

KEYSIGHT TECHNOLOGIES (AGILENT HP)

E3648A

The Keysight (Agilent/HP) E3648A is a programmable, dual-output DC power supply designed for benchtop and system applications. It delivers up to 90 watts of total clean and reliable power across two isolated channels, each featuring dual-range output flexibility (0-8V/5A or 0-20V/2.5A). Part of the E3640 series, it features low ripple and noise, built-in remote sensing, and standard GPIB and RS-232 interfaces with SCPI command support.

SPECIFICATIONS

General

Interfaces	GPIB (IEEE-488), RS-232
Display	Vacuum Fluorescent Display (VFD)

Physical

Power Supply	100 / 115 / 230 Vac $\pm 10\%$, 47 - 63 Hz
Operating Temperature	0 to 40 °C
Dimensions (W×H×D)	212.8 × 88.1 × 348.3 mm
Weight	9.2 kg kg
Output Terminals	Front panel binding posts and rear panel screw-terminal block

Output Ratings

Number of Outputs	2
Maximum Output Power	100 W (50 W per output)
Output 1 & 2 Range 1 (Low)	0 to 8 V / 0 to 5 A
Output 1 & 2 Range 2 (High)	0 to 20 V / 0 to 2.5 A

Load and Line Regulation

Voltage Load Regulation	$< 0.01\% + 3 \text{ mV}$
Current Load Regulation	$< 0.01\% + 250 \mu\text{A}$
Voltage Line Regulation	$< 0.01\% + 3 \text{ mV}$
Current Line Regulation	$< 0.01\% + 250 \mu\text{A}$

Ripple and Noise (20 Hz to 20 MHz)

Normal Mode Voltage (Peak-to-Peak)	$< 5 \text{ mVpp}$
Normal Mode Voltage (RMS)	$< 0.5 \text{ mVrms}$
Normal Mode Current (RMS)	$< 4 \text{ mArms}$
Common Mode Current	$< 1.5 \mu\text{Arms}$

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

Transient Response Time	< 50 μ s (to recover within 15 mV for a 50% load change)
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Protection Features

Overvoltage Protection (OVP)	Yes
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Connectivity and Interfaces

Programming Language Standard	SCPI
Remote Sense Capability	Yes

Environmental and Compliance

Storage Temperature	-20°C to 70°C
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Physical Characteristics

Cooling System	Fan cooling
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Performance

Overvoltage Protection (OVP) Accuracy	$\pm(0.5\% + 0.5 \text{ V})$
Command Processing Time	< 50 ms
Warm-up Time	1 hour
Temperature Coefficient (Voltage)	$\pm(0.01\% + 3 \text{ mV})$ per °C
Temperature Coefficient (Current)	$\pm(0.02\% + 3 \text{ mA})$ per °C

Electrical

Isolation Voltage	$\pm 240 \text{ Vdc}$ maximum (any terminal to earth ground)
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Features

Store/Recall Capacity	5 states
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Environmental

Operating Humidity	0 to 80% RH at 40 °C (non-condensing)
Maximum Operating Altitude	2000 m

Power

AC Input (Standard)	115 VAC ±10%, 47 to 63 Hz
AC Input (Option 0E3)	230 VAC ±10%, 47 to 63 Hz
AC Input (Option 0E9)	100 VAC ±10%, 47 to 63 Hz

Compliance

Safety Compliance	CSA 22.2 No. 1010.1, IEC 1010-1
EMC Compliance	CISPR-11, EN 55011, EN 50082-1

TECHNOLOGY

Linear

APPLICATIONS

Test and Measurement / Benchtop / System Integration

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