

## Single-Input 250 W to 300 W



6060B and 6063B

Cost-effective for single input applications  
Convenient optional front panel input connection

The 6060B and 6063B each provides one load input. This is more convenient for single input applications than a mainframe product.

These electronic loads are particularly suited for the lab bench. Entering commands manually using the front panel keypad is simpler because the channel does not need to be specified, as in a mainframe configuration. The keypad entry is further simplified because these products do not have the downloadable LIST feature of the N3300A Series, which helps to maximize production throughput. Extensive protection is included to help protect your valuable prototypes under test. This includes overvoltage, overcurrent, overtemperature, overpower, and reverse polarity.

These loads are suitable for manufacturing test systems where maximizing speed is not critical. They use industry standard SCPI instructions, and also have VXIPlug&Play drivers to simplify system design. For the greatest speed and accuracy in programming and measurement, see the N3300A Series of DC electronic loads.

Specifications	6060B	6063B
<b>Amperes</b>	0 to 60 A	0 to 10 A
<b>Volts</b>	3 to 60 V	3 to 240 V
<b>Maximum power (at 40° C)</b>	300 W	250 W
<b>Constant current mode</b>		
Ranges	0 to 6 A, 0 to 60 A	0 to 1 A, 0 to 10 A
Accuracy	0.1% ±75 mA	0.15% ±10 mA
Regulation	10 mA	8 mA
<b>Constant voltage mode</b>		
Accuracy	0.1% ±50 mV	0.12% ±120 mV
Regulation (w/remote sense)	10 mV	10 mV
<b>Constant resistance mode</b>	0.033 to 1.0 Ω	0.20 to 24.0 Ω
Ranges	1 to 1,000 Ω 10 to 10,000 Ω	24 to 10,000 Ω 240 to 50,000 Ω
Accuracy	1 Ω: 0.8% ±8 mΩ (with ≥6 A at input) 1 KΩ: 0.3% ±8 mS (with ≥6 V at input) 10 KΩ: 0.3% ±8 mS (with ≥6 V at input)	24 Ω: 0.8% ±200 mΩ (with ≥1 A at input) 10 KΩ: 0.3% ±0.3 mS (with ≥24 V at input) 50 KΩ: 0.3% ±0.3 mS (with ≥24 V at input)
<b>Transient generator</b>		
Frequency range	0.25 Hz to 10 kHz	0.25 Hz to 10 kHz
Accuracy	3%	3%
Duty cycle range	3 to 97% (0.25 Hz to 1 kHz) 6 to 94% (1 to 10 kHz)	3 to 97% (0.25 Hz to 1 kHz) 6 to 94% (1 to 10 kHz)
Accuracy	6% of setting ±2%	6% of setting ±2%
Current level high range	60-A range:	10-A range:
Accuracy	0.1% ±350 mA	0.18% ±50 mA
Current level low range	6-A range:	1-A range:
Accuracy	0.1% ±80 mA	0.18% ±13 mA
Voltage level	3 to 60 V	3 to 240 V
Voltage level accuracy	0.1% ±300 mV	0.15% ±1.1 V
<b>Readback specifications</b>		
Current readback accuracy	0.05% ±65 mA	0.12% ±10 mA
Voltage readback accuracy	±(0.05% + 45 mV)	±(0.1% + 150 mV)
<b>Ripple and noise (20-Hz to 10-MHz noise)</b>		
Current	4 mA rms 40 mA peak-to-peak	1 mA rms 10 mA peak-to-peak
Voltage	6 mV rms	6 mV rms

More detailed specifications at [www.agilent.com/find/6060](http://www.agilent.com/find/6060)

## Single-Input: 250 W to 300 W (Continued)

### Specifications

6060B

6063B

**Notes:**

1. Operating temperature range is 0° to 55°C. All specifications apply for 25°C ±5°C, except as noted.
2. Maximum continuous power available is derated linearly from 40°C to 75% of maximum at 55°C.
3. DC current accuracy specifications apply 30 seconds after input is applied.

