



*A high capacity battery pack with solar and mains charging providing long term 12 Volt power for field applications, specifically Remote Data Collection (T24-RDC)*

### Introduction

The 'Power Pack & Solar Panel' 1 provides dependable off-grid power generation to support a variety of Mantracourt products. Packaged in an IP65 sealed case with rugged waterproof connectors the PP1 has two sources of charge for the internal battery with both solar and mains power input charging. The case also features stainless steel padlock protectors for easily securing your supply on site. The PP1 has a single 12 V fuse protected output. The mating connector comes pre-fitted with 5 metres of cable and bare end connections.

The solar panel features hail-proof tempered glass and closely packed polycrystalline cells, sealed into a robust aluminium frame. The junction box on the rear of the panel does not protrude beyond the frame, so installation can be simple and neat. The solar cell comes with 3 metres of cable as standard longer lengths are available on request. The SP1 & PP1 combined are designed to provide a perpetual power supply for a 12 V system drawing an average of 53 mA, even during winter.

The PP1 can also be used as a mains 12 V DC supply with battery back up.

### Specification at a Glance

- Unlimited power at 12 V at 50 mA
- Rugged case
- 33 Ahr internal battery
- 110-240 V charge input power
- 20 W solar panel
- Includes pole / wall mounting kit for solar panel
- IP65 / NEMA 4 rated enclosure

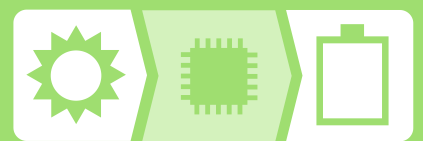


### User Benefits

- Remote power supply for T24 products
- Either battery, solar panel or mains options
- Rechargeable battery (PP1)
- Supports a variety of Mantracourt Products
- 1 year warranty

### Ideal Application

- Civil Engineering
- Construction
- Agriculture
- Oil/Gas
- Environmental/Climate



## Related Product



T24-RDC

Remote telemetry acquisition system for data logging



T24-WSS

Wireless Speed Sensor (Anemometer)

## Case Study

### The Application:

In hot locations rail tracks can be affected by the high temperatures, in extreme heat the track will experience compressive stress causing the rail to buckle. Rail stressing, as it is referred to, is a costly issue resulting in transport delays and disruption. To ensure movement of the track does not occur the 'rail neutral' temperature must be maintained, this can be done by adding stress to the rail.

A railway maintenance organisation in the USA required instrumentation to keep a record of the tracks temperature. The long strips of rail in secluded areas made it difficult to access the line in order to monitor the tracks temperature, so the company required a wireless system to monitor and collect the data.

### The Solution:

Temperature acquisition modules connected to a Pt100 type 385 sensor (T24 -TA) were placed every 10 meters along the 800 m of track line to record the temperature.



Using the potentiometer acquisition modules (T24-RA), with a linear transducer, any movement of the rail could also be measured. The remote data collector (T24-RDC) logged the data measured by the TA and RA. As the range of the T24-TA & RA was

limited to 200m an active repeater (T24-AR) was then used both ways to extend the coverage area to the 800 m of required track.

Due to the rural location of the tracks, the power pack and solar panel (T24 PP1&SP1) were used to power the RDC so that no mains powers were required. This system allowed the organisation to monitor the tracks from a location of their choice and removed the need for personnel site visits.

## CE & Environmental

Storage temperature	- 200 to +50°C
Operating temperature	- 20 to +50°C
Relative humidity	95% maximum non condensing
IP rating	IP65 / NEMA 4

### CE Environmental Approvals

European EMC Directive	2004/108/EC
Low Voltage Directive	2006/95/EC

*For more information contact us today...*

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In the interests of continued product development, Mantracourt Electronics Limited reserves the right to alter product specifications without prior notice

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