HP E363xA - Series
Programmable Power Supplies

Technical Data
October 1998

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

Affordable programmable power supplies to meet your needs

The HP 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.
HP E363xA-series are designed to meet the most demanding applications in R&D design verifications, production testing, and QA verifications with traditional HP 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 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 manual 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.

HP E3631A triple-output power supply

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

HP 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.

HP 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 +6V, 0 to 5A	0 to +25V, 0 to 1A	0 to -25V, 0 to 1A	0 to +15V/7A or 0 to +30V/4A	0 to +8V/20A or 0 to +20V/10A	0 to +25V/7A o 0 to +50V/4A
Load Regulation [1] +(% of output + offset)	< 0.01% + 2mV < 0.01% + 250uA					
Line Regulation +(% of output + offset)	< 0.01% + 2mV < 0.01% + 250uA					
Ripple and Noise (20Hz to 20MHz)						
Normal Mode Voltage	< 350uVrms / 2mVpp				<350uVrms/ 3mVpp	<500uVrms/ 3mVpp
Normal Mode Current	<2mArms	<500uArms		< 2mArms		
Common Mode Current	< 1.5uArms					
Accuracy 12Mos (25 °C + 5 °C), ± (% output + offset)						
Programming						
Voltage	0.1% + 5mV	0.05% + 20mV		0.05% + 10mV		
Current	0.2% + 10mA	0.15% + 4mA		0.2% + 10mA		
Readback						
Voltage	0.1% + 5mV	0.05% + 10mV		0.05% + 5mV		
Current	0.2% + 10mV	0.15% + 4mA		0.15% + 5mA		
Resolution						
Program	0.5mV / 0.5mA	1.5mV / 0.1mA		1mV/ 0.5mA	1mV/1mA	3mV/0.5mA
Readback	0.5mV / 0.5mA	1.5mV / 0.1mA		0.5mV / 0.1mA	0.5mV / 1mA	1.5mV / 0.5mA
Meter	1mV/1mA	10mV / 1mA		1mV / 1mA	1mV / 1mA (<10A), 10mA (≥10A)	
Transient Response	Less than 50usec for output to recover to within 15mV following a change in output current from full load to half load or vice versa.					
Command Processing Time [2]	< 100msec					
OVP/OCP Accuracy, ± (% output + offset) Activation time	N / A			0.5% + 0.5V / 0.5% + 0.5A <1.5msec, OVP>3V / <10msec, OVP< 3V and OCP		
Temperature Coefficient per °C ± (% output + offset)						
Voltage	0.01% + 2mV	0.01% + 3mV				
Current	0.02% + 3mA	0.02% + 0.5mA		0.02% + 3mA		
Stability, constant output & temperature ± (% of output + offset), 8 hrs						
Voltage	0.03%+1mV	0.02%+2mV		0.02%+1mA		
Current	0.1%+3mA	0.05%+1mA		0.1% + 1mA		
Remote Sense Max voltage in each load lead				1V	0.7V	
Voltage Programming Speed, to within 1% of total excursion						
Up Full Load	11msec	50msec		50msec	95msec	80msec
No Load	10msec	45msec		20msec	45msec	100msec
Down Full Load	13msec	20msec		45msec	30msec	30msec
No Load	200msec	400msec		400msec	450msec	450msec
AC Input (47Hz - 63Hz)	100Vac ± 10% (Opt 0E9) / 115Vac + 10% (Std) / 230Vac ± 10% (Opt 0E3)					
Dimension/Net Weight	213mmW x 133mmH x 348mmD (8.4 x 5.2 x 13.7 in) / 8.2kg (18 lbs)			213mmW x 133mmH x 348mmD (8.4 x 5.2 x 13.7 in) / 9.5kg (21 lbs)		
Warranty	3 years					
Product Regulation	Designed to comply with UL 1244, IEC1010-1; Certified with CSA 22.2 no. 1010.1, meets requirements for CE regulation					

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

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

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Ordering Information

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

Power Options

Opt. 0E3 230 Vac +/- 10%
Opt. 0E9 100 Vac +/- 10%

Other Options

Opt. W50 Additional 2-year warranty (5-year total)
Opt. 910 Extra manual sets

Rack Mount Kits

HP E3631A/32A/33A/34A
To rack mount a single instrument (HP P/N 5063-9243)
To rack mount two instruments side by side
Lock-link Kit (HP P/N 5061-9694)
Flange Kit (HP P/N 5063-9214)
To rack mount one or two instruments in a sliding support shelf
Shelf (HP P/N 5063-9256)
Slide Kit (HP P/N 1494-0015)

For more information about HP's programmable power supplies and all other Hewlett-Packard basic instruments, and for a current sales office listing, visit our web site at **http://www.hp.com/go/bi.**
You can also contact one of the following centers and ask for a test and measurement sales representative.

United States:
Hewlett-Packard Company
Test and Measurement Call Center
P.O. Box 4026
Englewood, Colorado 80155-4026
1 800 452 4844

Canada:
Hewlett-Packard Canada Ltd.
5150 Spectrum Way
Mississauga, Ontario
L4W 5G1
(905) 206 4725

Europe:
Hewlett-Packard
European Marketing Centre
P.O. Box 999
1180 AZ Amstelveen
The Netherlands
(31 20) 547 9900

Japan:
Hewlett-Packard Japan Ltd.
Measurement Assistance Center
9-1, Takakura-Cho,
Hachioji-Shi,
Tokyo 192, Japan
Tel: (81) 426 56 7832
Fax: (81) 426 56 7840

Latin America:
Hewlett-Packard
Latin American Region Headquarters
5200 Blue Lagoon Drive
9th Floor
Miami, Florida 33126
U.S.A.
Tel: (305) 267-4245
(305) 267-4220
Fax: (305) 267-4288

Australia/New Zealand:
Hewlett-Packard Australia Ltd.
31-41 Joseph Street
Blackburn, Victoria 3130
Australia
1 800 629 485

Asia Pacific:
Hewlett-Packard Asia Pacific Ltd.
17-21/F Shell Tower, Times Square,
1 Matheson Street, Causeway Bay,
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