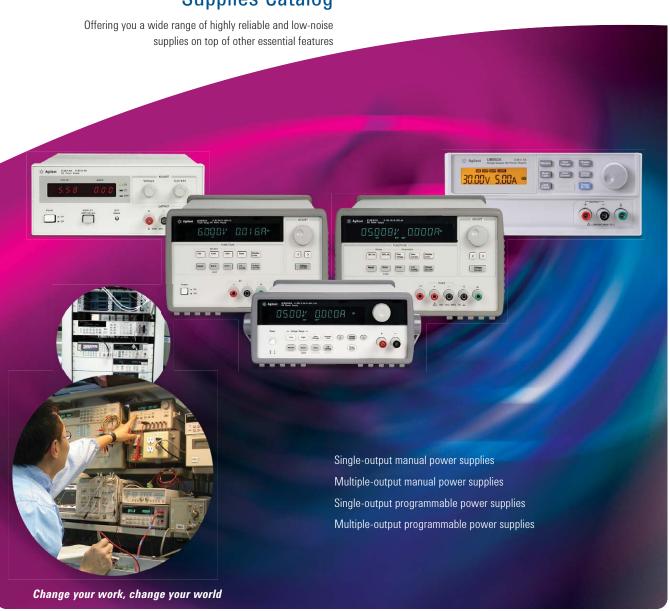
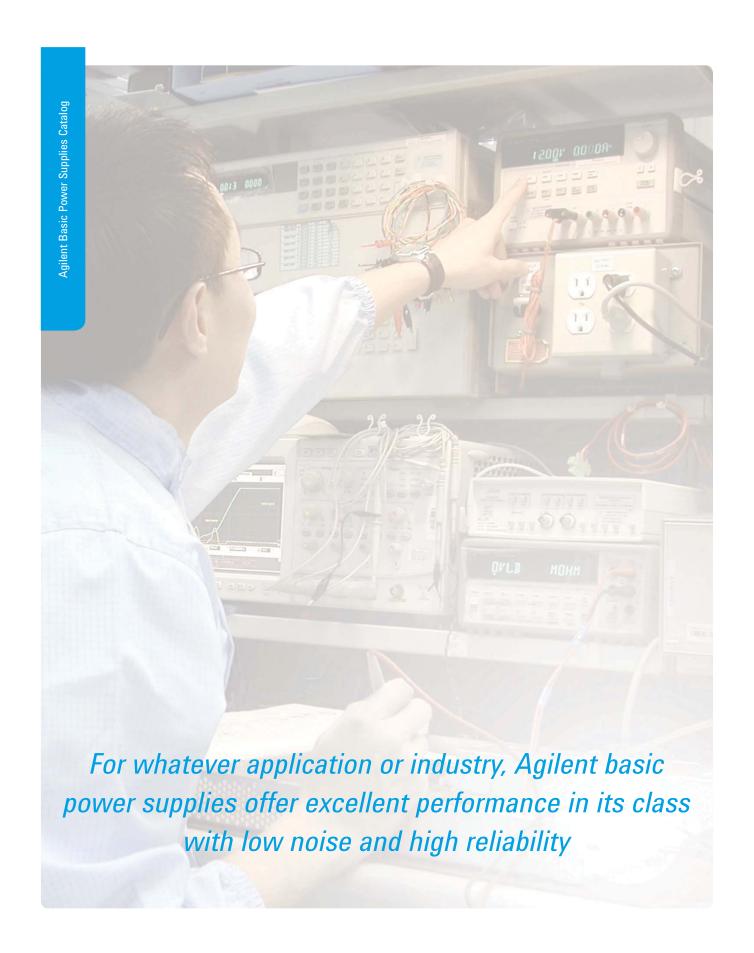


Agilent Basic Power Supplies Catalog







Reliable power, repeatable results

Agilent DC power supplies are small and compact. They offer quiet and stable DC power for both manual and automatic testing. Key features include the following:

- Excellent regulation
- · Low output noise
- Fast load transient response (<50 μSec)
- Remote sensing feature
- GPIB and RS-232 interface (SCPI-compatible)
- Built-in voltage and current measurements
- · Overvoltage and/or overcurrent protections
- · Save or recall up to three memory states
- Keypad lock
- Physical lock mechanism

