# Keysight E363xA Series

# Programmable DC Power Supplies





# Clean and Stable Power with Programmability at an Affordable Price

# Affordable programmable power supplies to meet your needs

The Keysight Technologies, Inc. E363xA Series of programmable DC power supplies gives you the performance of the system power supplies at a decent price. All models provide clean power, excellent regulation and a fast transient response with built-in GPIB and RS-232 interfaces. The E363xA Series is designed to meet the requirements of the most demanding applications in R&D design verifications, production testing, and QA verifications with traditional quality and reliability which you can count on.

# -2500y 1,000R\* -2500y 1,000R\* -2500y 1,000R\*

## Excellent performance you can trust

With the 0.01% load and line regulation, the E363xA Series can maintain a steady output when power line and load changes occur. The power supplies specify both normal mode voltage/current noise and common mode current noise. The low normal mode noise specification assures clean power for precision circuitry applications, and the low common mode current provides isolation from power line current injection.

#### Remote interface

If you have an IEEE-488 card or RS-232 in a PC, these power supplies will work for you. Every model comes equipped with both GPIB and RS-232 as standard. All programming is done in easy-to-use SCPI (Standard Commands for Programmable Instruments). The user's guide describes the process for the first-time programmers.

# Front panel operation

A knob and self-guiding keypads allow you to set the output at your desired resolution quickly and easily. You can store and recall for up to three complete setups using the internal non-volatile memory. The output on/off button sets the output to zero.

## E3631A triple-output power supply

This famous 80-watt triple output supply offers three independent outputs: 0 to 6 V/5A, 0 to  $\pm$ 25V/1A and 0 to  $\pm$ 25V/1A. The 6 V output is electrically isolated from the  $\pm$ 25 V supply to minimize any interference between circuits under test. The  $\pm$ 25 V outputs can be set to track each other.

# E3632A/33A/34A single-output dual range power supplies

These single output power supplies give you the flexibility to select from a dual output range. The output load is protected against overvoltage and overcurrent, which are easily monitored and adjusted from the front panel and remote interface. Remote sensing is available to eliminate the errors caused by voltage drops on the load leads. The E3633A/34A offer front and rear output terminals for easy wiring.

# Reliable Power, Repeatable Results

- Single and triple output
- 80 W to 200 W output power
- Dual range output (except E3631A)
- Low noise and excellent regulation
- Remote sensing (except E3631A)
- Front and rear output terminals (E3633A/34A only)
- GPIB and RS-232 standard
- Save and recall functions
- Overvoltage protection, overcurrent protection (except E3631A)

# E3631A/32A/33A/34A Programmable DC Power Supply Specifications

Model Number	1	E3631A 2	3	E3632A	E3633A	E3634A				
DC output	0 to +6 V,	0 to +25 V.	0 to -25 V,	0 to 15 V/7 A or	0 to 8 V/20 A or	0 to 25 V/7 A or				
Rating (0 to 40 °C)	0 to 5 A	0 to 1 A	0 to 1 A	0 to 30 V/4 A	0 to 20 V/10 A	0 to 50 V/ 4 A				
Load regulation	< 0.01% + 2 mV									
± (% of output + offset)	< 0.01% + 250 μA									
Line regulation	< 0.01% + 2 mV									
± (% of output + offset)	< 0.01% + 250 μA									
Ripple and noise (20 Hz to 2	20 MHz)									
Normal mode voltage	< 350 μVrms/2 mVpp				< 350 μVrms/3 mVpp	< 500 μVrms/ 3 mVpp				
Normal mode current	< 2 mArms < 500 μArms			< 2 mArms						
Accuracy <sup>1</sup> 12 months (25 °C	C + 5 °C), ± (% output	+ offset)								
Programming										
Voltage	0.1% + 5 mV			0.05% + 10 mV						
Current	0.2% + 10 mA	0.15%	+ 4 mA	0.2% + 10 mA						
Readback <sup>2</sup>										
Voltage	0.1% + 5 mV	0.05%	+ 10 mV	0.05% + 5 mV						
Current	0.2% + 10 mA	0.15%	+ 4 mA	0.15% + 5 mA						
Transient response	Less than 50 μsec for output to recover to within 15 mV following a change in output current from full load to half load or vice versa									

