6060B and 6063B

Single-Input
250 W to 300 W

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 VXI*Plug&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
Amperes	0 to 60 A	0 to 10 A
Volts	3 to 60 V	3 to 240 V
Maximum power (at 40° C)	300 W	250 W
Constant current mode		
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
Constant voltage mode		
Accuracy	0.1% ±50 mV	0.12% ±120 mV
Regulation (w/remote sense)	10 mV	10 mV
Constant resistance mode	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)
Transient generator		
Frequency range Accuracy	0.25 Hz to 10 kHz 3%	0.25 Hz to 10 kHz 3%
Duty cycle range Accuracy	3 to 97% (0.25 Hz to 1 kHz) 6 to 94% (1 to 10 kHz) 6% of setting ±2%	3 to 97% (0.25 Hz to 1 kHz) 6 to 94% (1 to 10 kHz) 6% of setting ±2%
Current level high range Accuracy	60-A range: 0.1% ±350 mA	10-A range: 0.18% ±50 mA
Current level low range Accuracy	6-A range: 0.1% ±80 mA	1-A range: 0.18% ±13 mA
Voltage level Voltage level accuracy	3 to 60 V 0.1% ±300 mV	3 to 240 V 0.15% ±1.1 V
Readback specifications		
Current readback accuracy Voltage readback accuracy	0.05% ±65 mA ±(0.05% + 45 mV)	0.12% ±10 mA ±(0.1% + 150 mV)
Ripple and noise (20-Hz to 10-MHz noise) Current Voltage	 4 mA rms 40 mA peak-to-peak 6 mV rms	 1 mA rms 10 mA peak-to-peak 6 mV rms

More detailed specifications at **www.agilent.com/find/6060**

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

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.

Specifications	6060B	6063B
Supplemental Characteristics	(Non-warranted characteristics determined by design that are useful in applying the product)	
Constant current mode	60-A range: 16 mA	10-A range: 2.6 mA
Resolution	6-A range: 1.6 mA	1-A range: 0.26 mA
Temperature coefficient	100 ppm/°C ±5 mA/°C	150 ppm/°C ±1 mA/°C
Constant voltage mode		
Resolution	16 mV	64 mV
Temperature coefficient	100 ppm/°C ±5 mV/°C	120 ppm/°C ±10 mV/°C
Constant resistance mode 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
Transient generator		
Frequency range Resolution	0.25 Hz to 10 kHz 4% or less	0.25 Hz to 10 kHz 4% or less
Duty cycle range Resolution	3 to 97% (0.25 Hz to 1 kHz) 6 to 94% (1 to 10 kHz) 4%	3 to 97% (0.25 Hz to 1 kHz) 6 to 94% (1 to 10 kHz) 4%
Current level high range Resolution	60-A range: 260 mA	10-A range: 43 mA
Current level low range Resolution	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/ms
Rise/fall time	12 µs to 8 ms	16 µs to 8 ms
Analog programming bandwidth	10 kHz (–3 dB frequency)	10 kHz (–3 dB frequency)
Analog programming accuracy		
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
Analog programming voltage	0 to 10 V	0 to 10 V
Readback specifications	17 mA (via GPIB)	2.7 mA (via GPIB)
Current readback resolution	20 mA (front panel)	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

More detailed specifications at **www.agilent.com/find/6060**

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

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.

Specifications	**6060B**	**6063B**
Supplemental Characteristics (Continued)	(Non-warranted characteristics determined by design that are useful in applying the product)	
Analog monitor accuracy		
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
Remote sensing	5-Vdc maximum between sense and load input	5-Vdc maximum between sense and load input
Minimum operating voltage (at full rated current)	2 volts (1.2 V typical)	2 volts (1.2 V typical)
Programmable short	0.033 Ω (0.020 Ω typical)	0.20 Ω (0.10 Ω typical)
Programmable open (typical)	20 kΩ	80 kΩ
Drift (over 8-hour interval)		
Current	0.03% ±10 mA	0.03% ±15 mA
Voltage	0.01% ±10 mV	0.01% ±20 mV
DC isolation voltage	±240 Vdc, between any input and chassis ground	±240 Vdc, between any input and chassis ground
Digital inputs	V_{IL} = 0.9 V max at I_{IL} = –1 mA / V_{IH} = 3.15 V min (pull-up resistor on input)	V_{IL} = 0.9 V max at I_{IL} = –1 mA / V_{IH} = 3.15 V min (pull-up resistor on input)
Digital outputs	V_{OL} = 0.72 V max at I_{OL} = 1 mA / V_{OH} = 4.4 V min at I_{OH} = –20 µA	V_{OL} = 0.72 V max at I_{OL} = 1 mA / V_{OH} = 4.4 V min at I_{OH} = –20 µA
Net weight (approx.)	6.12 kg (13.5 lb)	6.12 kg (13.5 lb)
Shipping weight	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:
VXI*Plug&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

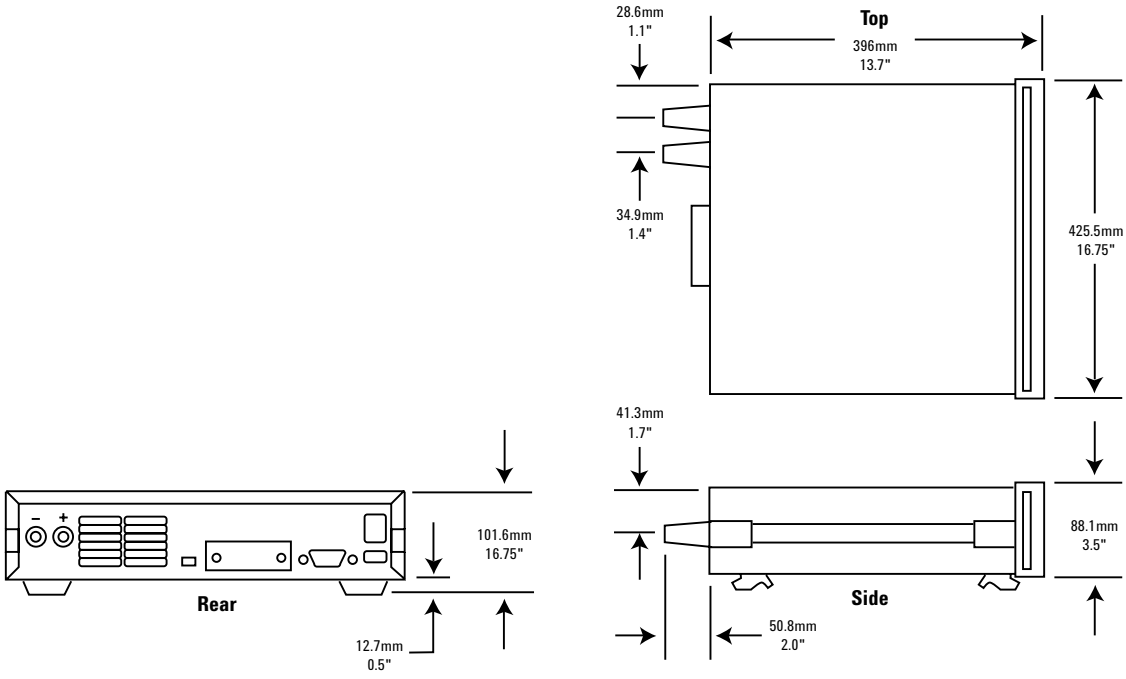
Ordering Information

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**

Your Requested Excerpt from the
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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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Printed in the USA, February 8, 2006

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