

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.

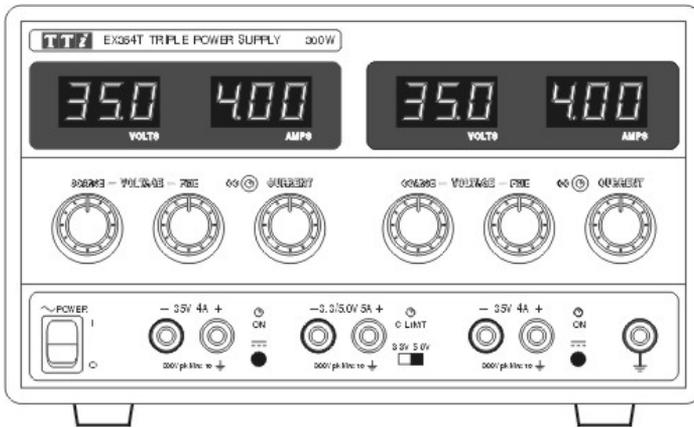
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EX series Compact bench DC power supplies



- Single, dual & triple output models from 175W to over 300W
- Digital voltage and current meters for each main output
- Highly compact design, excellent price/performance ratio

High power at low cost

The EX series provides high levels of power at surprisingly low cost. The attractive case style is highly compact using the minimum of bench space. The fan-less design provides silent operation *. The low weight makes them easy to move about.

Mixed-mode regulation

The EX series combines switch-mode pre-regulation with linear post-regulation to provide performance comparable with an all linear design. Excellent line and load regulation is matched by low noise and good transient response. High power efficiency makes fan cooling unnecessary.

Constant voltage or constant current

The main outputs can operate in constant voltage or constant current mode with automatic crossover and mode indication. Coarse and fine voltage controls are provided. The current control is logarithmic enabling low current levels to be set accurately.

Simultaneous digital metering

The EX series incorporate separate digital voltage and current meters on each main output. The meters use bright 14mm (0.56") LED displays and have an update rate of 4 per second providing near instantaneous response.

Simultaneous metering of voltage and current provides accurate information "at a glance" and avoids any possibility of misinterpretation. When an output switch is set to "off", the current limit setting is displayed enabling conditions to be set before the load is connected.

Ready for low-voltage logic

To reflect the increasing usage of low-voltage logic devices, the third output of the EX354T can be switched between 5 volts and 3.3 volts.

Output voltages up to 150V

The EX752M is a dual output 300 watt PSU with Multi-Mode capability. This enables it to operate as a dual power supply with two independent and isolated outputs, or as a single power supply of double the power.

As a dual, each output provides 0 to 75V at 0 to 2A (mode A). As a single the output can be selected as either 0 to 75V at 0 to 4A (mode B) or 0 to 150V at 0 to 2A (mode C). In single modes, the unused half of the unit becomes completely inoperative and its displays are blanked.

SPECIFICATIONS (see separate data sheet for EX-R models)

MAIN OUTPUTS

- Operating Mode: Constant voltage or constant current with automatic cross-over and indication.
- Voltage Setting: 0V to >rated O/P by coarse and fine controls.
- Current Setting: 0A to >rated O/P by single logarithmic control.
- Load regulation: <0.01% of max. O/P for a 90% load change.
- Line regulation: <0.01% of max. O/P for a 10% line voltage change.
- Output impedance: Typically <5mΩ in constant voltage mode. Typically >50kΩ in constant current mode.
- Ripple & Noise (20MHz bandwidth): Typically <2mV rms (CV mode).
- Transient Response: <200μs to within 50mV of set level for 90% load change.
- Temp. Coefficient: Typically <100ppm/°C.
- Output Protection: Outputs will withstand forward voltages above the rated output voltage. Reverse protection by diode clamp for currents up to 3A.
- Status Indication: Output ON lamps. Constant current lamps.
- Output Switch: Electronic. Preset voltage and current displayed when output is off.
- Output Terminals: 4mm terminals on 19mm (0.75") pitch.

METERS (main outputs)

- Meter Types: Separate 3 digit meters for voltage & current with 14mm (0.56") LED displays. Reading rate 4/sec. 100mV, 10mA.
- Meter Resolutions: Voltage 0.3% ±1 digit. Current 0.6% ±1 digit.

LOGIC OUTPUT (EX354T)

- Voltage: 5V or 3.3V, selectable by front panel switch.
- Voltage accuracy: ±2%
- Current limit: 5A minimum.
- Load regulation: <0.5% for a 90% load change.
- Line regulation: <0.1% for a 10% line voltage change.
- Ripple & Noise (20MHz bandwidth): Typically <2mV rms.
- Output Protection: Output will withstand forward voltages above the rated output. Diode clamp reverse protection for currents to 3A.
- Output Terminals: 4mm terminals on 19mm (0.75") pitch.
- Status Indication: Current limit lamp.

POWER

- AC Input: EX354D, EX354T, EX752M: 110V to 240V ±10%, 50/60Hz. EX355, EX355P, EX1810R, EX4210R, : 220 to 240V ±10% (115V to order). Installation Category II.

SIZE AND WEIGHT

- Size: 140 x 160 x 320mm (single); 260 x 160 x 320mm (dual/triple).
- Weight: 3.0 to 4.4kg.

ENVIRONMENTAL

- Operating Range: +5°C to +40°C, 20% to 80% RH.
- Storage Range: -40°C to + 70°C.
- Environmental: Indoor use at <2000m, Pollution Degree 1.
- Safety: Complies with EN61010-1.
- EMC: Complies with EN61326.

Thurlby Thandar Instruments Ltd. operates a policy of continuous development and reserves the right to alter specifications without prior notice.

EX & EX-R series - combined range		
Single Output		
EX355	35V/5A	175 watts
EX1810R	18V/1A	180 watts
EX4210R	42V/1A	420 watts
Dual Output		
EX354D	2 x 35V/4A	280 watts
EX752M	2 x 75V/2A	300 watts
Triple Output		
EX354T	2 x 35V/4A + 5V/5A	305 watts

Note: This is a faxable data sheet, a colour brochure is also available.

Designed and built in the EEC by:



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