



Agilent Technologies E3640A – E3649A Programmable DC Power Supplies

Data Sheet



Clean Programmable Power Supplies

- Single and Dual Output
- Dual Output Ranges
- 30W to 100W Output Power
- Front and Rear Output Terminals
- Over-voltage Protection
- Remote Sense
- GPIB and RS-232 Standard

Great Performance, Outstanding Price

With 30 to 100W of output power, the Agilent E364xA-series of programmable DC power supplies provide great performance at a great price. All ten models deliver clean power, dependable regulation, fast transient response and built-in GPIB and RS-232 interfaces. They're designed to meet the needs of R&D design verification, production testing, QA verifications and other demanding applications with Agilent Technologies' quality and reliability.

Steady Output

With 0.01 percent load and line regulation, Agilent E364xA power supplies keep output steady when power line and load changes occur. They also specify low normal mode voltage noise and low 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. Agilent E364xA power supplies specify less than 90 msec of voltage settling time at any output load condition.

Remote Interface

Agilent E364xA power supplies support any PC with a GPIB (IEEE-488) card or RS-232 interface. Every model ships standard with both GPIB and RS-232. Easy-to-use SCPI (Standard Commands for Programmable Instruments) keeps programming fast and simple. The user manual provides information for beginning programmers, yet includes enough detail to help veteran programmers as well.

Broad Support

VXIplug&play software drivers are available for Agilent VEE and National Instruments LabView™ and LabWindows™, simplifying integration of the E364xA into your test system. The drivers are supported under Microsoft® Windows 98® and NT.®

Front Panel Operation

An easy-to-use rotary knob and self-guiding keypads allow you to quickly and easily set output at the resolution you need. Voltage and current levels can be set to a maximum resolution of 10 mV/1 mA from the front panel. Up to five 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. Dual output models allow two voltages or currents to be displayed simultaneously.

Versatile Power

Agilent E364xA power supplies give you the flexibility to select from dual output ranges. Output load is protected against overvoltage, which is easily monitored and adjusted from the front panel and remote interface. Remote sensing is available in the rear terminal to eliminate errors due to voltage drops on the load leads. These power supplies offer new versatile binding

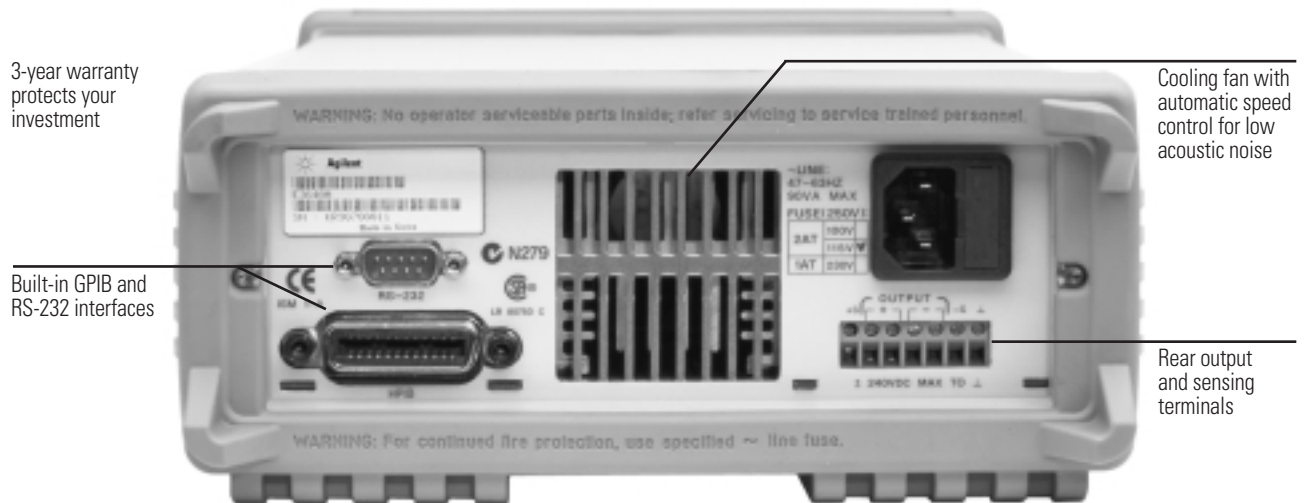
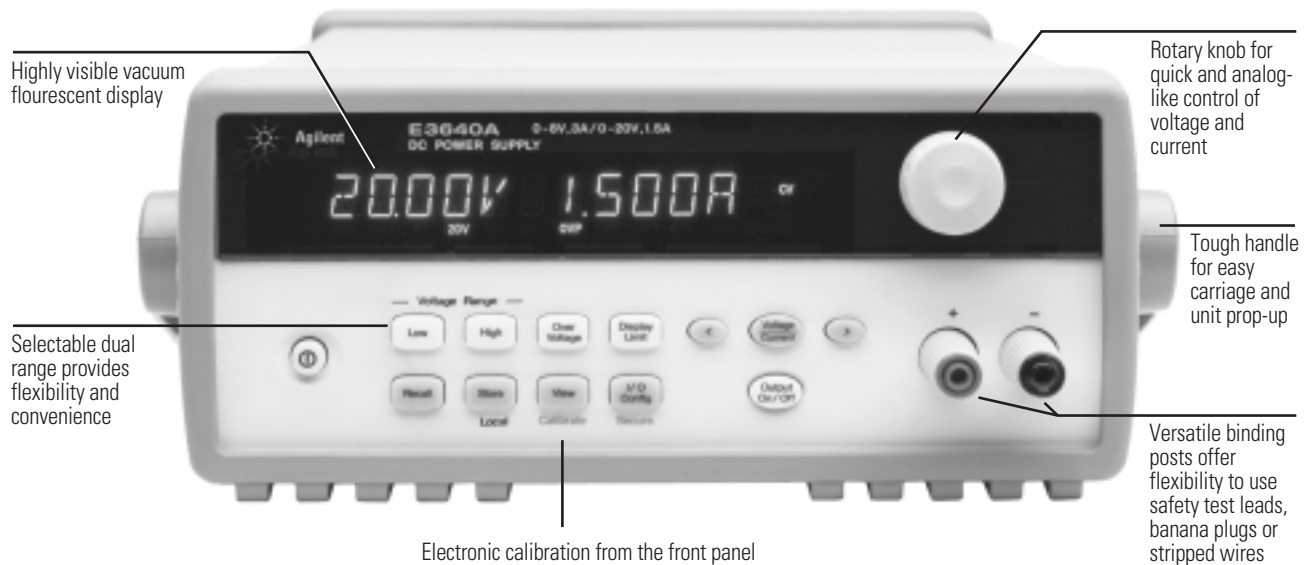


