

KEYSIGHT TECHNOLOGIES (AGILENT HP)

E3646A

The Keysight Technologies (Agilent) E3646A is a clean, reliable 54W dual-output programmable DC power supply designed for versatile benchtop and system testing. Combining low ripple and noise with integrated programming and measurement capabilities, it delivers precise power control through standard GPIB and RS-232 interfaces.

SPECIFICATIONS

General

Interfaces	GPIB (IEEE-488) and RS-232
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Physical

Dimensions (W×H×D)	212.8 mm W × 133.0 mm H × 348.3 mm D mm
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Weight	8.2 kg kg
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Output Ratings

Number of Outputs	2
Output 1 Range 1 Voltage	0 to 8 V
Output 1 Range 1 Current	0 to 3 A
Output 1 Range 2 Voltage	0 to 20 V
Output 1 Range 2 Current	0 to 1.5 A
Output 2 Range 1 Voltage	0 to 8 V
Output 2 Range 1 Current	0 to 3 A
Output 2 Range 2 Voltage	0 to 20 V
Output 2 Range 2 Current	0 to 1.5 A
Maximum Total Output Power	60 W

Load and Line Regulation

Voltage Load Regulation	<0.01% + 3 mV
Current Load Regulation	<0.01% + 250 μ A
Voltage Line Regulation	<0.01% + 3 mV
Current Line Regulation	<0.01% + 250 μ A

Ripple and Noise

Normal Mode Voltage Ripple (RMS)	<0.5 mVrms
Normal Mode Voltage Ripple (Peak-to-Peak)	<5 mVpp
Normal Mode Current Ripple (RMS)	<4 mArms
Common Mode Current (RMS)	<1.5 μ Arms
Noise Bandwidth Limit	20 Hz to 20 MHz

Programming Accuracy

Output 1 Voltage Programming Accuracy	<0.05% + 10 mV
Output 1 Current Programming Accuracy	<0.2% + 10 mA
Output 2 Voltage Programming Accuracy	<0.05% + 10 mV
Output 2 Current Programming Accuracy	<0.2% + 10 mA

Readback Accuracy

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

Resolution

Meter Display Current Resolution	1 mA
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Transient Response and Settling Time

Transient Recovery Time	<50 μ s
Transient Voltage Settling Bandwidth	within 15 mV of nominal value

Protection Features

Overvoltage Protection Accuracy	$\pm(0.5\% + 0.5 \text{ V})$
Overvoltage Protection Response Time	<1.5 ms

System and Front Panel Features

Remote Sensing Maximum Voltage Drop	1 V per lead
State Storage Capacity	5 save/recall states

Connectivity and Programming

GPIB Interface	Yes (IEEE-488)
RS-232 Interface	Yes (9-pin D-sub)
Command Language Support	SCPI (Standard Commands for Programmable Instruments)

Power Requirements

AC Input Frequency Range	47 to 63 Hz
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Physical Characteristics

Form Factor	Half-rack 2U
Cooling Mechanism	Fan cooled (low noise)

Environmental and Safety Compliance

Operating Temperature Range	0°C to 40°C (full specs), 40°C to 55°C (derated)
Storage Temperature Range	-20°C to 70°C
Maximum Operating Humidity	Up to 80% RH (non-condensing)
Recommended Calibration Interval	1 year

Temperature Coefficient

Voltage Temperature Coefficient	<0.01% + 3 mV per °C
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Performance

Recommended Warm-up Time	1 hour
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Power

AC Input Voltage Options	100 Vac ±10% (Opt 0E9) / 115 Vac ±10% (Opt 0EM) / 230 Vac ±10% (Opt 0E3)
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TECHNOLOGY

Linear

APPLICATIONS

Test and Measurement

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