



# THURLBY THANDAR INSTRUMENTS

## TS1410

### High Current DC Power Supply



- *Simulates all 12V battery types*
- *Built-in analogue current meter*
- *12 to 14 Volts output range*
- *10 Amps max. continuous current*
- *Excellent line and load regulation*
- *Very low ripple and noise*
- *Full short-circuit protection*
- *Over-voltage crowbar*
- *Remote sense terminals*

The TS1410 DC power supply has been designed for applications requiring a professional quality high current bench power source for equipment that is normally operated from twelve volt batteries.

The output voltage has been made adjustable (via a calibrated knob) between 12V and 14V. This covers most "twelve volt" sources such as six lead-acid cells (13.8V) or ten nickel-cadmium cells (12.6V).

The output is current limited at just over 10A and this current can be supplied continuously. This is an important advantage over many low cost PSUs where the rated current can only be supplied briefly. A built-in analogue meter provides an indication of output current.

The TS1410 provides a very high performance including excellent line and load regulation and a ripple and noise figure typically below 1mV. To remove voltage drops in the connecting leads and to ensure near perfect regulation at the load, remote sense terminals are incorporated.

An over-voltage crowbar system provides very high protection against power supply failure or the application of external voltages. The output is fully protected against short circuits. Reverse voltage protection is also incorporated.

#### SPECIFICATION

Output Voltage Range: 12 to 14 Volts.  
Max. Output Current: 10 Amps minimum,  
typical current limit point 12A.

Over-voltage Protection:

Dual speed circuit giving typically 20ms response time up to 17V and typically 2 $\mu$ s above 17V.

Output Protection:

Clamped by over-voltage protection circuit for voltages over 17V at currents up to 2A continuous. Diode clamped for reverse voltages at current up to 3A continuous.

Output Terminals: 4mm terminals on 19mm spacing.

Load Regulation: 0.1 % for 50% load change.

Line Regulation: 0.1 % for a 10% line voltage change.

Ripple and Noise: Typically less than 1 mV rms.

Meter Type: Analogue with 54mm x 32mm face.

Meter Accuracy: Typically 5%.

#### Power Requirements:

Input Voltage: Internally set for 220V or 240V.

Input Voltage Range:  $\pm$  10% of setting.

Power Consumption: 500VA maximum.

#### Environmental:

Operating Range: 5°C to 40°C, 20% to 80% RH.

Storage Range: -40°C to 70°C.

Size: 190(W) x 160(H) x 273(D)mm.

Weight: 7.8 kg.

Designed and built in the U.K. by:



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