Agilent Technologies
Innovating the HP Way

posts on the front panel and screw-type terminals on the rear panel. New front panel binding posts allow you to use safety test leads as well as conventional banana clips and stripped wires. An optional rackmount kit is available. The Agilent E364xA series employs a cooling fan with automatic speed control for reduced acoustic noise.

LabView and LabWindows are registered trademarks of National Instruments.

Microsoft, Windows 98 and Windows NT are US registered trademarks of Microsoft Corp.



Agilent E3640A – E3649A Programmable DC Power Supply Specifications

| Model Number | E3640A | E3641A | E3642A | E3643A | E3644A | E3645A |
|----------------------------------|---|--------------------------------|-----------------------------|--------------------------------|---------------------------|--------------------------------|
| Maximum Power | 30W | | 50W | | 80W | |
| # of Output | 1 | 1 | 1 | 1 | 1 | 1 |
| DC Output Rating (@ 0°C to 40°C) | 0 to 8V/3A or 0 to 20V/1.5A | 0 to 35V/0.8A or 0 to 60V/0.5A | 0 to 8V/5A or 0 to 20V/2.5A | 0 to 35V/1.4A or 0 to 60V/0.8A | 0 to 8V/8A or 0 to 20V/4A | 0 to 35V/2.2A or 0 to 60V/1.3A |
| Net Weight | 5.3kg (11.7 lbs) | | 6.2kg (13.7 lbs) | | 6.7 kg (14.7 lbs) | |
| Dimension | 254.4mmW x 103.6mmH x 374mmD (10 x 4.1 x 14.7 in) | | | | | |

| Model Number | E3646A | E3647A | E3648A | E3649A |
|----------------------------------|---|---------------------------------------|------------------------------------|----------------------------------|
| Maximum Power | 60W | | 100W | |
| # of Output | 2 | 2 | 2 | 2 |
| DC Output Rating (@ 0°C to 40°C) | Two 0 to 8V/3A or 0 to 20V/1.5A | Two 0 to 35V/0.8A or 0 to 60V/0.5A | Two 0 to 8V/5A or 0 to 20V/2.5A | Two 0 to 35V/1.4A or 60V/0.8A |
| Net Weight | 7.3kg (16.1 lbs) | | 9.2kg (20.3 lbs) | |
| Dimension | 228mm W x 133mm H x 374mm D (8.9 x 5.2 x 14.7 in) | | | |

