

U8000 Series Single Output DC Power Supplies



Key Features

- Excellent load and line regulation:
(CV: <math><0.01\% + 2 \text{ mV}</math>;
CC: <math><0.02\% + 2 \text{ mA}</math>)
- Low output noise: 1 mVrms (20 Hz to 20 MHz)
- Over Voltage and Over Current Protection
- LCD display with backlight capability
- Standby output for safety purposes
- Save-and-recall function upto three memory states
- Security features: keypad lock and physical lock mechanism



Figure 1. The U8001A 90 W and U8002A 150 W single output DC power supplies

More Protection, More Convenience — For Less

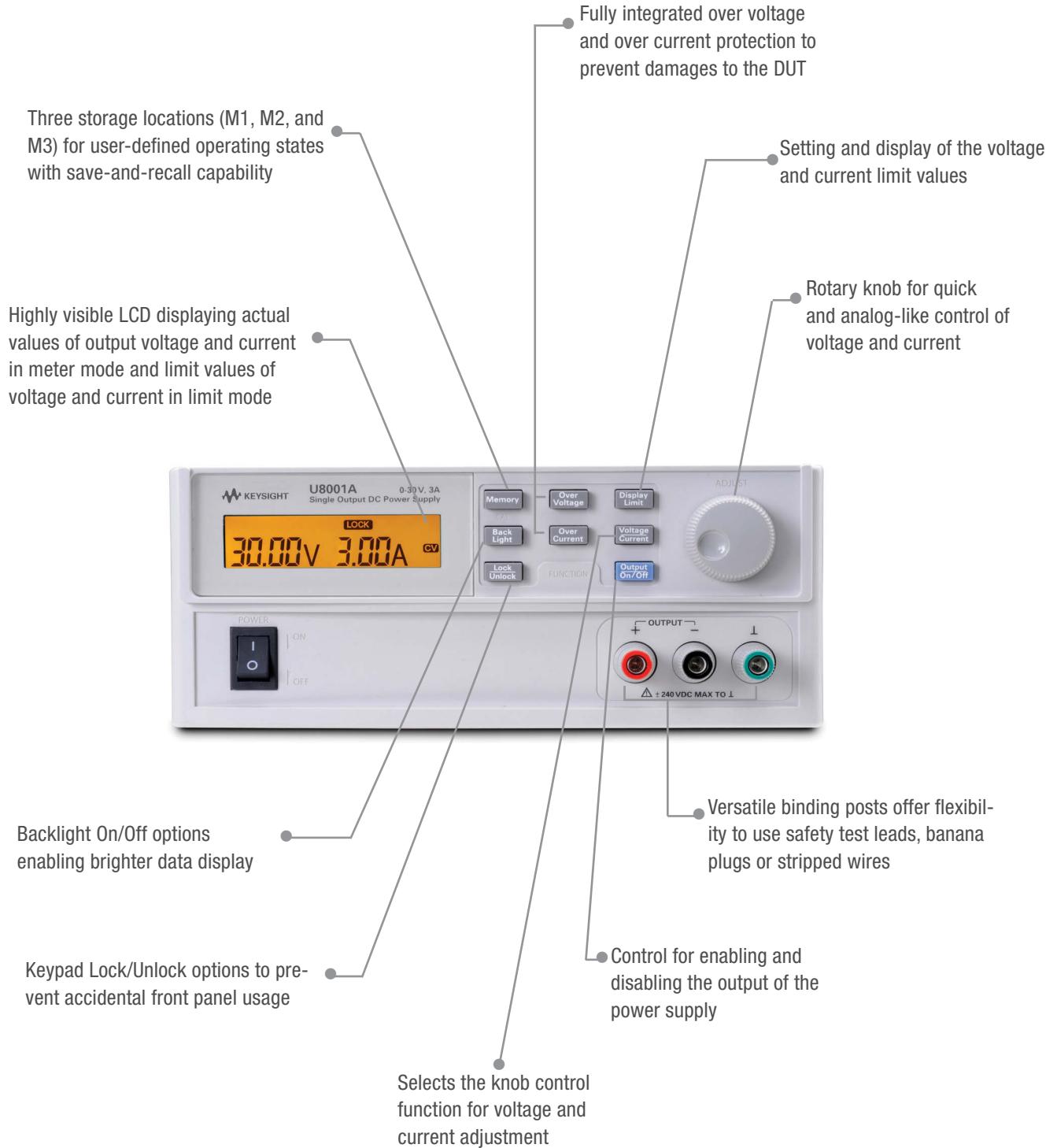
It's often difficult to find a power supply that is just right for your test requirements and your budget. Whether you're manufacturing consumer products, testing electronic components, or simply looking for reliable, affordable power, the Keysight Technologies, Inc. family of basic power supplies now includes single output, non-programmable models in the 90 W to 150 W power range. With capabilities typically found only in programmable supplies, you get excellent value along with great efficiency in your work. As a result, you can minimize setup time and measurement errors and maximize device reliability. You'll get the right power with a difference — backed by stringent safety certifications and Keysight quality standards — at an affordable price.

The Keysight U8000 Series offers 90 W to 150 W single output, non-programmable DC power supplies that include features typically found only in costly programmable supplies. The U8000 Series delivers excellent value by providing reliable DC power, efficient setup capabilities, and important security features that let you address a variety of applications in electronics manufacturing and educational settings.