#### Supplemental Characteristics

(Non-warranted characteristics determined by design that are useful in applying the product)

	6060B	6063B
<b>Constant current mode</b>		
Resolution	60-A range: 16 mA 6-A range: 1.6 mA	10-A range: 2.6 mA 1-A range: 0.26 mA
Temperature coefficient	100 ppm/°C ±5 mA/°C	150 ppm/°C ±1 mA/°C
<b>Constant voltage mode</b>		
Resolution	16 mV	64 mV
Temperature coefficient	100 ppm/°C ±5 mV/°C	120 ppm/°C ±10 mV/°C
<b>Constant resistance mode</b>		
Resolution	1 Ω: 0.27 mΩ 1 KΩ: 0.27 mS 10 KΩ: 0.027 mS	24 Ω: 6 mΩ 10 KΩ: 0.011 mS 50 KΩ: 0.001 mS
Temperature coefficient	1 Ω: 800 ppm/°C ±0.4 mΩ/°C 1 KΩ: 300 ppm/°C ±0.6 mS/°C 10 KΩ: 300 ppm/°C ±0.6 mS/°C	24 Ω: 800 ppm/°C ±10 mΩ/°C 10 KΩ: 300 ppm/°C ±0.03 mS/°C 50 KΩ: 300 ppm/°C ±0.03 mS/°C
<b>Transient generator</b>		
Frequency range	0.25 Hz to 10 kHz	0.25 Hz to 10 kHz
Resolution	4% or less	4% or less
Duty cycle range	3 to 97% (0.25 Hz to 1 kHz) 6 to 94% (1 to 10 kHz)	3 to 97% (0.25 Hz to 1 kHz) 6 to 94% (1 to 10 kHz)
Resolution	4%	4%
Current level high range	60-A range: 260 mA	10-A range: 43 mA
Current level low range	6-A range: 26 mA	1-A range: 4 mA
Current temperature coefficient	100 ppm/°C ±7 mA/°C	180 ppm/°C ±1.2 mA/°C
Voltage level resolution	260 mV	1 V
Voltage temperature coefficient	150 ppm/°C ±5 mV/°C	120 ppm/°C ±10 mV/°C
Programmable slew rate	60-A range: 1 A/ms to 5 A/μs 6-A range: 0.1 A/ms to 0.5 A/μs	10-A range: 0.17 A/ms to 0.83 A/μs 1-A range: 17 A/ms to 83 A/μs
Rise/fall time	12 μs to 8 ms	16 μs to 8 ms
<b>Analog programming bandwidth</b>	10 kHz (–3 dB frequency)	10 kHz (–3 dB frequency)
<b>Analog programming accuracy</b>		
Current (low range)	4.5% ±75 mA	3% ±8 mA
Current (high range)	4.5% ±250 mA	3% ±20 mA
Temperature coefficient	100 ppm/°C ±6 mA/°C	150 ppm/°C ±1 mA/°C
Voltage	0.8% ±200 mV	0.5% ±150 mV
Temperature coefficient	100 ppm/°C ±1 mV/°C	120 ppm/°C ±10 mV/°C
<b>Analog programming voltage</b>	0 to 10 V	0 to 10 V
<b>Readback specifications</b>		
Current readback resolution	17 mA (via GPIB) 20 mA (front panel)	2.7 mA (via GPIB) 10 mA (front panel)
Temperature coefficient	50 ppm/°C ±5 mA/°C	100 ppm/°C ±1 mA/°C
Voltage readback resolution	17 mV (via GPIB) 20 mV (front panel)	67 mV (via GPIB) 100 mV (front panel)
Temperature coefficient	50 ppm/°C ±1.2 mV/°C	100 ppm/°C ±8 mV/°C

## Single-Input: 250 W to 300 W (Continued)

### Specifications

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6063B

**Notes:**

1. Operating temperature range is 0° to 55°C. All specifications apply for 25°C ±5°C, except as noted.
2. Maximum continuous power available is derated linearly from 40°C to 75% of maximum at 55°C.
3. DC current accuracy specifications apply 30 seconds after input is applied.

