



Agilent
E363xA Series
Programmable DC Power Supplies

Data Sheet



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)

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 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.



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 +25V/1A and 0 to -25V/1A. The 6 V output is electrically isolated from the ± 25 V supply to minimize any interference between circuits under test. The ± 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.

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

Model Number	E3631A			E3632A	E3633A	E3634A
	1	2	3			
DC Output 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/7 A 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
Load Regulation ± (% of output + offset)				< 0.01% + 2 mV < 0.01% + 250 µA		
Line Regulation ± (% of output + offset)				< 0.01% + 2 mV < 0.01% + 250 µA		
Ripple and Noise (20 Hz to 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		
Common Mode Current	< 1.5 µArms					
Accuracy¹ 12 Months (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		
Resolution						
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 (< 10A), 10 mA (≥ 10 A)	
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					
Command Processing Time²	< 50 msec			< 100 msec		
OVP/OCP						
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 <10 msec		
Temperature Coefficient per °C (% 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		
Stability, constant load & 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		
Remote Sense (max. voltage in each load lead)	N/A			1 V	0.7 V	
Voltage Programming Speed, to within 1% of total excursion						
Up	Full Load	11 msec	50 msec	50 msec	95 msec	80 msec
	No Load	10 msec	20 msec	20 msec	45 msec	100 msec
Down	Full Load	13 msec	45 msec	45 msec	30 msec	30 msec
	No Load	200 msec	400 msec	400 msec	450 msec	450 msec

¹ Accuracy specifications are valid after a 1-hour warm-up and calibration at 25 °C.

² Maximum time for output to change after receipt of commands.

Model Number	E3631A			E3632A	E3633A	E3634A
	1	2	3			
AC Input (47 Hz – 63 Hz)	100 Vac ±10% (Opt 0E9)/115 Vac ±10% (Std)/230 Vac ±10% (0E3)					
Dimensions	213 x mm W x 133 mm H x 348 mm D (8.4 x 5.2 x 13.7 in)					
Weight	8.2 kg (18 lbs) net, 11 kg (24 lbs) shipping				9.5 kg (21 lbs) net, 12 kg (26 lbs) shipping	
Warranty	One year for E363xA series power supplies Three months for standard shipped accessories					
Product Regulation	Certified to CSA 22.2 No. 231 (for E3631A), No. 1010.1 (for E3632A/33A/34A); conforms to IEC 1010-1; carries CE marks; complies with CISPR-11, Group 1, Class A					

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 guide, Service guide, Product
Reference CD, AC power cord

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 Rackmount kit*

Opt. UK6 Commercial calibration

with test result data

E3600A-100 Test lead kit

Rackmount Kits*

Agilent 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

* Rackmounting with 1CM or lock-link/
flange kit requires

Agilent or customer support rails

Agilent Support Rails-E3663AC



Agilent Email Updates

www.agilent.com/find/emailupdates

Get the latest information on the products and applications you select.



Agilent Direct

www.agilent.com/find/agilentdirect

Quickly choose and use your test equipment solutions with confidence.



www.agilent.com/find/open

Agilent Open simplifies the process of connecting and programming test systems to help engineers design, validate and manufacture electronic products. Agilent offers open connectivity for a broad range of system-ready instruments, open industry software, PC-standard I/O and global support, which are combined to more easily integrate test system development.



LXI is the US registered trademark of the LXI Consortium.

Remove all doubt

Our repair and calibration services will get your equipment back to you, performing like new, when promised. You will get full value out of your Agilent equipment throughout its lifetime. Your equipment will be serviced by Agilent-trained technicians using the latest factory calibration procedures, automated repair diagnostics and genuine parts. You will always have the utmost confidence in your measurements.

Agilent offers a wide range of additional expert test and measurement services for your equipment, including initial start-up assistance onsite education and training, as well as design, system integration, and project management.

For more information on repair and calibration services, go to

www.agilent.com/find/removealldoubt

Product specifications and descriptions in this document subject to change without notice.

www.agilent.com

For more information on Agilent Technologies' products, applications or services, please contact your local Agilent office. The complete list is available at:

www.agilent.com/find/contactus

Phone or Fax

Americas

Canada	(877) 894-4414
Latin America	305 269 7500
United States	(800) 829-4444

Asia Pacific

Australia	1 800 629 485
China	800 810 0189
Hong Kong	800 938 693
India	1 800 112 929
Japan	0120 (421) 345
Korea	080 769 0800
Malaysia	1 800 888 848
Singapore	1 800 375 8100
Taiwan	0800 047 866
Thailand	1 800 226 008

Europe & Middle East

Austria	01 36027 71571
Belgium	32 (0) 2 404 93 40
Denmark	45 70 13 15 15
Finland	358 (0) 10 855 2100
France	0825 010 700* *0.125€/minute
Germany	07031 464 6333
Ireland	1890 924 204
Israel	972-3-9288-504/544
Italy	39 02 92 60 8484
Netherlands	31 (0) 20 547 2111
Spain	34 (91) 631 3300
Sweden	0200-88 22 55
Switzerland	0800 80 53 53
United Kingdom	44 (0) 118 9276201

Other European Countries:

www.agilent.com/find/contactus

Revised: October 6, 2008

© Agilent Technologies, Inc. 2009
Printed in USA, June 19, 2009
5968-9726EN



Agilent Technologies