **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 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 built-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. 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 ± (% o	Load regulation ± (% of output + offset)					
Voltage	< 0.01%+	2 mV	3 mV	6 mV	10 mV	20 mV
Current	< 0.02% +	250 μΑ	100 μΑ	50 μΑ	30 μΑ	20 μΑ
Line regulation ± (% of output + offset)						
Voltage	< 0.01%+	1 mV	2 mV	4 mV	7 mV	12 mV
Current	< 0.02% +	250 μΑ	100 μΑ	50 μΑ	30 μΑ	20 μΑ
Output ripple and noise	e (20 Hz to 20 M	1Hz)				
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 (2	Accuracy 12 months (23°C ± 5°C)					
Programming accuracy	± (% of output	+ offset)				
Voltage	0.05% +	3 mV	8 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		50 mV	87.5 mV	150 mV	250 mV	15 mV
Time		< 50 µs	< 50 µs	< 50 µs	< 50 µs	< 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 μΑ	120 μΑ	60 µA	36 μΑ	24 μΑ
Readback	Voltage	240 μV	800 μV	1.4 mV	2.4 mV	4 mV
	Current	200 μΑ	80 μΑ	40 μΑ	24 μΑ	16 µA
	Low range current	5 μΑ	960 nA	280 nA	180 nA	120 nA
Program (Meter)	Voltage	1 mV	1 mV	2 mV	3 mV	6 mV
Minimum perceivable change	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 μΑ	1 μΑ	1 μΑ	1 μΑ	1 μΑ
Output ripple and noise	(20 Hz to 20 MI	Hz)				
Current	RMS	2 mA	1 mA	400 μΑ	200 μΑ	160 µA
Overvoltage protection (	OVP) ± (% of o	utput + offset	)			
Accuracy	0.20%	0.12 V	0.4 V	0.7 V	1.2 V	2 V
Activation time (average	time for the ou	tput to start to	o drop after O	VP or OCP c	ondition occu	rs)
Overvoltage (OVP)	< 1.5 ms wh	en the trip vo	ltage is great	er than or equ	ual to 3 V	
Overcurrent (OCP)	< 1.5 ms	< 1.5 ms				
Command processing tir	me					
	< 10 ms					
Programming temperatu	re coefficient p	er °C (% of ou	utput + offset)			
/oltage	0.005%	180 µV	600 µV	1.05 mV	1.8 mV	3.0 mV
Current	0.01%	250 μΑ	100 μΑ	50 μA	60 μΑ	40 μΑ
Readback temperature o	coefficient per °	C (% of outpu	ıt + offset)			
/oltage	0.005%	12 µV	40 μV	70 μV	120 µV	200 μV
Current	0.01%	250 μΑ	100 μΑ	50 µA	30 μΑ	20 μΑ
Remote sense (max. vol	Itage in load lea	ıd)				
Output can function as c	lescribed with u	ip to a 1-V dro	op per load le	ad		
Jp/down programming s	settling time to v	vithin 1% of to	otal excursior	1		
Jp, full load		25 ms	50 ms	50 ms	50 ms	100 ms
Jp, 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 (L	XI Core) and	USB 2.0 FS	(TMC488)	

## **Typical Characteristics**

Environmental conditions	E36102A	E36103A	E36104A	E36105A	E36106A	
Operating environment	Indoor use, installation category II (for AC input), pollution degree 2					
Operating temperature range	0 to 40°C					
Storage temperature	–20 to 70°C					
Relative humidity	Up to 95%					
Altitude	Up to 2000 met	ers				
	Compliant with EMC Directive (2004/108/EC)					
	IEC 61326-1:2012/EN 61326-1:2013 Group 1 Class A					
Electromagnetic compatibility	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			61010-1:2010		
AC input	100, 115, or 230 V input (± 10%), 47 to 63 Hz, 200 VA					
Net weight	3.7 kg or 8.1 lbs	s. (approx.)				
Overall dimension (H x W x D)	2U, 1/4 rack (98	3.5 x 106.4 x 367	7.7 mm)			

## 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**

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

www.keysight.com/find/e36100

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