

Test Equipment Solutions Datasheet

Test Equipment Solutions Ltd specialise in the second user sale, rental and distribution of quality test & measurement (T&M) equipment. We stock all major equipment types such as spectrum analyzers, signal generators, oscilloscopes, power meters, logic analysers etc from all the major suppliers such as Agilent, Tektronix, Anritsu and Rohde & Schwarz.

We are focused at the professional end of the marketplace, primarily working with customers for whom high performance, quality and service are key, whilst realising the cost savings that second user equipment offers. As such, we fully test & refurbish equipment in our in-house, traceable Lab. Items are supplied with manuals, accessories and typically a full no-quibble 2 year warranty. Our staff have extensive backgrounds in T&M, totalling over 150 years of combined experience, which enables us to deliver industry-leading service and support. We endeavour to be customer focused in every way right down to the detail, such as offering free delivery on sales, covering the cost of warranty returns BOTH ways (plus supplying a loan unit, if available) and supplying a free business tool with every order.

As well as the headline benefit of cost saving, second user offers shorter lead times, higher reliability and multivendor solutions. Rental, of course, is ideal for shorter term needs and offers fast delivery, flexibility, try-before-you-buy, zero capital expenditure, lower risk and off balance sheet accounting. Both second user and rental improve the key business measure of Return On Capital Employed.

We are based near Heathrow Airport in the UK from where we supply test equipment worldwide. Our facility incorporates Sales, Support, Admin, Logistics and our own in-house Lab.

All products supplied by Test Equipment Solutions include:

- No-quibble parts & labour warranty (we provide transport for UK mainland addresses).
- Free loan equipment during warranty repair, if available.
- Full electrical, mechanical and safety refurbishment in our in-house Lab.
- Certificate of Conformance (calibration available on request).
- Manuals and accessories required for normal operation.
- Free insured delivery to your UK mainland address (sales).
- Support from our team of seasoned Test & Measurement engineers.
- ISO9001 quality assurance.

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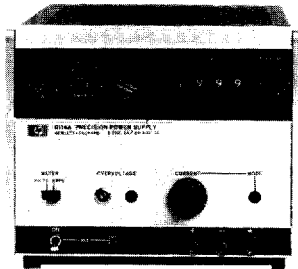


POWER SUPPLIES

Special Purpose: Precision Voltage Sources

Models 6111A-6116A

- 6114A, 6115A...CV/CC operation
- .025% output voltage accuracy
- Overvoltage crowbar



6114A, 6115A

- 6111A-6113A, 6116A...CV/CL operation
- 0.1% output voltage accuracy
- Thumbwheel voltage control



6111A, 6112A,
6113A, 6116A

Description

6114A, 6115A High Performance Precision Source

These 40 watt precision power supplies are ideal for applications where an accurate, highly stable, and easy-to-use source of dc voltage is required. Both models feature automatic dual range operation. For example, model 6114A can supply 0-20 V at 0-2 A, and 20-40 V at 0-1 A, without manual range switching. Automatic output current range crossover occurs when the supply is providing greater than one-half of the maximum rated output voltage. Pushbutton voltage controls on models 6114A and 6115A allow the output voltage to be set rapidly and accurately. A front-panel control allows the output current to be set to any desired value within the maximum rating. Using this control, the supplies can be operated as constant current sources with 0.01% current regulation.

Power: 104-127 or 208-250 V ac selected by switch, 48-440 Hz, 150 VA maximum.

Size: 166 H x 197 W x 336 mm D (6.5" x 7.75" x 13.25").

Weight: net, 7.7 kg (17 lb). Shipping, 9.5 kg (21 lb).

6111A, 6112A, 6113A and 6116A

Although these 20 watt precision power supplies do not provide quite the level of performance and flexibility of models 6114A and 6115A, they are lower in cost and are suitable for many precision power applications. Output voltage is adjusted by a five-decade thumbwheel voltage programmer for convenient and precise adjustment of output voltage. A single-turn current control allows full-range adjustment of the current-limit point.

