

T24-ACM/SA

Loadcell Telemetry Data Acquisition Unit

- ◆ Licence free 2.4GHz band
- ◆ Traceable system calibration certificate
- ◆ Very high resolution data acquisition
- ◆ Battery or external dc powered
- ◆ Sealed to IP67
- ◆ 1 year warranty



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 700 Ω 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.

This unit can be used with any of our loadcells. Details of our loadcell families can be found on our web site at www.novatechloadcells.co.uk.

T24-ACM/SA Specification

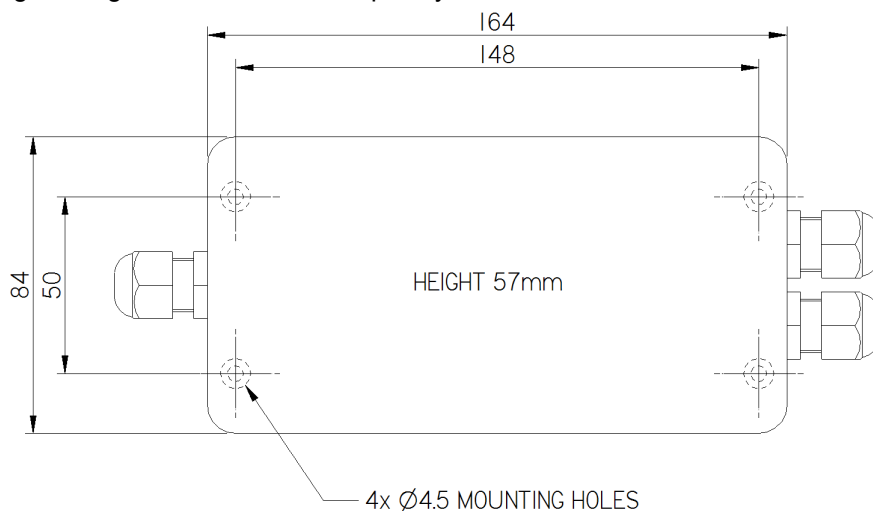
Description	Min	Typical	Max	Units
Battery voltage	2.1	3	3.6	Vdc
External dc supply	5		18	Vdc
Bridge Excitation	4.5	5	5.25	Vdc
Loadcell Excitation System		4 wire		
Bridge Impedance	85		5,000	Ω
Bridge Sensitivity	-3.2		+3.2	mV/V
Offset Temperature Stability		1	4	ppm/°C
Gain Temperature Stability		3	5	ppm/°C
Offset Stability with Time		0.002	0.008	%FR *
Gain Stability with Time			30	ppm of FR /1st Year
Non-linearity		0.0005	0.0025	% 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
Case dimensions	See diagram below			
Operating temperature range	-20		55	°C
Storage temperature	-40		85	°C
Humidity	0		95	%RH Non condensing
Sealing		IP67		

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.

Order code

T24-ACM/SA Cased battery or externally 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.



Complies with EMC directive, 2004/108/EC.
 The Radio Equipment and Telecommunications Terminal Equipment (R&TTE)
 Directive, 1999/5/EC. RoHS compliant.



Novatech reserves the right to vary the foregoing details without prior notice

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