DC Power Supplies Offerings Summary

| Categories | Models | Voltage (max) | Current (max) | Power (max) | No. of ranges | Load and line regulation | Ripple and noise | I/O interface |
|---|--|---------------------------|--------------------------|---------------------------|---------------|--------------------------------|------------------------------------|--------------------|
| Single-output | U8001A/U8002A | up to 30 V | up to 5 A | up to 150 W | 1 | 0.01%+2 mV | 12 mVp-p | _ |
| manual power supplies | E3610A/11A/12A E3614A/15A/16A/17A | up to 120 V up to 60 V | up to 3 A up to 6 A | 30 W up to 60 W | 2 | 0.01%+2 mV | 2 mVp-p 1 mVp-p | _ |
| Multiple-output manual power | U8031A/U8032A (triple-output) | up to 60 V | up to 6 A | 375 W | 1 | 0.01%+2 mV | 10 mVp-p | _ |
| supplies | E3620A (dual-output) E3630A (triple-output) | up to 25 V up to ±20 V | up to 1 A up to 2.5 A | 50 W 35 W | 1 | 0.01%+2 mV | 1.5 mVp-p | _ |
| Single-output programmable power supplies | E3632A/33A/34A E3640A-E3645A | up to 50 V up to 60 V | up to 20 A up to 8 A | up to 200 W up to 80 W | 2 | 0.01%+2 mV 0.01%+3 mV | best at 2 mVp-p best at 5 mVp-p | GPIB and RS-232 |
| Multiple-output programmable power supplies | E3646A-E3649A E3631A | up to 60 V up to ±25 V | up to 5 A | up to 100 W 80 W | 2 | 0.01%+3 mV 0.01%+2 mV | best at 5 mVp-p 2 mVp-p | GPIB and RS-232 |

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Single-output. Manual. 30 W to 60 W





E3610A - E3617A

Features

- Dual-range outputs (E3610A/11A/12A)
- Remote programming (E3614A/15A/16A/17A)
- Remote sensing (E3614A/15A/16A/17A)
- Overvoltage protection (OVP) (E3614A/15A/16A/17A)
- Overload protection

These linear-regulated DC power supplies provide reliable and convenient DC power on a lab bench. The 10-turn pots and clear voltage and current meters allow fine adjustments to be made easily. These models are CV/CC, so they can serve as either voltage or current sources. The "CC Set" button allows the current setting to be viewed, allowing easy adjustment of a current limit. Either the positive or negative terminal may be connected to ground, creating a positive or negative voltage, or floated up to 240 V from ground.

E3610A, E3611A, E3612A

These flexible 30 W DC power supplies have 2 ranges, providing more current at lower voltage levels.

E3614A, E3615A, E3616A, E3617A

These DC power supplies provide remote sensing to eliminate the errors in voltage regulation due to voltage drops in the load leads. Delicate loads are protected by the overvoltage protection feature. Remote voltage signals can be used to control the power supply's output voltage and current levels.

Supplemental Characteristics

Size: E3610A-E3612A: 213 mm W x 91 mm H x 319 mm D (8.4 in x 3.6 in x 12.6 in.) E3614A-E3617A: 213 mm W x 91 mm H x 373 mm D (8.4 in x 3.6 in x 14.7 in.)

Weight: E3610A-E3612A: 3.8 kg (8.4 lbs) net, 5.1 kg (11.3 lbs) shipping E3614A-E3617A: 5.5 kg (12.1 lbs) net, 6.75 kg (14.9 lbs) shipping

Warranty: One year

Ordering Information

Opt 0E9 90 to 110 Vac, 47 to 63 Hz (Japan only)

Opt 0EM 104 to 126 Vac, 47 to 63 Hz

Opt 0E3 207 to 253 Vac, 47 to 63 Hz

Opt 1CM Rack mount kit (E3614A-E3617A only)

Opt OL2 Extra documentation package

Specifications (at 0 °C to 55 °C unless otherwise specified)

