Novatech
Loadcell Design & Manufacture

T24-ACM/SA Loadcell Telemetry Data Acquisition Unit

- Licence free 2.4GHz band
- Traceable system calibration certificate
- Very high resolution data acquisition
- 2 way wireless system for data integrity
- Toolkit software available
- 1 year warranty

Specification

Parameter	Value	Unit
Battery voltage	2.1 (Min) / 3 (Typical) / 3.6 (Max)	Vdc
External dc supply	5 (Min) / 18 (Max)	Vdc
Bridge Excitation	4.5 (Min) / 5 Typical / 5.25 (Max)	Vdc
Loadcell Excitation System	4 wire	
Bridge Impedance	85 (Min) / 5,000 (Max)	Ohms
Bridge Sensitivity	-3.2 (Min) / +3.2 (Max)	mV/V
Offset Temperature Stability	1 (Typical) / 4 (Max)	ppm/°C
Gain Temperature Stability	3 (Typical) / 5 (Max)	ppm/°C
Offset Stability with Time	0.002 (Typical) / 0.008 (Max)	%FR *
Gain Stability with Time	30	ppm of FR /1st Year
Non-linearity	0.0005 (Typical) / 0.0025 (Max)	% FR
Internal Resolution	16 Million	Counts/Divisions
Resolution at 1000ms sample time *	250,000	Counts/Divisions
Resolution at 100ms sample time *	120,000	Counts/Divisions

Resolution at 10ms sample time *	50,000	Counts/Divisions
Maximum loadcell cable length	3	m
Operating temperature range	-20 (Min) / 55 (Max)	°C
Storage temperature	-40 (Min) / 85 (Max)	°C
Humidity	0 (Min) / 95 (Max)	%RH Non condensing
Sealing	IP67	

This remote loadcell data acquisition unit provides high performance wireless measurement of loadcell outputs. Providing direct mV/V input and 5V bridge excitation for up to 4 load cells.

Low power modes allow the module to power down between transmissions or to power off completely and can be controlled by other T24 products such as the handheld displays or a base station. The data acquisition unit uses a pair of standard alkaline D cells and is configured using free T24 Toolkit software which runs on a computer connected to a T24 base station. External powering is also possible with a suitable dc power supply. Using good quality alkaline batteries, a 700ohm loadcell, a 100ms sample time at 3 readings a second with 24 hours a day operation the battery life is approximately 18 days. The Toolkit software will calculate typical battery life for a given set of conditions. Loadcell connections are via field terminals. Full details are given in the manual. If the unit is supplied with a loadcell it will normally be calibrated to read the loadcell output in the same force units as the loadcell calibration. A traceable system certificate will be supplied for this calibration. The loadcell and this unit are the only parts of the telemetry system that require calibration. Alternative calibrations are possible; please consult our engineering department to discuss your requirements. Complies with EMC directive, 2004/108/ECThe Radio Equipment and Telecommunications Terminal Equipment (R&TTE) Directive, 1999/5/EC. RoHS compliant.

Order Codes

Code	Description
T24-ACM/SA	Cased battery powered loadcell data acquisition unit.
	T24 manual is available for download. The T24 system can be calibrated in a number of different ways depending upon the application. Please consult our engineering department for help with your requirements.
	Please see Engineering Sheet E035 for Frequently Asked Questions for the T24 Telemetry system.

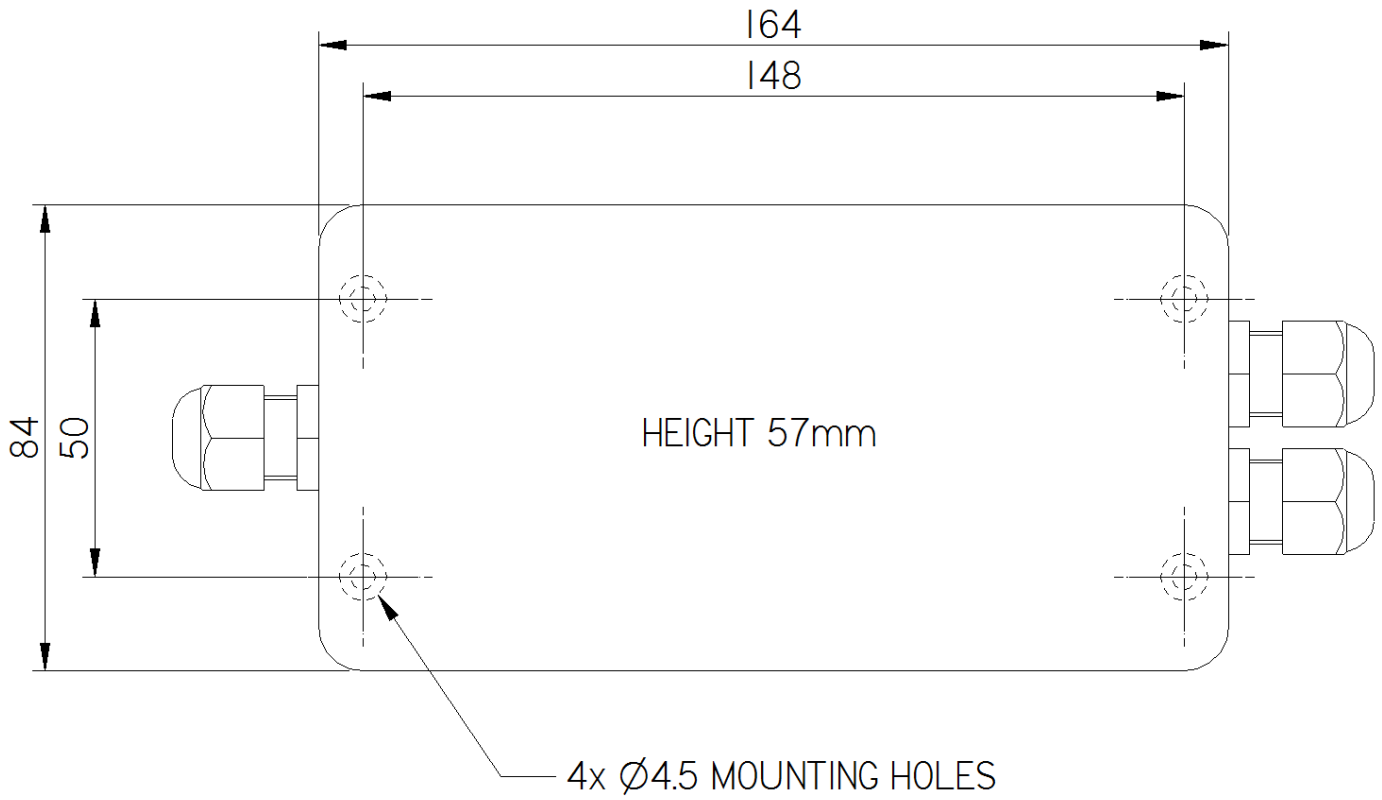
Notes

- * Noise free.
- FR = full range.
- RH = relative humidity.
- Line of sight transmission distance assumes ideal conditions with the data acquisition unit 3m above the ground.
- The batteries used may reduce the operating temperature range. Storage temperature is without batteries.

Files

Type	Title	Download
PDF Instructions	Printable manual for the T24 system.	Download

Diagram



Novatech Measurements Limited

83 Castleham Road, St Leonards on Sea, East Sussex, TN38 9NT, England.
Telephone: +44 (0)1424 852744
Fax: +44 (0)1424 853002
E-mail: info@novatechloadcells.co.uk