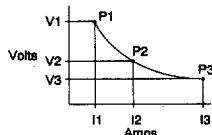


POWER SUPPLIES

Autoranging Power Supplies

HP 6010A, 6011A, 6012B, 6015A, 6023A, 6024A

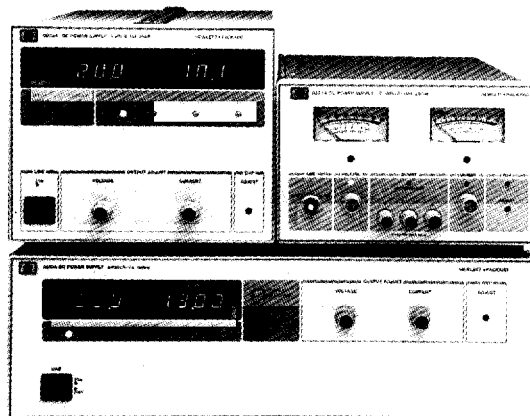
- Complete front-panel control/display
- Constant-voltage/constant-current operation
- Remote programming and sensing
- Autoranging output
- High-efficiency, compact, and lightweight
- Ten-turn voltage and current controls
- Auto-series, auto-parallel operation



HP 6023A

HP 6024A
(right)

HP 6010A, 6011A,
6012B, & 6015A



Specifications (at 0° to 50° C unless otherwise specified)

		HP 6010A	HP 6011A	HP 6012B	HP 6015A	HP 6023A	HP 6024A	
Volts		0 to 200V	0 to 20V	0 to 60V	0 to 500V	0 to 20V	0 to 60V	
Amperes		0 to 17A	0 to 120A	0 to 50A	0 to 5A	0 to 30A	0 to 10A	
Maximum power		1,200 W	1,064 W	1,200 W	1,050 W	242 W	240 W	
Autoranging output	P1	200 V, 5 A	20 V, 50 A	60 V, 17.5 A	500 V, 2 A	20 V, 10 A	60 V, 3.3 A	
	P2	120 V, 10 A	14 V, 78 A	40 V, 30 A	350 V, 3 A	14 V, 17.2 A	40 V, 6 A	
	P3	60 V, 17 A	7 V, 120 A	20 V, 50 A	200 V, 5 A	6.7 V, 30 A	20 V, 10 A	
Load regulation	Voltage	0.01% + 5 mV	0.01% + 3 mV	0.01% + 5 mV	0.01% + 13 mV	0.01% + 2 mV	0.01% + 3 mV	
	Current	0.01% + 10 mA	0.01% + 15 mA	0.01% + 10 mA	0.03% + 34 mA	0.01% + 9 mA	0.01% + 3 mA	
Source regulation	Voltage	0.01% + 5 mV	0.01% + 2 mV	0.01% + 3 mV	0.01% + 13 mV	0.01% + 1 mV	0.01% + 5 mV	
	Current	0.01% + 5 mA	0.01% + 25 mA	0.01% + 10 mA	0.03% + 17 mA	0.01% + 6 mA	0.01% + 5 mA	
10% Change transient recovery	Time	2 ms	2 ms	2 ms	5 ms	1 ms	1 ms	
	Level	150 mV	100 mV	100 mV	200 mV	50 mV	75 mV	
Ripple and noise: from 20 Hz to 20 MHz	Voltage	rms	22 mV	8 mV	8 mV	50 mV	3 mV	3 mV
		peak-to-peak	50 mV	50 mV	40 mV	160 mV	30 mV	30 mV
	Current	rms	15 mA	120 mA	25 mA	50 mA	15 mA	5 mA

Supplemental Characteristics (nonwarranted characteristics determined by design that are useful in applying the product)