| | E3610A | E3611A | E3612A | E3614A | E3615A | E3616A | E3617A |
|---|-------------------------------------|--|---|------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| Number of output ranges | 2 | 2 | 2 | 1 | 1 | 1 | 1 |
| GPIB | No | No | No | No | No | No | No |
| Output ratings ¹ | | | | | | | |
| Range 1 | 0 to 8 V, 0 to 3 A ¹ | 0 to 20 V, 0 to 1.5 A ¹ | 0 to 60 V, 0 to 0.5 A ¹ | 0 to 8 V, 0 to 6 A | 0 to 20 V, 0 to 3 A | 0 to 35 V, 0 to 1.7 A | 0 to 60 V, 0 to 1 A |
| Range 2 | 0 to 15 V, 0 to 2 A ¹ | 0 to 35 V, 0 to 0.85 A ¹ | 0 to 120 V, 0 to 0.25 A ¹ | _ | _ | _ | _ |
| Power (max) | 30 W | 30 W | 30 W | 48 W | 60 W | 60 W | 60 W |
| Load and line regulation | 0.01% + 2 mV | 0.01% + 2 mV | 0.01% + 2 mV | 0.01% + 2 mV | 0.01% + 2 mV | 0.01% + 2 mV | 0.01% + 2 mV |
| Ripple and noise from 20 H | z to 20 MHz | | | | | | |
| Constant voltage | <200 μVrms, 2 mVp-p | <200 µVrms, 2 mVp-p | <200 μVrms, 2 mVp-p | <200 µVrms, 1 mVp-p | <200 µVrms, 1 mVp-p | <200 µVrms, 1 mVp-p | <200 μVrms, 1 mVp-p |
| Constant current | <200 µArms, 1 mAp-p | <200 µArms, 1 mAp-p | <200 μArms, 1 mAp-p | <5 mArms | <2 mArms | <500 μArms | <500 μArms |
| Supplemental characteristic | s (Non-warranted | characteristics det | ermined by design | and useful in app | lying the product) | | |
| Control mode | CV/CC | CV/CC | CV/CC | CV/CC | CV/CC | CV/CC | CV/CC |
| Voltage Meter resolution | 10 mV | 100 mV | 100 mV | 10 mV | 10 mV (0-20 V), 100 mV (>20 V) | 10 mV (0-20 V), 100 mV (>20 V) | 10 mV (0-20 V), 100 mV (>20 V) |
| Current (minimum change using front-panel controls) | 10 mA | 10 mA | 1 mA | 10 mA | 10 mA | 1 mA | 1 mA |

^{1.} Maximum current is derated 1% per °C between 40 °C to 55 °C

Single-output. Manual. 90 W and 150 W





U8001A, U8002A

Features

- Fully integrated overvoltage and overcurrent protections
- Capability to save and recall up to three memory states
- Keypad lock
- · Physical lock mechanism
- · LCD display with backlight on/off options
- · Excellent load and line regulation
- · Fast transient response
- · Low output noise

The Agilent U8000 Series extends the functionality of non-programmable power supplies with features typical only in programmable models.

These power supplies provide fully integrated overvoltage and overcurrent protections to protect DUTs. Up to three frequently used operating states can be stored to minimize manual errors and reduce setup time. Keypad lock prevents measurement errors due to accidental front panel usage. The power supply can be secured at its place using the physical lock mechanism. This series comes with LCD display with backlight on/off options that enables brighter display for data viewing.

With power performance of 90 W and 150 W, this series is well suited for a variety of electronics manufacturing applications and in educational labs.

Supplemental Characteristics

Product regulation: Certified with CSA and meets requirements for CE and C-tick regulations

Warranty: One year

Size: U8001A-U8002A: 212.3 mm W x 88.1 mm H x 394.3 mm D (8.4 in. x 3.5 in. x 15.5 in.)

Weight: U8001A: 7.3 kg (16.1 lbs) U8002A: 8.3 kg (18.3 lbs)

Ordering Information

Opt 0E9 90 to 110 Vac, 47 to 63 Hz (Japan only)

 $\textbf{Opt 0EM}\ 104\ to\ 126\ Vac,\ 47\ to\ 63\ Hz$

Opt 0E3 207 to 253 Vac, 47 to 63 Hz

Opt UK6 Commercial calibration with test

result data

Opt 1CM Rack mount kit

Specifications

| | U8001A | U8002A | | | |
|---|--------------------|--------------------|--|--|--|
| Number of output | 1 | 1 | | | |
| GPIB | No | No | | | |
| Output rating | 0 to 30 V | 0 to 30 V | | | |
| | 0 to 3 A | 0 to 5 A | | | |
| Power (max) | 90 W | 150 W | | | |
| Load and line regulation | | | | | |
| Voltage | <0.01% + 2 mV | <0.01% + 2 mV | | | |
| Current | <0.02% + 2 mA | <0.02% + 2 mA | | | |
| Ripple and noise from 20 Hz to 2 | 20 MHz | | | | |
| Constant voltage | <1 mVrms, 12 mVp-p | <1 mVrms, 12 mVp-p | | | |
| Constant current | 3 mArms | 3 mArms | | | |
| Programming accuracy at 25 °C | ±5°C | | | | |
| Voltage | <0.35% + 20 mV | <0.35% + 20 mV | | | |
| Current | <0.35% + 20 mA | <0.35% + 20 mA | | | |
| Readback accuracy at 25 °C ± 5 | 5°C | | | | |
| Voltage | <0.35% + 20 mV | <0.35% + 20 mV | | | |
| Current | <0.35% + 20 mA | <0.35% + 20 mA | | | |
| Meter resolution | | | | | |
| Voltage | 10 mV | 10 mV | | | |
| Current | 10 mA | 10 mA | | | |
| Transient response <50 µsec for output to recover to within 15 mV following a change in output current from full load to half load or vice vers | | | | | |

Multiple-output. Manual. 35 W and 50 W





E3620A, E3630A

Features

- · Dual and triple outputs
- · Autotracking for outputs synchronization
- · Overload indicator to monitor output

These linear-regulated DC power supplies provide reliable and convenient DC power on a lab bench. Voltage and current can be monitored simultaneously on the front panel meters. There is also an overload indicator for each output.