| | |
|---|---|
| Load¹ and Line Regulation ±(% of output + offset) | |
| Voltage | <0.01% + 3mV |
| Current | <0.01% + 250uA |
| Ripple and Noise (20Hz to 20MHz) | |
| Normal Mode Voltage | <5mVpp/0.5Vrms for 8V/20V models <8mVpp/1mVrms for 35V/60V models |
| Normal Mode Current | <4mArms |
| Common Mode Current | <1.5uArms |
| Accuracy 12 Months (@ 25 °C ± 5 °C), ±(% output + offset) | |
| Programming | |
| Voltage | <0.05% + 10mV (<0.1% + 25mV for output 2 of E3646/47/48/49A) |
| Current | <0.2% + 10mA |
| Readback | |
| Voltage | <0.05% + 5mV (<0.1% + 25mV for output 2 of E3646/47/48/49A) |
| Current | <0.15% + 5mA (<0.15% + 10mA for output 2 of E3646/47/48/49A) |
| Resolution | |
| Program | <5mV / 1mA |
| Readback | <2mV / 1mA |
| Meter | 10mV / 1mA |
| Transient Response | Less than 50µsec for output to recover to within 15mV following a change in output current from full load to half load or vice versa. |
| Settling Time ² | <90msec |
| OVP | |
| Accuracy, ±(% output + offset) | <0.5% + 0.5V |
| Activation time ³ | <1.5msec, OVP≥3V / <10msec, OVP< 3V |
| Temperature Coefficient per °C ± (% output + offset) | |
| Voltage | <0.01% + 3mV (<0.02% + 5mV for output 2 of E3646/47/48/49A) |
| Current | <0.02% + 3mA |
| Stability , constant output & temperature ±(% of output + offset), 8 hrs | |
| Voltage | <0.02%+2mV |
| Current | <0.1% + 1mA |
| Remote Sense | 1V |
| Max voltage drop in each load lead | |
| AC Input (47Hz – 63Hz) | 100Vac ± 10% (Opt 0E9) / 115Vac ± 10% (Std) / 230Vac ± 10% (Opt 0E3) |
| Warranty | 3 years |
| Product Regulation | Designed to comply with UL3111-1; certified to CSA 22.2 No. 1010.1; conforms to IEC 1010-1; complies with EMC directive 89/336/EEC(Group1, Class A) |

¹ With sense terminal connected.

² Maximum time required for the output voltage to change from 1% to 99% or vice versa following the receipt of VOLTage or APPLY command via direct GPIB or RS-232 interface.

³ Average time for output to start to drop after OVP condition occurs.

Ordering Information

Agilent E364xA-Series Power Supplies
E3640A 30-Watt Single Power Supply
E3641A 30-Watt Single Power Supply
E3642A 50-Watt Single Power Supply
E3643A 50-Watt Single Power Supply
E3644A 80-Watt Single Power Supply
E3645A 80-Watt Single Power Supply
E3646A 60-Watt Dual Power Supply
E3647A 60-Watt Dual Power Supply
E3648A 100-Watt Dual Power Supply
E3649A 100-Watt Dual Power Supply

Accessories included

Users Guide, Quick Reference Guide and AC power cord

Power Options

Opt. 0E3 230 Vac +/- 10%

Opt. 0E9 100 Vac +/- 10%

Other Options

Opt. 1CM Rackmount kit(Single output).

.(Dual output).

Opt. W50 Additional 2-year warranty
(5-year total)

Opt. 910 Extra manual

Agilent E364xA Single Output Manual
(P/N E3640-90001)

Agilent E364xA Dual Output Manual (P/N E3646-90001)

Accessories

Power Supply Load Leads

Agilent E3619A 18AWG power supply
test leads

Rackmount Kits

Agilent E3640A/41A/42A/43A/44A/45A

To rackmount a single instrument
(P/N 5063-9240)

To rackmount two instruments side-by-side

Lock-link Kit (P/N 5061-9694)

Flange Kit (P/N 5063-9212)

To rackmount one or two instruments
in a sliding support shelf

Shelf (P/N 5063-9255)

Slide Kit (P/N 1494-0015)

For a single instrument, also order

filler panel (P/N 5002-3999)

Agilent E3646A/47A/48A/49A

To rackmount a single instrument
(P/N 5063-9243)

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

Shelf (P/N 5063-9256)

Slide Kit (P/N 1494-0015)

Authorized Agilent Distributor

Click here to Buy:

TRANSCAT

800.800.5001

Transcat.com

Data subject to change.
© Agilent Technologies 2000
Printed in the U.S.A. 02/00
5968-7355EN



Agilent Technologies

Innovating the HP Way