Programming response time (at full load)	Settling band	300 mV	30 mV	90 mV	750 mV	5 mV	60 mV
	Up	300 ms	300 ms	300 ms	350 ms	100 ms	200 ms
	Down	600 ms	500 ms	2.0 s	600 ms	200 ms	300 ms
AC input current	100 Vac						5.3 A
	120 Vac	24 A	24 A	24 A	24 A	6.5 A	5.3 A
	220 Vac	15 A	15 A	15 A	15 A	3.8 A	2.9 A
	240 Vac	14 A	14 A	14 A	14 A	3.6 A	2.7 A
Weight	Net	16.3 kg (36 lb)	16.8 kg (37 lb)	15.9 kg (35 lb)	16.3 kg (36 lb)	8.6 kg (19 lb)	5.4 kg (12 lb)
	Shipping	21.7 kg (48 lb)	22.2 kg (49 lb)	21.3 kg (47 lb)	21.7 kg (48 lb)	10.5 kg (23 lb)	7.3 kg (16 lb)
Price		\$3,450	\$3,450	\$3,450	\$3,860	\$2,430	\$2,430

Remote Sensing: Up to 2 V can be dropped in each lead. Voltage regulation specification is met with up to 0.5-V drop, but degrades for greater drops.

Modulation (analog programming of output voltage and current)

Input signal: 0 to 5 V or 0 to 4 kΩ (0 to 2.5 kΩ for HP 6024A).

Inductive Load: The HP 6023A is stable when operating in the CC mode into inductive loads up to 1 H. The HP 6010A, 6011A, 6012B, and 6015A are stable into inductive loads up to 100 mH. Special modifications are available for stability up to 10 H.

DC Floating Voltage: Either terminal can be grounded or floated from chassis ground up to 240 V for the HP 6011A, 6012B, and 6023A; up to 550 V for the HP 6010A and 6015A.

Regulatory Compliance: Listed to UL 1244; certified to CSA 556B; conform to IEC 348, all carry the CE mark, except HP 6024A

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

Size: HP 6010A, 6011A, 6012B, 6015A: 425.5 mm W × 132.6 mm H × 516.4 mm D (16.75 in × 5.2 in × 20.33 in)

HP 6023A: 212.3 mm W × 177.0 mm H × 443.6 mm D (8.36 in × 6.97 in × 17.872 in)

HP 6024A: 212.3 mm W × 133.4 mm H × 415.33 mm D (8.36 in × 5.25 in × 16.35 in)

Key Features (For more information, see page 198)

- Auto-parallel and auto-series operation of up to two units
- Overvoltage protection
- Overtemperature and excess ac-line protection

Ordering Information

Opt 002 Provides extra programming and monitoring capabilities. (not available with HP 6015A.)

Input Power The standard unit is configured to operate at 104 to 127 Vac, 48 to 63 Hz.

Opt 100 87 to 106 Vac, 48 to 63 Hz. HP 6024A only. The power supply output power is derated to 75%.

Opt 220 191 to 233 Vac, 48 to 63 Hz \$0

Opt 240 208 to 250 Vac, 48 to 63 Hz \$0

Opt 800 Rack Mount Kit for two units side by side.

For HP 6023A and 6024A only.

HP 6023A (order HP p/n 5061-9694 and 5062-3978) \$87

HP 6024A (order HP p/n 5061-9694 and 5062-3977) \$87

For **HP 6010A, 6011A, 6012B, and 6015A**, one of these line cord options **must be specified** when ordering. Order according to local electrical codes. See page 211.

Opt 831 12 AWG, 200 to 400 Vac, Unterminated \$0

Opt 833 1.5-mm² Wire, 200 to 240 Vac, Unterminated \$0

Opt 834 10 AWG Wire; 100 to 120 Vac, Unterminated \$0

Opt 841 with NEMA 6-20P; 20-A, 250-V Plug \$15

Opt 843 with JIS C8303 Appended Fig 6(2); 20-A, 250-V Plug \$36

Opt 845 with IEC 309; 16-A, 220-V Plug \$36

Opt 846 With NEMA L5-30P; 30-A, 120-V Locking Plug \$56

Opt 847 With CEE 7/7; 16-A, 220-V Plug \$36

Opt 848 with BS 546; 15-A, 240-V Plug \$36

Opt 908 Rack Mount Kit for a Single Unit. A blank

filler panel is supplied when ordered for half-rack-

width units.

HP 6010A, 6011A, 6012B, and 6015A \$41

HP 6023A \$82

HP 6024A \$71

Opt 909 Rack Mount Kit with Handles for HP 6010A, \$92

6011A, 6012B, and 6015A

Opt 910 Extra Operating and Service Manual \$26