E3620A

The E3620A has two isolated, independent, CV/CL 25 V outputs. It is easy to make precise adjustments using the 10-turn pots.

F36304

The E3630A triple output power supply has two 20 V outputs and one 6 V output. The \pm 6V output is an isolated constant-voltage/current-foldback output, and both the \pm 20 V output and the \pm 20 V output are constant-voltage/current-limit. An autotracking feature lets you use one voltage control to adjust both 20 V outputs. These outputs track each other to within one percent, making it easy to adjust the power supply for circuits requiring balance voltages. The \pm 20 V outputs are referenced together to a floating common.

Supplemental Characteristics

Size: E3620A: 213 mm W x 91 mm H x 401 mm D (8.4 in x 3.6 in x 15.8 in.) E3630A: 213 mm W x 92 mm H x 320 mm D (8.4 in x 3.6 in x 12.6 in.)

Weight: E3620A: 5.5 kg (12.1 lbs) E3630A: 3.8 kg (8.4 lbs)

Warranty: One year

Ordering Information

Opt 0E9 90 to 110 Vac, 47 to 63 Hz (Japan only)

Opt 0EM 104 to 126 Vac, 47 to 63 Hz

Opt 0E3 207 to 253 Vac, 47 to 63 Hz

Opt 1CM Rack mount kit (E3620A only)

Opt 0L2 Extra documentation package

Specifications (at 0 °C to 55 °C unless otherwise specified)

| | E3620A | E3630A | | | |
|--|---------------------------------|-----------------------------------|--|--|--|
| Number of output | 2 | 3 | | | |
| GPIB | No | No | | | |
| Output ratings ² | | | | | |
| Output 1 | 0 to 25 V, 0 to 1 A | 0 to 6 V, 0 to 2.5 A ² | | | |
| Output 2 | 0 to 25 V, 0 to 1 A | 0 to +20 V, 0 to 0.5 A | | | |
| Output 3 | _ | 0 to -20 V, 0 to 0.5 A | | | |
| Power (max) | 50 W | 35 W | | | |
| Load regulation | 0.01% + 2mV | 0.01% + 2mV | | | |
| Ripple and noise from 20 Hz to 20 MHz | | | | | |
| Normal mode voltage rms | 350 μV | 350 μV | | | |
| Peak-to-peak | 1.5 mV | 1.5 mV | | | |
| Common mode current | 1 μArms | 1 μArms | | | |
| Control mode | CV/CL | CV/CL (±20 V), CV/CF (6 V) | | | |
| Meter resolution (minimun change using front-panel controls) | | | | | |
| Voltage | 10 mV (0-20 V), 100 mV, (>20 V) | 10 mV | | | |
| Current | 1 mA | 10 mA | | | |
| Input power | 115 Vac ± 10%, 47 to 63 Hz | 115 Vac, ± 10%, 47 to 63 Hz | | | |

^{2.} Maximum current is derated 3.3% per °C between 40 °C to 55 °C

Triple-output. Manual. 375 W



U8031A, U8032A

Features

- · Output sequencing capability
- 375 W total power for three outputs
- Excellent load regulation (CV: < 0.01% + 2 mV; CC: < 0.02% + 2 mA)
- Provides clean output with ≤ 1 mVrms (0.5 mVrms typical) noise
- Fast < 50 μs transient response for stable testing
- Over-voltage and over-current protection
- Physical lock mechanism

Agilent extends its portfolio of bench power supplies to introduce the U8030 series - the only triple-output power supply in its class to offer output sequencing that can be setup and generated right from its front panel without any computer programming. This practical function saves programming time and reduces complexity without requiring extensive programming skills.

Both models, the U8031A and U8032A, are built with excellent load regulation and clean output noise for continued stability. With a total output power of 375 W for three outputs, the U8030 series is the ultimate power source alternative in electronics manufacturing, research and development as well as education sector.

Supplemental Characteristics

Product regulation: Certified with CSA and meets requirements for CE and C-tick regulations

Warranty: One year

Size: U8031A-U8032A: 212.3 mm W x 179.0 mm H x 379.0 mm D (8.4 in. x 7.0 in. x 14.9 in.)

