

KEYSIGHT TECHNOLOGIES (AGILENT HP)

E3649A

The Keysight (Agilent) E3649A is a high-performance, dual-output, 97W programmable DC power supply designed for both benchtop use and system integration. Part of the popular E3640 series, it provides clean, low-ripple power with dual output ranges up to 35V/1.4A or 60V/0.8A per channel. Complete with GPIB and RS-232 interfaces, it features Standard Commands for Programmable Instruments (SCPI) support, excellent regulation, and dual-line vacuum fluorescent displays, making it ideal for general-purpose electronic test and R&D environments.

SPECIFICATIONS

General

Interfaces	GPIB, RS-232
Display	Vacuum fluorescent display (VFD), dual line

Output Specifications

Number of Outputs	2
Output Voltage Range (Range 1)	0 to 35 V
Output Current Range (Range 1)	0 to 1.4 A
Output Voltage Range (Range 2)	0 to 60 V
Output Current Range (Range 2)	0 to 0.8 A
Maximum Power Rating	97 W
Load Regulation (Voltage)	< 0.01% + 3 mV
Load Regulation (Current)	< 0.01% + 250 μ A
Line Regulation (Voltage)	< 0.01% + 3 mV
Line Regulation (Current)	< 0.01% + 250 μ A
Normal Mode Voltage Ripple & Noise (rms)	< 1 mVrms
Normal Mode Voltage Ripple & Noise (peak-to-peak)	< 8 mVpp
Normal Mode Current Ripple & Noise (rms)	< 4 mArms
Common Mode Noise Current	< 1.5 μ Arms

Programming Accuracy

Voltage Programming Accuracy (Output 1)	< 0.05% + 10 mV
Voltage Programming Accuracy (Output 2)	< 0.05% + 10 mV
Current Programming Accuracy (Outputs 1 & 2)	< 0.2% + 10 mA

Readback Accuracy

Voltage Readback Accuracy (Output 1)	< 0.05% + 5 mV
Voltage Readback Accuracy (Output 2)	< 0.05% + 5 mV
Current Readback Accuracy (Output 1)	< 0.15% + 5 mA
Current Readback Accuracy (Output 2)	< 0.15% + 5 mA

Transient Response and Settling

Transient Response Recovery Time	< 50 μ s
Transient Response Settling Band	within 15 mV of final value following a 50% to 100% or 100% to 50% load change

Protection Features

Overvoltage Protection (OVP) Accuracy	< 0.5% + 0.5 V
---------------------------------------	----------------

Isolation and Connections

Maximum Isolation Voltage (Output to Ground)	240 Vdc
Remote Sensing Capability	Up to 1 V drop per lead

System Control and Interface

Command Language / Syntax Standards	SCPI (Standard Commands for Programmable Instruments)
Save/Recall State Storage Capacity	5 states

Environmental Specifications

Storage Temperature Range	-20 to 70 °C
Relative Humidity (Non-condensing)	Up to 80% RH at 40°C
Cooling System Type	Fan-cooled

Physical Characteristics

Net Weight	9.2 kg
Rack Mounting Unit (RU) Height	3U (half-rack width)

Compliance and Standards

Safety Standards Certifications	Certified to CSA 22.2 No. 1010.1, IEC 1010-1 / EN 61010-1
Electromagnetic Compatibility (EMC) Compliance	EN 55011 Group 1 Class A, EN 50082-1

Power Requirements

AC Input Frequency	47 Hz to 63 Hz
--------------------	----------------

Performance

Maximum Sense Lead Compensation Voltage	1 V per lead
Warm-up Time	30 minutes

Environmental

Operating Altitude	Up to 2000 meters
--------------------	-------------------

Compliance & Safety

Installation Category	IEC 1010-1 Overvoltage Category II
Pollution Degree	Pollution Degree 2

Maintenance

Recommended Calibration Interval	1 year
----------------------------------	--------

Inputs & Outputs

Rear Panel Connections	Screw-terminal blocks for Output 1 and Output 2 (including remote sense), GPIB (IEEE-488) connector, RS-232 (9-pin female) connector
------------------------	--

Interfaces & Control

Default GPIB Address	5
RS-232 Baud Rates	300, 600, 1200, 2400, 4800, 9600 baud
RS-232 Flow Control	DTR/DSR (hardware) or None
SCPI Compliance Version	1997.0

TECHNOLOGY

Linear power supply

APPLICATIONS

Test and Measurement, R&D Benchtop, and Automated Test Systems (ATE)

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.