

- Ideal for portable product test
- Dynamic pulse measurement
- Precision low current measurement
- Low-output noise
- High-speed programming
- SCPI (Standard Commands for Programmable Instruments)
- GPIB and RS-232 interface
- HP VXI *plug&play* drivers

HP 66312A, top; HP 66332A, bottom



HP 66312A  
HP 66332A

### Abbreviated Specifications and Characteristics

		HP 66312A	HP 66332A
<b>Output ratings</b>	Voltage/Current	0 to 20 V/0 to 2 A	0 to 20 V/0 to 5 A
<b>Programming accuracy</b> at 25° C ±5° C	Voltage/+Current	0.05%+	10 mV/1 mA
<b>Ripple and noise</b> (20 Hz to 20 MHz, with outputs ungrounded or with other terminal grounded)	Voltage normal mode (rms/p-p)	0.5 mV/3 mV	0.3 mV/3 mV
	Voltage fast mode (rms/p-p)	NA	1 mV/10 mV
	Current (rms)	1 mA	2 mA
<b>DC measurement accuracy</b> via GPIB or front-panel meters with respect to actual output at 25° C ± 5° C	Voltage	0.03% +	3 mV
	Low current range -20 mA to +20 mA	0.1% +	2.5 µA
	High current range +20 mA to + rated I -20 mA to - rated I	0.2% + 0.2% +	0.25 mA 0.85 mA
<b>Load regulation</b>	Voltage/Current	2 mV/0.5 mA	2 mV/1 mA
<b>Line regulation</b>	Voltage/Current	0.5 mV/0.5 mA	0.5 mV/0.5 mA
<b>Transient Response Time:</b> Less than 100 µs (50 µs in the fast mode HP 66332A) for the output voltage to recover to its previous level (within 0.1% of the voltage rating of the supply), following any step change in load current of up to 50% of the output current rating of the supply			
<b>Average programming resolution</b>	Voltage/Current	5 mV/0.5 mA	5 mV/1.25 mA
<b>OVP accuracy</b>		2.4% +	240 mV
<b>Sink current*</b>		1.2 A	5 A

\*For the HP 66332A, the sink current tracks the programmed current to within 2 mA for programmed currents greater than 5 mA. Below 5 mA, the sink current remains at 5 mA. The sink current does not track the programmed current for the 66312A.

**Dynamic Measurements:** Accuracy of the instantaneous voltage measurement is 0.03% +5 mV. Accuracy of the instantaneous current measurement is 0.6% +1 mA (2 mA for HP 66332A). The dc, rms, maximum, minimum, high-level and low-level voltage and current measurements are calculated from the instantaneous voltage and current readings. Up to 4096 data points can be acquired. The sampling interval can be varied from 15.6 µs to 31,200 s. The instantaneous data points can also be read back from the storage buffer. Dynamic measurements on current waveforms with frequency content up to 10 kHz can be made on the low- or high-current range. Above 10 kHz, accurate current measurements can only be made in the high range.

**dc Floating Voltage:** Output terminals can be floated up to ±240 Vdc maximum from chassis ground (50 volts for HP 66312A)

**Remote Sensing:** Up to two volts dropped in each load lead. Add 2 mV to the voltage load regulation specification for each one volt change in the positive output lead (positive output lead for the HP 66312A) due to load current change.

**Command-Processing Time:** Average time required for the output voltage to begin to change following receipt of digital data is 4 ms for the power supplies connected directly to the GPIB. (Display disabled.)

**Output-Programming Response Time:** The rise and fall time (10/90% and 90/10%) of the output voltage is less than 2 ms (400 µs for the HP 66332A in the fast mode). The output voltage change settles within 1 LSB (0.025% x rated voltage) of final value in less than 6 ms (2 ms in the fast mode).

**Measurement Time:** Average time to process query, calculate measurement parameter and return data is 50 ms. (Includes the default tie of 30 ms for acquiring data, and a 20 ms data processing overhead)

**Input Power (full load):** HP 66312A: 160 VA, 100 W;  
HP 66332A: 350 VA, 250 W

**Regulatory Compliance:** Listed to UL-3111-1; certified to CSA 22.2. No. 1010-1, complies with EN61010-1, complies with EMC directive 89/336/EEC (ISM Group 1, Class B)

**Warranty Period:** Three years

**Size:** HP 66312A: 212.8 mm W x 88.1 mm H x 444.4 mm D

(8.4 in x 3.5 in x 17.5 in);

HP 66332A: 425.5 mm W x 88.1 mm H x 364.4 mm D

(16.75 in x 3.5 in x 14.3 in)

**Weight:** HP 66312A: 8.85 kg (19.5 lb) net; 11.1 kg (24.5 lb) shipping;

HP 66332A: 12.7 kg (28 lb) net, 15.0 kg (33 lb) shipping

### Key Literature

1999/00 HP Power Products Catalog, p/n 5968-2199

For more information, visit our web site: <http://www.hp.com/go/dynamicPS>

### Ordering Information

**Standard:** 104 to 127 Vac, 47 to 63 Hz

**Opt 100** 87 to 106 Vac, 47 to 63 Hz

**Opt 220** 191 to 233 Vac, 47 to 63 Hz

**Opt 230** 207 to 253 Vac, 47 to 63 Hz

**Opt 020** Front-panel Binding Posts (HP 66332A only)

**Opt 760** Isolation and Reversal Relays (HP 66332A only)

**Opt 8ZJ** Delete instrument feet

**Opt 1CM** Rackmount Kit,

HP 66312A: HP p/n 5060-3972

HP 66332A: HP p/n 5062-3974

**Opt 1CP** Rackmount Kit with Handles,

HP p/n 5062-3975 (HP 66332A only)

**Opt AXS** Rackmount Kit for side-by-side mounting

(66312A only), Locking Kit HP p/n 5061-9694;

Flange Kit HP p/n 5062-3974

**Opt OBN** Service Manual and extra Operating Guide (Standard unit is shipped with operating guide and programming guide only.)

### Accessories

HP p/n 1494-0060 Rack Slide Kit (HP 66332A only)