Weight: 8.2 kg (18.1 lbs)

Ordering Information

Opt 0E9 90 to 110 Vac, 47 to 63 Hz (Japan only)

Opt 0EM 104 to 126 Vac, 47 to 63 Hz **Opt 0E3** 207 to 253 Vac, 47 to 63 Hz

Opt UK6 Commercial calibration with test

result data

Opt ABA English language user guide, printed

Opt ACF Japanese language user guide,

printed

Opt 1CM Rack mount kit

Specifications

| | U8031A | U8032A | |
|--------------------------|---|------------------|--|
| Number of output | 3 | 3 | |
| GPIB | No | No | |
| Output rating | | | |
| Output 1 | 0-30 V, 0-6 A | 0-60 V, 0-3 A | |
| Output 2 | 0-30 V, 0-6 A | 0-60 V, 0-3 A | |
| Output 3 (fixed) | 5 V, 3 A | 5 V, 3 A | |
| Power (max) | 375 W | 375 W | |
| Load and line regulation | | | |
| Voltage | <0.01% + 2 mV | <0.01% + 2 mV | |
| Current | <0.02% + 2 mA | <0.02% + 2 mA | |
| Ripple and noise | | | |
| Constant voltage | ≤1 mVrms, 0.5 mVrms (typical) or ≤10 mVpp, 5 mVpp (typical) | | |
| Constant current | ≤1 mArms | ≤1 mArms | |
| Programming accuracy | | | |
| Voltage | ≤0.25% + 15 mV | ≤0.25% + 15 mV | |
| Current | ≤0.30% + 15 mA | ≤0.30% + 15 mA | |
| Readback accuracy | | | |
| Voltage | ≤0.25% + 10 mV | ≤0.25% + 10 mV | |
| Current | ≤0.25% + 10 mA | ≤0.25% + 10 mA | |
| Meter resolution | | | |
| Voltage | 10 mV (4 digits) | 10 mV (4 digits) | |
| Current | 10 mA (3 digits) | 10 mA (3 digits) | |
| Transient response | <50 μs | <50 μs | |

Triple-output. Programmable. 80 W





E3631A

Features

- Programmable via GPIB and RS-232
- · Autotracking for outputs synchronization
- · Save/Recall up to three states

This is the DC power supply for every engineer's or electronic technician's lab bench. It has two tracking 25 V outputs, which are together referenced to a floating common, and an isolated 6 volt output. It is easy to control from the front panel, or with industry standard SCPI commands via the GPIB or RS-232. VXIPlug&Play drivers are available to further simplify computer control. Up to 3 complete states can be stored for later recall. The low noise, excellent regulation, and built-in voltmeter/ammeter make this reliable power supply well suited for the needs of the R&D lab.

Supplemental Characteristics

Product regulation: Designed to comply with UL1244, IEC 1010-1; certified with

CSA 22.2; meets requirements for CE regulation

Software Driver: IVI-COM

VXIPlug&Play

IntuiLink Connectivity Software

Warranty: One year

Size: E3631A: 213 mm W x 133 mm H x 348 mm D (8.4 in. x 5.2 in. x 14.2 in.)

Weight: 8.2 kg (18 lbs)

Ordering Information

Opt 0E9 90 to 110 Vac, 47 to 63 Hz (Japan only)

Opt 0EM 104 to 126 Vac, 47 to 63 Hz **Opt 0E3** 207 to 253 Vac, 47 to 63 Hz

Opt 1CM Rack mount kit

Opt OL2 Extra documentation package

Specifications (at 0 °C to 55 °C unless otherwise specified)

| | E3631A | | | |
|------------------------------------|--|----------------------|----------------------|--|
| DC outputs | | | | |
| Voltage | 0 to +25 V | 0 to -25 V | 0 to 6 V | |
| Current | 0 to 1 A | 0 to 1 A | 0 to 5 A | |
| Load and line regulation | | | | |
| Voltage | <0.01% + 2 mV | <0.01% + 2 mV | <0.01% + 2 mV | |
| Current | <0.01% + 250 μA | <0.01% + 250 μA | <0.01% + 250 μA | |
| Ripple and noise from 20 Hz to 20 |) MHz | | | |
| Normal-mode voltage | <350 μV rms/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 | |
| 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 | |
| Readback accuracy at 25 °C \pm 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 | |
| Resolution | | | | |
| Program/readback | 1.5 mV, 0.1 mA | 1.5 mV, 0.1 mA | 0.5 mV, 0.5 mA | |
| Meter | 10 mV, 1 mA | 10 mV, 1 mA | 1 mV, 1 mA | |
| Transient response | 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 | | | |

Single and dual-output. Programmable. 30 W to 100 W





E3640A - E3645A





E3646A - E3649A

Features

- · Dual-range outputs
- · Remote sensing
- · Front and rear output terminals
- Programmable via GPIB and RS-232
- Save/Recall up to five states
- Overvoltage protection (OVP) features

These isolated dual range DC power supplies provide the stable and reliable DC power that the manufacturing test system designer needs. These models offer constant-voltage/constant-current outputs, so they can serve as either voltage or current sources. They can be used either for manual or automated testing, and have VXIPlug&Play drivers to further simplify computer control.

