E3631A 80W Triple Output Power Supply, 6V, 5A & ±25V, 1A

Product Status: Currently Orderable | Currently Supported

Overview

Key Specifications

Output Ratings

- Output 1: 0 to 6 V, 0 to 5 A
- Output 2: 0 to +25 V, 0 to 1 A
- Output 3: 0 to -25 V, 0 to 1 A

Programming Accuracy at 25°C ±5°C

- Voltage: 0.05% + 20 mV, 0.05% + 20 mV, 0.1% + 5 mV
- + Current: 0.15% + 4 mA, 0.15% + 4 mA, 0.2% + 10 mA

Ripple & Noise (20 Hz to 20 MHz)

- Normal Mode Voltage: <350 µVrms/ 2 mV p-p, <350 µV rms/2 mV p-p, <350 µV rms/2 mV p-p
- Normal-mode current: <500 µA rms, <500 µA rms, <2 mA rms
- Common-mode current: <1.5 µA rms, <1.5 µA rms, <1.5 µA rms

Readback Accuracy at 25°C ±5°C

- Voltage: 0.05% + 10 mV, 0.05% + 10 mV, 0.1% + 5 mV
- Current: 0.15% + 4 mA, 0.15% + 4 mA, 0.2% + 10 mA

Description

Agilent basic DC power supplies offer essential features for a tight budget. The triple output, 80 W, GPIB, E3631A provides small, compact size for bench use; low output ripple and noise; built-in measurements and basic programmable features with GPIB and RS232 interface. This clean and reliable supply is designed for general purpose applications; and combines convenient benchtop capabilities with flexible system features in a compact, multi-output package.

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/7A or 0 to 30 V/4 A	0 to 8 V/20A or 0 to 20 V/10 A	0 to 25 V/7 A or 0 to 50 V/ 4A
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					
Accuracy[1] 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/1mA (< 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 Time[2]	< 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 × mm W × 133 mm H × 348 mm D (8.4 × 5.2 × 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	1 year					
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

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*

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