Power: 115 V ac \pm 10%, 43-63 Hz, 0.5 A, 52 W (for 230 V, order Opt. 028).

Size: 133 H x 216 W x 318 mm D (5.25" x 8.5" x 12.5").

Weight: net, 5 kg (11 lb). Shipping, 6.8 kg (14 lb).

Ordering Information

Option Descriptions

009: ten-turn output controls. replaces single-turn output voltage and current controls. add \$30.00

011: internal overvoltage, protection crowbar. Protects delicate loads against power supply failure or operator error. add \$100.00

015: three-digit graduated turns-counting dial and ten-turn controls for output voltage and current (where applicable and available). Improves resettability of power supply output. add \$75.00

028: 230 V ac \pm 10%, single-phase input. Consists of reconnecting power transformer taps, and other components where necessary. N/C

040: Multiprogrammer interface. Prepares standard HP power supplies for resistance programming by the 6940B or 6942A Multiprogrammer. add \$40.00

910: one additional operating and service manual shipped with each voltage source. \$7.50

Accessories

14515A: 5.25 in. high rack kit for one supply \$60.00

14525A: 5.25 in. high rack kit for two supplies \$35.00

14515A: and **14525A** rack kits apply to the following models: 6111A-6113A, 6116A

5060-8762: adapter frame for rack mounting one or two 1/2 rack width units. This frame applies to the following models: 6114A, 6115A \$72.50

5060-8760: blank filler panel. This 1/2 rack width panel applies to the following models: 6114A, 6115A \$26.00

Specifications†

RATINGS—DC Output			PERFORMANCE							General		
Volts	Amps	Model	Accuracy	Resolution	PARD (rms/p-p)	Source Effect	Load Effect	Temperature Coefficient	Drift (Stability)	Overvoltage Protection	Options	Price
0-10	0-2	6113A	0.1% + 1 mV	20 μ V	40 μ V/100 μ V	0.001%	0.001% + 100 μ V	0.001% + 10 μ V	0.01% + 100 μ V	Opt 11, 3-13 V	11, 28, 40	\$1,050
0-20	0-1	6111A	0.1% + 1 mV	200 μ V	40 μ V/100 μ V	0.001%	0.001% + 100 μ V	0.001% + 10 μ V	0.01% + 100 μ V	Opt 11, 2.5-23 V	11, 28, 40	\$1,000
0-20, 20-40	0-2, 0-1	6114A	0.025% + 1 mV	200 μ V	40 μ V/200 μ V*	0.0005% + 40 μ V	0.0005% + 100 μ V	0.001% + 15 μ V	0.0015% + 15 μ V	STD, 0.5-45 V	9, 15	\$1,350
0-40	0-0.5	6112A	0.1% + 1 mV	200 μ V	40 μ V/100 μ V	0.001%	0.001% + 100 μ V	0.001% + 10 μ V	0.01% + 100 μ V	Opt 11, 2.5-44 V	11, 28, 40	\$1,000
0-50, 50-100	0-0.8, 0-0.4	6115A	0.025% + 1 mV	200 μ V	40 μ V/200 μ V*	0.0005% + 100 μ A	0.0005% + 50 μ V	0.001% + 15 μ V	0.0015% + 15 μ V	STD, 0.5-110 V	9, 15	\$1,350
0-100	0-0.2	6116A	0.1% + 1 mV	200 μ V	40 μ V/100 μ V	0.001%	0.001% + 100 μ V	0.001% + 10 μ V	0.01% + 100 μ V	Opt 11, 20-106 V	11, 28	\$1,050

†Refer to page 232 for complete specification definitions.

* * Specified with final decade pot set to zero. If pot is set to value other than zero, pot wiper jump effect may cause drift of 0.0015% + 200 μ V (90-day).

‡ 200 μ V p-p noise is typical with a maximum 400 μ V p-p spike of less than 1 μ s duration occurring repetition rate of twice power line frequency under worst case conditions of high line, full output voltage. When operated at 400 Hz input, peak-to-peak ripple is less than 10 mV.