Power That's Suitable for Your Application Requirements

The Keysight U8000 Series with power ranging from 90 W to 150 W provides performance that is suitable for electronics manufacturing for computers and peripherals, communication systems and peripherals, aircraft/avionics systems, electronic components, and more. The U8000 Series complements the Keysight E3600 DC power supplies family to provide a wider range of power source alternatives.

Features of the U8000 Series



Performance Specifications

Electrical Specifications

Parameter	U8001A	U8002A
Output Ratings (at 0 °C to 40 °C)	0 to +30 V 0 to 3 A	0 to +30 V 0 to 5 A
Line and Load Regulation	CV: <0.01% +2 mV CC: <0.02% +2 mA	
Ripple and Noise (25 °C ±5 °C)	CV: 12 mVp-p, <1 mVrms; CC: 3 mArms	
Load Transient Response Time (within 15 mV from full load to half load and from half load to full load)	<50 µs	
Programming Accuracy ¹ (25 °C ±5 °C)	<0.35% +20 mV <0.35% +20 mA	
Readback Accuracy ¹ (25 °C ±5 °C)	<0.35% +20 mV <0.35% +20 mA	
Meter Resolution	Voltage: 10 mV Current: 10 mA	
Maximum Output Float Voltage	±240 Vdc	

¹ Specifications are based on one hour warm-up period.

Supplemental Characteristics

Supplemental Characteristics

Parameter	U8001A	U8002A
Temperature Coefficient (for 12 months)	CV: <100 ppm/ °C	
	CC: <380 ppm/ °C	CC: <300 ppm/ °C
Output Voltage Overshoot (during turn-on or turn-off of AC power state with the output control set to less than 1 V)	<1 V	
Voltage Programming Speed, to within 1% of total excursion		
Up	Full Load	150 ms
	No Load	100 ms
Down	Full Load	30 ms
	No Load	450 ms
Last Memory Setting Enabled	Yes	
Over Voltage Protection Response Time	<1.5 ms when the trip voltage is equal to or greater than 3 V and <10 ms when the trip voltage is less than 3 V (average time for output to drop from 90% of output voltage to 1 V after OVP condition occurred)	

Protection Features

Parameter	U8001A	U8002A
Over Voltage Protection Accuracy ± (% of output + offset)	<0.5% +0.5 V	
Over Voltage Protection Programmable Range	1 V to 33 V	
Over Current Protection Accuracy ± (% of output + offset)	<0.5% +0.5 A	
Over Current Protection Programmable Range	1 A to 3.3 A	1 A to 5.5 A

AC Power Input Specifications

Parameter	U8001A	U8002A
Input Power Option (selectable)	100 Vac ± 10%, 47 to 63 Hz 115 Vac ± 10%, 47 to 63 Hz 230 Vac ± 10%, 47 to 63 Hz	
Maximum Input Power	330 VA	500 VA
Fuse	External, customer assessable	

Physical Specifications

Parameter	U8001A	U8002A
Dimensions (H x W x L)	88.1 mm x 212.3 mm x 394.3 mm	
Weight	7.3 kg	8.3 kg

General Characteristics

Display

- Liquid Crystal Display (LCD)

Operating Environment

- Operating temperature from 0 °C to 40 °C (for full rated output) and 40 °C to 55 °C (for derated output)
- Relative humidity up to 95%
- Altitude up to 2000 meters

Storage Compliance

- -20 °C to 70 °C

Safety and EMC Compliance

Certified with:

- IEC 61326:2002/
EN61326:1997+
A1:1998+A3:2003
- CISPR 11:1990/
EN55011:1990
- Canada: ICES-001:2004
- Australia/New Zealand: AS/
NZS CISPR11:2004
- IEC 61010-1:2001/EN61010-
1:2001 (2nd Edition)
- Canada: CAN/CSA-C22.2
No. 61010-1-04
- USA: ANSI/UL 61010-1:2004

Memory Operations

Up to three operating states

Calibration Cycle

One year

Warm-up time

- 60 minutes

Ordering Information

- U8001A DC Power Supply, 30 V, 3 A
- U8002A DC Power Supply, 30 V, 5 A

Included Documentation:

- U8001A-0B0 No documentation package

Additional Documentation:

- U8001A-AB0 Traditional Chinese User's and Service Guide
- U8001A-AB2 China – Simplified Chinese printed User's and Service Guide
- U8001A-ABA English User's and Service Guide
- U8001A-ACF Japanese User's and Service Guide

Calibration Document:

- U8001A-UK6 Commercial calibration with test result data

Power Options

- Opt 0E9 90 to 110 Vac, 47 to 63 Hz
- Opt 0EM 104 to 126 Vac, 47 to 63 Hz
- Opt 0E3 207 to 253 Vac, 47 to 63 Hz

Other Options

- Option U800xA-AUT Custom Power On (available only upon purchase with main model)
- E3600A-100 Test lead kit
- Option 1CM Rack-mount kit

Rack-mount Kits

- To rack-mount a single instrument:
 - Adapter kit (P/N 5063-9240)
- To rack-mount two instruments side-by-side:
 - Lock-link kit (P/N 5061-9694)
 - Flange kit (P/N 5063-9212)
- To rack-mount two instruments in a sliding support shelf:
 - Support shelf (P/N 5063-9255)
 - Slide kit (P/N 1494-0015)