**Supplemental Characteristics**

(Non-warranted characteristics determined by design that are useful in applying the product)

Supplemental Characteristics	6060B	6063B
<b>Analog monitor accuracy</b>		
Current monitor (0 to 10 V out)	4% ±85 mA	3% ±10 mA
Temperature coefficient	50 ppm/°C ±6 mA/°C	100 ppm/°C ±1 mA/°C
Voltage monitor (0 to 10 V out)	0.25% ±40 mV	0.4% ±240 mV
Temperature coefficient	50 ppm/°C ±0.2 mV/°C	70 ppm/°C ±1.2 mV/°C
<b>Remote sensing</b>	5-Vdc maximum between sense and load input	5-Vdc maximum between sense and load input
<b>Minimum operating voltage</b> (at full rated current)	2 volts (1.2 V typical)	2 volts (1.2 V typical)
<b>Programmable short</b>	0.033 Ω (0.020 Ω typical)	0.20 Ω (0.10 Ω typical)
<b>Programmable open (typical)</b>	20 kΩ	80 kΩ
<b>Drift</b> (over 8-hour interval)		
Current	0.03% ±10 mA	0.03% ±15 mA
Voltage	0.01% ±10 mV	0.01% ±20 mV
<b>DC isolation voltage</b>	±240 Vdc, between any input and chassis ground	±240 Vdc, between any input and chassis ground
<b>Digital inputs</b>	V <sub>IL</sub> = 0.9 V max at I <sub>IL</sub> = -1 mA / V <sub>IH</sub> = 3.15 V min (pull-up resistor on input)	V <sub>IL</sub> = 0.9 V max at I <sub>IL</sub> = -1 mA / V <sub>IH</sub> = 3.15 V min (pull-up resistor on input)
<b>Digital outputs</b>	V <sub>OL</sub> = 0.72 V max at I <sub>OL</sub> = 1 mA / V <sub>OH</sub> = 4.4 V min at I <sub>OH</sub> = -20 μA	V <sub>OL</sub> = 0.72 V max at I <sub>OL</sub> = 1 mA / V <sub>OH</sub> = 4.4 V min at I <sub>OH</sub> = -20 μA
<b>Net weight</b> (approx.)	6.12 kg (13.5 lb)	6.12 kg (13.5 lb)
<b>Shipping weight</b>	8.16 kg (18 lb)	8.16 kg (18 lb)

## Single-Input: 250 W to 300 W (Continued)

### Application Notes:

**Agilent AN 372-1 Power Supply Testing**  
(AN 372-1)  
5952-4190

**Agilent AN 372-2 Battery Testing**  
(AN 372-2)  
5952-4191

**Pulsed Characterization of Power Semiconductors Using Electronic Loads**  
(AN 1246)  
5091-7636E

### Supplemental Characteristics for all model numbers

**Software Driver:**  
VXIPlug&Play

**Weight:** 6.12 kg (13.5 lb) net; 8.16 kg (18 lb) shipping

**Size:** 425.5 mm W x 88.1 mm H x 396 mm D (16.75 in x 3.5 in x 13.7 in)

**Warranty:** One year

### Ordering Information

**Opt 020** Front Panel DC Input Connectors

**Opt 100** 87 to 106 Vac, 47 to 66 Hz input (for Japan only)

**Opt 120** 104-127 Vac, 47 to 66 Hz

**Opt 220** 191 to 233 Vac, 47 to 66 Hz input

**Opt 240** 209 to 250 Vac, 47 to 66 Hz input

\* **Opt 908** Rack-mount Kit (p/n 5062-3974C)

\* **Opt 909** Rack-mount Kit with Handles (p/n 5063-9219)