The E3640A Series DC power supplies can be quickly integrated into a test system. Both front and rear panel terminals are provided for easy wiring. Remote sensing eliminates the errors in voltage regulation due to voltage drops in the load leads. Delicate DUTs are protected by overvoltage protection. Up to 5 operating states can be stored for later recall.

Supplemental Characteristics

DC Floating Voltage: Output terminals can be floated up to ± 240 Vdc from chassis ground **Remote Sensing:** Up to 1 V can be dropped in each load lead. The drop in the load leads subtracts from the voltage available for the load.

Settling Time: Less than 90ms 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.

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)

Software Driver: IVI-COM VXIPlug&Play

IntuiLink Connectivity Software

Warranty: One year

Size: E3640A-E3645A: 213 mm W x 88 mm H x 348 mm D (8.4 in. x 3.5 in. x 13.7 in.) E3646A-E3649A: 213 mm W x 133 mm H x 348 mm D (8.4 in. x 5.2 in. x 13.7 in.)

Weight: E3640A, E3641A: 5.3 kg (11.7 lbs) E3642A, E3643A: 6.2 kg (13.7 lbs) E3644A, E3645A: 6.7 kg (14.7 lbs)

E3646A, E3647A: 7.3 kg (16.1 lbs) E3648A, E3649A: 9.2 kg (20.3 lbs)

Ordering Information

Opt 0E3 207 to 253 Vac, 47 to 63 Hz

Opt 0E9 90 to 110 Vac, 47 to 63 Hz (Japan only)

Opt 0EM 104 to 126 Vac, 47 to 63 Hz

Opt 1CM Rack mount kit

(E3640A-E3645A p/n 5063-9240;

E3646A-E3649A p/n 5063-9243)

Opt 0L2 Extra documentation package

Opt 0B0 Delete documentation

Specifications (at 0 °C to 55 °C unless otherwise specified)

| | E3640A | E3641A | E3642A | E3643A | E3644A | | | |
|---|---------------------|-------------------|---------------------|-------------------|---------------------|--|--|--|
| Number of output | 1 | 1 | 1 | 1 | 1 | | | |
| GPIB | Yes | Yes | Yes | Yes | Yes | | | |
| DC outputs | DC outputs | | | | | | | |
| Voltage | 0 to 8 V | 0 to 35 V | 0 to 8 V | 0 to 35 V | 0 to 8 V | | | |
| Current | 3 A | 0.8 A | 5 A | 1.4 A | 8 A | | | |
| Voltage | 0 to 20 V | 0 to 60 V | 0 to 20 V | 0 to 60 V | 0 to 20 V | | | |
| Current | 1.5 A | 0.5 A | 2.5 A | 0.8 A | 4 A | | | |
| Power (max) | 30 W | 30 W | 50 W | 50 W | 80 W | | | |
| Load and line regulation | | | | | | | | |
| Voltage | <0.01% + 3 mV | <0.01% + 3 mV | <0.01% + 3 mV | <0.01% + 3 mV | <0.01% + 3 mV | | | |
| Current | <0.01% + 250 µA | <0.01% + 250 μA | <0.01% + 250 μA | <0.01% + 250 μA | <0.01% + 250 μA | | | |
| Ripple and noise from 20 Hz to | 20 MHz | | | | | | | |
| Normal-mode voltage | <500 μVrms, 5 mVp-p | <1 mVrms, 8 mVp-p | <500 μVrms, 5 mVp-p | <1 mVrms, 8 mVp-p | <500 μVrms, 5 mVp-p | | | |
| Normal-mode current | <4.0 mArms | <4.0 mArms | <4.0 mArms | <4.0 mArms | <4.0 mArms | | | |
| Common-mode current | <1.5 µArms | <1.5 µArms | <1.5 µArms | <1.5 µArms | <1.5 µArms | | | |
| Programming accuracy at 25 ° | $C \pm 5$ °C | | | | | | | |
| Voltage | <0.05% + 10 mV | <0.05% + 10 mV | <0.05% + 10 mV | <0.05% + 10 mV | <0.05% + 10 mV | | | |
| Current | <0.2% + 10 mA | <0.2% + 10 mA | <0.2% + 10 mA | <0.2% + 10 mA | <0.2% + 10 mA | | | |
| Readback accuracy at 25 °C ± | 5 °C | | | | | | | |
| Voltage | <0.05% + 5 mV | <0.05% + 5 mV | <0.05% + 5 mV | <0.05% + 5 mV | <0.05% + 5 mV | | | |
| Current | <0.15% + 5 mA | <0.15% + 5 mA | <0.15% + 5 mA | <0.15% + 5 mA | <0.15% + 5 mA | | | |
| Program resolution | | | | | | | | |
| Voltage | 5 mV | 5 mV | 5 mV | 5 mV | 5 mV | | | |
| Current | 1 mA | 1 mA | 1 mA | 1 mA | 1 mA | | | |
| Readback resolution | | | | | | | | |
| Voltage | 2 mV | 2 mV | 2 mV | 2 mV | 2 mV | | | |
| Current | 1 mA | 1 mA | 1 mA | 1 mA | 1 mA | | | |
| Meter resolution | | | | | | | | |
| Voltage | 10 mV | 10 mV | 10 mV | 10 mV | 10 mV | | | |
| Current | 1 mA | 1 mA | 1 mA | 1 mA | 1 mA | | | |
| Transient response <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. | | | | | | | | |

