



# Agilent 363xA-Series Programmable dc Power Supplies

## Data Sheet



- **Single and triple outputs**
- **80W to 200W output power**
- **Dual output ranges (except E3631A)**
- **Low noise and excellent regulation**
- **High accuracy and resolution**
- **Remote sense (except E3631A)**
- **Front and rear output terminals (E3633/34A only)**
- **GPIB and RS-232 standard**

### Clean and stable power with programmability at an affordable price

#### Affordable programmable power supplies to meet your needs

The E363xA-series of programmable dc power supplies give you the performance of system power supplies without the high price. All models give you clean power, dependable regulation and fast transient response with built-in GPIB and RS-232 interface. E363xA-series are designed to meet the most demanding applications in R&D design verifications, production testing, and QA verifications with traditional quality and reliability you can count on.

#### Excellent Performance you can trust

0.01% load and line regulation keep the output steady when power line and load change 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 first time programmers.

#### Front Panel Operation

A knob and self-guiding keypads allow you to set the output at the resolution you need for the most exacting adjustments quickly and easily. Up to three complete power supply setups can be stored and

recalled from 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 0 to +6 V/5 A and 0 to  $\pm 25$  V/1 A outputs. The 6V output is electrically isolated from the  $\pm 25$  V supply to minimize any interference between circuits under tests. 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 dual output ranges. Output load is protected against overvoltage and overcurrent, which are easily monitored and adjusted from the front panel and remote interface. Remote sense is available to eliminate the errors due to voltage drops on the load leads. E3633A/34A offers front and rear output terminals.

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

Model Number	E3631A			E3632A	E3633A	E3634A
	1	2	3			
<b>dc Output</b> Rating (0°C to 40°C)	0 to +6 V, 0 to 5 A	0 to +25 V, 0 to 1 A	0 to -25 V, 0 to 1 A	0 to 15 V / 7A or 0 to 30 V / 4 A	0 to 8 V / 20 A or 0 to 20 V / 10 A	0 to 25 V / 7 A or 0 to 50 V / 4 A
<b>Load Regulation</b> <sup>1</sup> ±(% of output + offset)	<0.01% + 2 mV <0.01% + 250 uA					
<b>Line Regulation</b> ±(% of output + offset)	<0.01% + 2 mV <0.01% + 250 uA					
<b>Ripple and Noise</b> (20 Hz to 20 MHz)						
Normal Mode Voltage	<350 uVrms / 2 mVpp				<350 uVrms / 3 mVpp	<500 uVrms / 3 mVpp
Normal Mode Current	<2 mArms	<500 uArms		<2 mArms		
Common Mode Current	<1.5 uArms					
<b>Accuracy 12 Mos</b> (25°C + 5°C), ± (% output + offset)						
Programming						
Voltage	0.1% + 5 mV	0.05% + 20 mV		0.05% + 10 mV		
Current	0.2% + 10 mA	0.15% + 4 mA		0.2% + 10 mA		
Readback						
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		
<b>Resolution</b>						
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 / 0.1 mA		0.5 mV / 0.1 mA	0.5 mV / 1 mA	1.5 mV / 0.5 mA
Meter	1 mV / 1 mA	10 mV / 1 mA		1 mV / 1 mA	1 mV / 1 mA (<10 A), 10 mA (≥10 A)	
<b>Transient Response</b>	Less than 50 usec for output to recover to within 15 mV following a change in output current from full load to half load or vice versa.					
<b>Command Processing Time</b> <sup>2</sup>	<100 msec					
<b>OVP/OCP</b>						
Accuracy, ±(% 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		
<b>Temperature Coefficient per °C</b> ± (% output + offset)						
Voltage	0.01% + 2 mV	0.01% + 3 mV				
Current	0.02% + 3 mA	0.02% + 0.5 mA		0.02% + 3 mA		
<b>Stability</b> , constant output & temperature ± (% of output + offset), 8 hrs						
Voltage	0.03% + 1 mV	0.02% + 2 mV		0.02% + 1 mV		
Current	0.1% + 3 mA	0.05% + 1 mA		0.1% + 1 mA		
<b>Remote Sense</b> Max voltage in each load lead				1 V	0.7 V	
<b>Voltage Programming Speed</b> , to within 1% of total excursion						
Up	Full Load	11 msec	50 msec	50 msec	95 msec	80 msec
	No Load	10 msec	45 msec	20 msec	45 msec	100 msec
Down	Full Load	13 msec	20 msec	45 msec	30 msec	30 msec
	No Load	200 msec	400 msec	400 msec	450 msec	450 msec
<b>AC Input</b> (47 Hz - 63 Hz)	100 Vac ±10% (Opt 0E9) / 115 Vac ±10% (Std) / 230 Vac ±10% (Opt 0E3)					
<b>Dimension/Net Weight</b>	213 mm W x 133 mm H x 348 mm D (8.4 x 5.2 x 13.7 in) / 8.2 kg (18 lbs)			213 mm W x 133 mm H x 348 mm D (8.4 x 5.2 x 13.7 in) / 9.5 kg (21 lbs)		
<b>Warranty</b>	1 year					
<b>Product Regulation</b>	Certified to CSA 22.2 No. 231 (for E3631A), No. 1010.1 (for E3632A/33A/34A); conforms to IEC 1010-1; carries CE mark; complies with CISPR-11, Group 1, Class A					

Note: 1. With sense terminal connected for E3632A/33A/34A.

2. 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

## Power Options

Opt. 0E3 230 Vac  $\pm$  10%

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

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

## Other Options

Opt. 0L2 Extra manual sets

Opt. 1CM Rack-mount kit\*

## Rack Mount Kits\*

E3631A/32A/33A/34A

To rack mount two instruments side by side

Lock-link Kit

(P/N 5061-9694)

Flange Kit

(P/N 5063-9214)

To rack mount two instruments in a sliding support shelf

Support Shelf (P/N 5063-9256)

Slide Kit (P/N 1494-0015) required for support shelf

\*Rackmounting with 1CM or lock-link/flange kit requires Agilent or customer supplied support rails Agilent Support Rails - E3663AC

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Printed in USA May 1, 2004  
5968-9726EN

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