**Opt 0L1** Full documentation on CD-ROM, and printed standard documentation package

**Opt 0L2** Extra copy of standard printed documentation package

**Opt 0B0** Full documentation on CD-ROM only

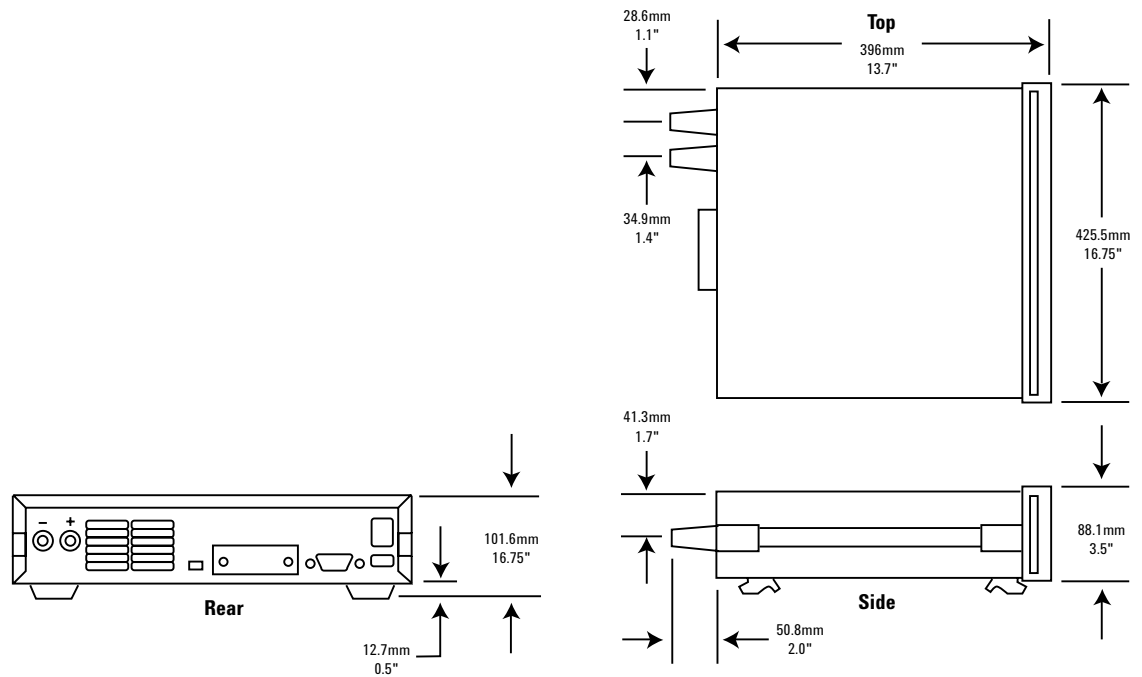
**Opt 0B3** Service Manual

\* Support rails required

### Accessories

**E3663AC** Support rails for Agilent rack cabinets

**Agilent Models: 6060B, 6063B**



More detailed specifications at [www.agilent.com/find/6060](http://www.agilent.com/find/6060)

**Your Requested Excerpt from the  
Agilent System and Bench Instruments Catalog 2006**

The preceding page(s) are an excerpt from the 2006 System and Bench Instruments Catalog. We hope that these pages supply the information that you currently need. If you would like to have further information about the extensive selection of Agilent DC power supplies, please visit [www.agilent.com/find/power](http://www.agilent.com/find/power) to print a copy of the complete catalog, or to request that a copy be sent to you. You will also find a lot of other useful information on this Web site.

In the full System and Bench Instruments Catalog, you will find that Agilent offers much more than DC power supplies. This catalog contains detailed technical and application information on digital multimeters, DC power supplies, arbitrary waveform generators, and many more instruments. If you need basic, clean, power for your lab bench, it's there. In each power product category we have also integrated the capabilities you need for a complete power solution, including extensive measurement and analysis capabilities.

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**Phone or Fax**

**United States:**

(tel) 800 829 4444  
(fax) 800 829 4433

**Canada:**

(tel) 877 894 4414  
(fax) 800 746 4866

**China:**

(tel) 800 810 0189  
(fax) 800 820 2816

**Europe:**

(tel) 31 20 547 2111

**Japan:**

(tel) (81) 426 56 7832  
(fax) (81) 426 56 7840

**Korea:**

(tel) (080) 769 0800  
(fax) (080) 769 0900

**Latin America:**

(tel) (305) 269 7500

**Taiwan:**

(tel) 0800 047 866  
(fax) 0800 286 331

**Other Asia Pacific Countries:**

(tel) (65) 6375 8100  
(fax) (65) 6755 0042  
Email: [tm\\_ap@agilent.com](mailto:tm_ap@agilent.com)  
Contacts revised: 09/26/05

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