| | E3645A | E3646A | E3647A | E3648A | E3649A |
|---|--------------------------|----------------------------|---------------------------|------------------------------|--------------------------|
| Number of output | 1 | 2 | 2 | 2 | 2 |
| GPIB | Yes | Yes | Yes | Yes | Yes |
| DC outputs | | | | | |
| Voltage | 0 to 35 V | 0 to 8 V | 0 to 35 V | 0 to 8 V | 0 to 35 V |
| Current | 2.2 A | 3 A | 0.8 A | 5 A | 1.4 A |
| Voltage | 0 to 60 V | 0 to 20 V | 0 to 60 V | 0 to 20 V | 0 to 60 V |
| Current | 1.3 A | 1.5 A | 0.5 A | 2.5 A | 0.8 A |
| Power (max) | 80 W | 60 W | 60 W | 100 W | 100 W |
| Load and line regulation | | | | | |
| Voltage | <0.01% + 3 mV | <0.01% + 3 mV | <0.01% + 3 mV | <0.01% + 3 mV | <0.01% + 3 mV |
| Current | <0.01% + 250 μA | <0.01% + 250 µA | <0.01% + 250 µA | <0.01% + 250 µA | <0.01% + 250 µA |
| Ripple and noise from 20 Hz to | 20 MHz | | | | |
| Normal-mode voltage | <1 mVrms, 8 mVp-p | <500 μVrms, 5 mVp-p | <1 mVrms, 8 mVp-p | <500 μVrms, 5 mVp-p | <1 mVrms, 8 mVp-p |
| Normal-mode current | <4.0 mArms | <4.0 mArms | <4.0 mArms | <4.0 mArms | <4.0 mArms |
| Common-mode current | <1.5 µArms | <1.5 µArms | <1.5 µArms | <1.5 µArms | <1.5 µArms |
| Programming accuracy at 25 ° | $C \pm 5$ °C | | | | |
| Voltage $< 0.05\% + (< 0.1\% + 25 \text{ mV for output 2})$ | 10 mV | 10 mV | 10 mV | 10 mV | 10 mV |
| Current <0.2% + | 10 mA | 10 mA | 10 mA | 10 mA | 10 mA |
| Readback accuracy at 25 °C ± | 5 °C | | | | |
| Voltage <0.05% + (<0.1% + 25 mV for output 2) | 5 mV | 5 mV | 5 mV | 5 mV | 5 mV |
| Current <0.15% + (<0.15% + 10 mA for output 2) | 5 mA | 5 mA | 5 mA | 5 mA | 5 mA |
| Program resolution | | | | | |
| Voltage | 5 mV | 5 mV | 5 mV | 5 mV | 5 mV |
| Current | 1 mA | 1 mA | 1 mA | 1 mA | 1 mA |
| Readback resolution | | | | | |
| Voltage | 2 mV | 2 mV | 2 mV | 2 mV | 2 mV |
| Current | 1 mA | 1 mA | 1 mA | 1 mA | 1 mA |
| Meter resolution | | | | | |
| Voltage | 10 mV | 10 mV | 10 mV | 10 mV | 10 mV |
| Current | 1 mA | 1 mA | 1 mA | 1 mA | 1 mA |
| Transient response | <50 µsec for output to i | recover to within 15 mV fo | ollowing a change in outp | ut current from full load to | half load or vice versa. |
| | | | 0 0 1 | | |

Maximum current is derated 3.3% per °C between 40 °C to 55 °C

Single-output. Programmable. 120 W to 200 W





E3632A-E3634A

Features

- · Dual-range outputs
- Remote sensing
- Front and rear output terminals (E3633A/34A)
- · Programmable via GPIB and RS-232
- Save/Recall up to three states
- Overvoltage and overcurrent protection features

These dual range DC power supplies provide the stable, accurate, and reliable DC power that the R&D engineer needs. These models are CV/CC, so they can serve as either voltage or current sources. They can be used either for manual or automated testing where moderate speed and accuracy are required. VXIPlug&Play drivers further simplify computer control.

