

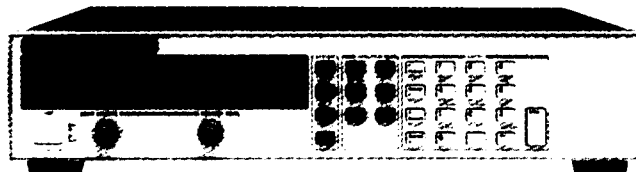
# POWER SUPPLIES

## Single-Output System, 200 W

HP 6641A, 6642A, 6643A, 6644A, 6645A

205

- Linear output regulation
- Low ripple and noise
- "One-Box" solution: includes V and I readback
- Fast up and down programming
- SCPI (Standard Commands for Programmable Instruments)



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

		HP 6641A	HP 6642A	HP 6643A	HP 6644A	HP 6645A
<b>Output ratings</b>	Output voltage	0 to 8 V	0 to 20 V	0 to 35 V	0 to 60 V	0 to 120 V
	Output current (40° C)	0 to 20 A	0 to 10 A	0 to 6 A	0 to 3.5 A	0 to 1.5 A
	Maximum current (50° C)	18.0 A	9.0 A	5.4 A	3.2 A	1.4 A
	Maximum current (55° C)	17.0 A	8.5 A	5.1 A	3.0 A	1.3 A
<b>Programming accuracy</b> at 25° C ± 5° C	Voltage	0.06% -	5 mV	10 mV	15 mV	26 mV
	Current	0.14% +	26 mA	13 mA	6.7 mA	4.1 mA
<b>Ripple and noise</b> from 20 Hz to 20 MHz	Constant voltage	rms	300 μV	300 μV	400 μV	500 μV
		peak-peak	3 mV	3 mV	4 mV	5 mV
	Constant current	rms	10 mA	5 mA	3 mA	1.5 mA
<b>Readback accuracy</b> at 25° C + 5° C	Voltage	0.07% -	6 mV	15 mV	25 mV	40 mV
	+ Current	0.10% -	18 mA	9.1 mA	5 mA	3 mA
	- Current	0.35% -	40 mA	20 mA	12 mA	6.8 mA
<b>Load regulation</b>	Voltage	1 mV	2 mV	3 mV	4 mV	5 mV
	Current	1 mA	0.5 mA	0.25 mA	0.25 mA	0.25 mA
<b>Line regulation</b>	Voltage	0.5 mV	0.5 mV	1 mV	1 mV	2 mV
	Current	1 mA	0.5 mA	0.25 mA	0.25 mA	0.25 mA

**Transient Response Time:** Less than 100 μs for the output voltage to recover to its previous level (within 0.1% of the voltage rating of the supply or 20 mV, whichever is greater) following any step change in load current of up to 50% of rated current.

### Supplemental Characteristics (Nonwarranted characteristics determined by design and useful in applying the product)

		HP 6641A	HP 6642A	HP 6643A	HP 6644A	HP 6645A
<b>Average programming resolution</b>	Voltage	2 mV	5 mV	10 mV	15 mV	30 mV
	Current	6 mA	3 mA	2 mA	1.2 mA	0.5 mA
	OVP	13 mV	30 mV	54 mV	93 mV	190 mV
<b>OVP accuracy</b>		160 mV	400 mV	700 mV	1.2 V	2.4 V
<b>Down programming current</b>		5.8 A	2.5 A	1.5 A	0.9 A	0.75 A
<b>Price</b>		\$2,450	\$2,345	\$2,345	\$2,345	\$2,395

**DC Floating Voltage:** Output terminals can be floated up to ± 240 Vdc from chassis ground.

**Remote Sensing:** Up to half the rated output voltage can be dropped in each load lead. The drop in the load leads subtracts from the voltage available for the load. Add 3 mV to the voltage load regulation specification for each 1-volt change in the positive output lead 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 20 ms for power supplies connected directly to the HP-IB.

**Output Programming Response time:** The rise and fall time (10:90% and 90:10%) of the output voltage is less than 15 ms. The output voltage change settles within 1 LSB (0.025% × rated voltage) of final value in less than 60 ms.

**Modulation:** (Analog programming of output voltage and current) Input signal: 0 to - 5 V

Input impedance: 10 KΩ nominal

**AC Input:**

Voltage	100 Vac	120 Vac	220 Vac	240 Vac
Current	4.4 A	3.8 A	2.2 A	2.0 A

**Input Power:** 480 VA, 400 W at full load; 60 W at no load.

**HP-IB Interface Capabilities:** SHI, AHI, T6, I4, SRI, RLI, PPO, DCI, DTI, EI, and CO. IEEE-488.2 and SCPI-compatible command set

**Regulatory Compliance:** Conforms to UL 1244 and IEC 1010: certified to CSA 22.2 No. 231; carries the CE mark

**RFI Suppression:** Complies with CISPR-11 Group 1 Class B

**Size:** 425 mm W × 88.1 mm H × 439 mm D (16.75 in × 3.5 in × 17.3 in)

**Weight:** Net, 14.2 kg (31.4 lb); shipping, 16.3 kg (36 lb)

**Warranty period:** Three years

### Key Features (for more information, see page 198)

- HP-IB programming of voltage and current
- Measured voltage and current readback over the HP-IB
- SCPI (Standard Commands for Programmable Instruments)
- Serial link connects up to 16 outputs to one HP-IB address
- Auto-parallel up to three units
- Outputs can be connected in parallel or in series
- Programmable overvoltage and overcurrent protection
- Overtemperature protection
- Discrete Fault Indicator/Remote Inhibit (DFI/RI)
- Self-test occurs at power-on or from an HP-IB Command
- Electronic calibration via HP-IB or front panel
- Five nonvolatile store-recall states
- User-definable power-on state
- Digital I/O controls external relay accessories (see page 210)
- Fan speed control minimizes acoustic noise

### Ordering Information

**Option Descriptions**

<b>Standard:</b> 104 to 127 Vac, 47 to 63 Hz	\$0
<b>Opt 100</b> 87 to 106 Vac, 47 to 63 Hz	\$0
<b>Opt 220</b> 191 to 233 Vac, 47 to 63 Hz	\$0
<b>Opt 240</b> 209 to 250 Vac, 47 to 63 Hz	\$0
<b>Opt 908</b> Rack Mount Kit (HP p/n 5062-3974)	\$36
<b>Opt 909</b> Rack Mount Kit with Handles (HP p/n 5062-3975)	\$82
<b>Opt 910</b> Service Manual (HP p/n 5959-3376) and Extra Operating Manual (HP p/n 5961-2579).	\$36

**Accessories**

See page 205.

For the most current prices and product information, contact your local Hewlett-Packard sales office—see page 691.