

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 1 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, presenting flexible technical + commercial solutions and supplying a loan unit during warranty repair, if available.

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 at Aldermaston 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 40GHz 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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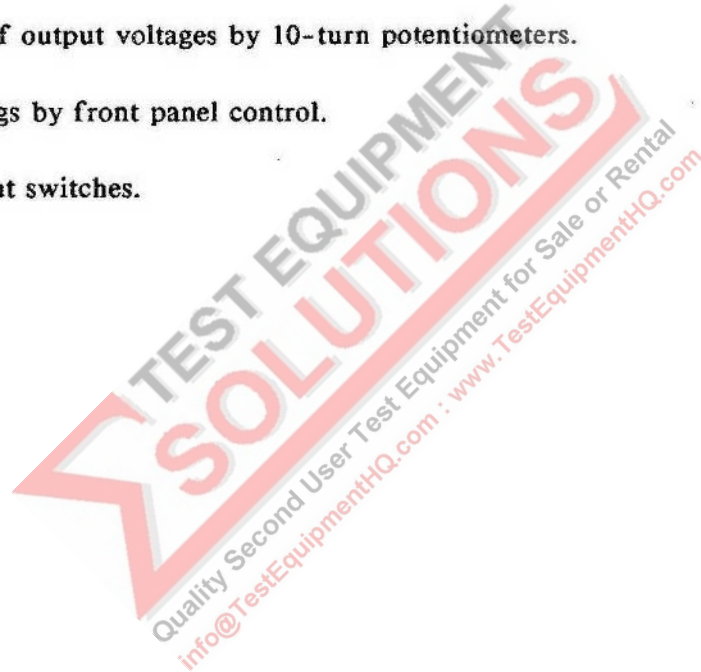
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2. INTRODUCTION

The Farnell PDA3502A is a twin output power supply with an output range for each half of 0 to 35V and 0 to 2A. Other features include :

- * Constant voltage or constant current operation.
- * Monitoring of voltage and current demand (when the output is off) and the 'real' voltage and current (when the output is on) by analogue displays by means of a volts/amps switch.
- * Tracking mode, useful for op amp supplies where the "slave" supply tracks the voltage of the "master" and creates a plus and minus supply. Switched from the front panel.
- * Fine control of output voltages by 10-turn potentiometers.
- * Current settings by front panel control.
- * Separate output switches.



3. SPECIFICATION

MAINS INPUT

- Frequency:** 50/60Hz.
- Voltage Ranges:** 220V or 240V $\pm 10\%$
110V or 130V $\pm 10\%$ by factory fitted option.
- Range Change:** Adjustment of mains inlet fuse drawer on back panel.
- Connection:** Via IEC lead approx 2.0 metres long (supplied).

OUTPUT

Twin isolated outputs of 0-35V and up to 2.0 amps.

Output Modes

By switch selection, operation is possible in the following modes:-

- Independent -** Both outputs float completely independent of the other.
- Tracking -** The "-ve master" output is internally connected to the "+ve slave" output creating a centre tap. The slave output tracks the master voltage setting. The current limit is determined by the lowest setting of either master or slave. For best results a shorting link (supplied) is placed between "-ve master" and "+ve slave" to improve regulation.

Output Switches

Both outputs have an ON/OFF switch. With the switch in its OFF state, the meter displays the prospective volts and amps settings.

Output Terminals

4 mm binding posts provide the output terminals and safety earth. A shorting link is provided to connect together master and slave for the tracking mode.

Line Regulation - For a $\pm 10\%$ mains change from nominal.

CONSTANT VOLTAGE - Less than 0.01% + 1mV.

CONSTANT CURRENT - Less than 0.01% + 100 μ A.

Load Regulation - INDEPENDENT MODE

CONSTANT VOLTAGE - Less than 0.01% + 2mV (for an open circuit to full load change).

CONSTANT CURRENT - Less than 0.1% + 1mA (for a short circuit to full voltage change).

Load Regulation - TRACKING MODE with link fitted.

CONSTANT VOLTAGE - Master output less than 0.01% + 2mV (for an open circuit to full load change).

Slave output less than 0.02% + 2mV (for an open circuit to full load change).

CONSTANT CURRENT - As independent.

Output Ripple and Noise - At full load and maximum voltage

CONSTANT VOLTAGE - Less than 2mV pk-pk

CONSTANT CURRENT - Less than 0.2mA pk-pk

Temperature Coefficient

Typically 0.03% per °c

Controls

Volts control 0.02% resolution. 10 turn.

Current Control less than 0.001% resolution. Single turn log.

Transient response

250mS typical to settle for 10-100% load change.(Output does not go beyond 0.05% of nominal)
(Tracking mode 500mS typical).

Protection

- i) Variable current limit.
- ii) DC output fuses (accessible from underside of chassis).
- iii) Reverse voltage protection by parallel diode.
- iv) Forward voltage protection by diode. Maximum protection voltage 65V.

Float Voltage

The maximum dc float voltage of any terminal is 200V with respect to ground.

METERS AND INDICATORS

Twin analogue meters switched between volts and amps.

Voltmeter

fsd, 35.0 volts

Resolution 0.5V

Accuracy $\pm 1.5\%$ fsd.

Ammeter

fsd, 2.0 amps

Resolution 50mA

Accuracy $\pm 1.5\%$ fsd.

Indicators

"CV", "CI" and "POWER" LEDs.

PHYSICAL SIZE

LENGTH - 330mm

WIDTH - 215mm

HEIGHT - 170mm

WEIGHT - 7.4kg

SAFETY

Designed to meet BS4743 (IEC348).

Isolation

Each unit is checked for insulation in the following places:-

Input (Live and Neutral linked) to Earth and Input to Output (terminals joined together and to earth) at 1500V ac to be less than 10mA. Outputs (linked together) and earth at 700V dc to be more than 10M ohm. Note:- Discharge 700V with a resistor of >500K ohm.

Environmental

Designed to meet:

Operating ambient - 0°C to +50°C (Derate power linearly above 35°C)

Storage - -20°C to +70°C

Operating RH - 0% to 90% non condensing.

Accessories Provided

2.0 metre IEC mains lead with free end.

Handbook.

Spare fuses.

Tracking terminal link