These DC power supplies have many features to help the R&D engineer to quickly and easily bias and monitor prototype circuitry. Remote sensing eliminates the errors in voltage regulation due to voltage drops in the load leads. Delicate prototypes are protected by overvoltage and overcurrent protection features. Up to 3 frequently used operating states may be stored for later recall. The output is isolated from chassis ground.

Supplemental Characteristics

Product regulation: Designed to comply with UL1244, IEC 1010-1; certified with

CSA 22.2; meets requirements for CE regulation

Software Driver: IVI-COM

VXIPlug&Play

IntuiLink Connectivity Software

Warranty: One year

Size: E3632A-E3634A: 213 mm W x 133 mm H x 348 mm D (8.4 in. x 5.2 in. x 13.7 in.)

Weight: 9.5 kg (21 lbs)

Ordering Information

Opt 0E9 90 to 110 Vac, 47 to 63 Hz (Japan only)

Opt 0EM 104 to 126 Vac, 47 to 63 Hz **Opt 0E3** 207 to 253 Vac, 47 to 63 Hz

Opt 1CM Rack mount kit

Opt 0L2 Extra documentation package

Specifications (at 0 $^{\circ}\text{C}$ to 55 $^{\circ}\text{C}$ unless otherwise specified)

| | E3632A | E3633A | E3634A | |
|--|-----------------------------------|---|--|--|
| Number of outputs | 1 | 1 | 1 | |
| GPIB | Yes | Yes | Yes | |
| Output ratings | | | | |
| Range 1 | 0 to 15 V, 7 A | 0 to 8 V, 20 A | 0 to 25 V, 7 A | |
| Range 2 | 0 to 30 V, 4 A | 0 to 20 V, 10 A | 0 to 50 V, 4 A | |
| Load and line regulation | | | | |
| Voltage | <0.01% + 2 mV | <0.01% + 2 mV | <0.01% + 2 mV | |
| Current | <0.01% + 250 μA | <0.01% + 250 μA | <0.01% + 250 μA | |
| Ripple and noise from 20 Hz | to 20 MHz | | | |
| Normal-mode voltage | <350 μVrms/2 mVpp | <350 μVrms/3 mVpp | <500 μVrms/3 mVp-p | |
| Normal-mode current | <2 mA rms | <2 mA rms | <2 mA rms | |
| Common-mode current | <1.5 μA rms | <1.5 μA rms | <1.5 μA rms | |
| Programming accuracy at 25 | $^{\circ}$ C \pm 5 $^{\circ}$ C | | | |
| Voltage | 0.05% + 10 mV | 0.05% + 10 mV | 0.05% + 10 mV | |
| Current | 0.2% +10 mA | 0.2% +10 mA | 0.2% +10 mA | |
| Readback accuracy at 25 $^{\circ}\text{C}$ | ±5°C | | | |
| Voltage | 0.05% + 5 mV | 0.05% + 5 mV | 0.05% + 5 mV | |
| Current | 0.15% + 5 mA | 0.15% + 5 mA | 0.15% + 5 mA | |
| Resolution | | | | |
| Program | 1 mV, 0.5 mA | 1 mV, 1 mA | 3 mV, 0.5 mA | |
| Readback | 0.5 mV, 0.1 mA | 0.5 mV, 1 mA | 1.5 mV, 0.5 mA | |
| Meter | 1 mV, 1 mA | 1 mV, 1 mA (<10 A/10 mA (≥10 A)) | 1 mV, 1 mA (<10 A/10 mA (≥10 A)) | |
| Transient response | 50 µsec for output to recover to | within 15 mV following a change in output curre | nt from full load to half load or vice versa | |

Measurement Automation—Quick and Easy

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Related Agilent Literature

| Publication title | Pub number |
|---|-------------|
| Understanding Linear Power Supply Operation Application Note 1554 | 5989-2291EN |
| Specifying and Buying a Bench Power Supply Application Note | 5989-5278EN |
| Choosing the Right DC System Power Supply Selection Guide | 5988-1024EN |
| 10 Practical Tips You Need to Know About Your Power Products Brochure | 5965-8239E |



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