# Supplemental Characteristics

Model Number		E3631A			E3633A	E3634A				
AC:	1	2	00.1/00.1100/./0	n+ 0F0\ /11F \/oo +100/ (C+d\ /22	0.\/00.+100/_(0.00)					
AC input (47 Hz – 63 Hz Dimensions	)	100 Vac ±10% (Opt 0E9)/115 Vac ±10% (Std)/230 Vac ±10% (0E3) 213 x mm W x 133 mm H x 348 mm D								
Dimensions										
Weight	0.2 kg (10 lb)	(8.4 x 5.2 x 13.7 in)								
Warranty	0.2 kg (10 tb:	8.2 kg (18 lbs) net, 11 kg (24 lbs) shipping 9.5 kg (21 lbs) net, 12 kg (26 lbs) shipping Three years for E363xA series power supplies								
vvarrancy		Three months for standard shipped accessories								
Product regulation		Certified to CSA 22.2 No. 231 (for E3631A), No. 1010.1 (for E3632A/33A/34A);								
i roddet regulation		conforms to IEC 1010-1; carries CE marks; complies with CISPR-11, Group 1, Class A								
Common mode current		Comornis to teo 1010-1, carries of marks, compiles with order κ-11, droup 1, class κ  < 1.5 μArms								
Resolution				· 110 µ 111110						
Program	0.5 mV/0.5 mA	1.5 mV/0.1 mA		1 mV/0.5 mA	1 mV/1 mA	3 mV/0.5 mA				
Readback	0.5 mV/0.5 mA	1.5 mV/0		0.5 mV/0.1 mA	0.5 mV/1 mA	1.5 mV/0.5 mA				
Meter	1 mV/1 mA			1 mV/1 mA	1 mV/1 mA (< 10A	A). 10 mA (≥ 10 A)				
Command processing										
time <sup>3</sup>		< 50 msec			< 100 msec					
OVP/OCP										
Accuracy		N/A			0.50/ - 0.5 //0.50/ - 0.5 /					
± (% output + offset)		N/A			0.5% + 0.5 V/0.5% + 0.5 A					
Activation time		N/A		1.5 msec, OVP ≥3 V/< 10 msec, OVP < 3 V and OCP <10 msec						
Temperature coefficien	t per °C (% output + offse	et)								
Voltage	0.01% + 2 mV	0.01% + 2 mV			0.01% + 3 mV					
Current	0.02% + 3 mA	0.02% + 3 mA			0.02% + 3 mA					
Stability, constant load	& temperature ± (% of out	put + offset), 8 hrs								
Voltage	0.03% + 1 mV	0.03% + 1 mV		0.02% + 1 mV						
Current	0.1% + 3 mA	0.1% + 3 mA		0.1% + 1 mA						
Remote Sense (max.		N/A			0.7	· \/				
voltage in each load lead)				1 V	1 V 0.7 V					
	peed, to within 1% of tota	ıl excursion								
Up Full load	11 msec	50 m	sec	50 msec	95 msec	80 msec				
No load	10 msec	20 m:	sec	20 msec	45 msec	100 msec				
Down Full load	13 msec	45 m	sec	45 msec	30 msec	30 msec				
No load	200 msec	400 m	isec	400 msec	450 msec	450 msec				

- 1. Accuracy specifications are valid after a 1-hour warm-up and calibration at 25 °C.
- 2. Accuracy refers to readback over GPIB and RS-232 or front panel with respect to actual output.
- 3. Maximum time for output to change after receipt of commands.

# Ordering Information

E3630 Series Power Supplies E3631A 80-Watt Triple Power Supply E3632A 120-Watt Single Power Supply E3633A/34A 200-Watt Single Power Supply

# Standard Shipped Accessories

User's & Service guide, Product Reference CD, AC power cord

# **Power Options**

Opt. 0E3 230 Vac ± 10% Opt. 0EM 115 Vac ± 10% Opt. 0E9 100 Vac ± 10%

# Other Options

Opt. 0L2 Extra manual sets
Opt. 1CM Rackmount kit\*
Opt. UK6 Commercial calibration with test result data
E3600A-100 Test lead kit

# Rackmount Kits\*

Keysight E3631A/32A/33A/34A
To rackmount two instruments side-by-side
Lock-link Kit (P/N 5061-9694)
Flange Kit (P/N 5063-9214)

To rackmount one or two instruments in a sliding support shelf Support Shelf (P/N 5063-9256) Slide Kit (P/N 1494-0015) required for support shelf

<sup>\*</sup> Rackmounting with 1CM or lock-link/flange kit requires Keysight or customer support rails Keysight Support Rails-E3663AC

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