Novatech
Loadcell Design & Manufacture

T24-ACMi/SA Miniature Loadcell Telemetry Data Acquisition Unit

- Licence free 2.4GHz band
- Very high resolution data acquisition
- Replaces TR150/200 in existing systems
- Battery powered
- Sealed to IP67
- Smaller than a TR150/200 loadmeter
- No vulnerable antenna

Specification

Parameter	Value	Unit
Battery voltage	2.1 (Min) / 3 (Typical) / 3.6 (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 (Max)	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
Case dimensions	See diagram below	
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 miniature 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 AA cells and is configured using free T24 Toolkit software which runs on a computer connected to a T24 base station. Using good quality alkaline batteries, a 700ohm loadcell, a 100ms sample time at 3 readings a second with 3 hours a day operation the battery life is approximately 32 days. The Toolkit software will calculate typical battery life for a given set of conditions. Loadcell connections are via a standard Binder 723 series cable mounted socket. The pin connections are the same as the TR150 and TR200 loadmeters. 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. We can also supply the unit scaled to 2mV/V for use with F256 set-up wheel installations. Please see the T24-SYSC data-sheet for more information. Alternative calibrations are possible; please consult our engineering department to discuss your requirements. The unit is supplied with standard Binder 723 series cable mounted loadcell input socket mounted on an 80mm long cable. CE - Complies with EMC directive, 2004/108/EC The Radio Equipment and Telecommunications Terminal Equipment (R&TTE) Directive, 1999/5/EC. RoHS compliant.

Order Codes

Code	Description
T24-ACMi/SA	Miniature 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.

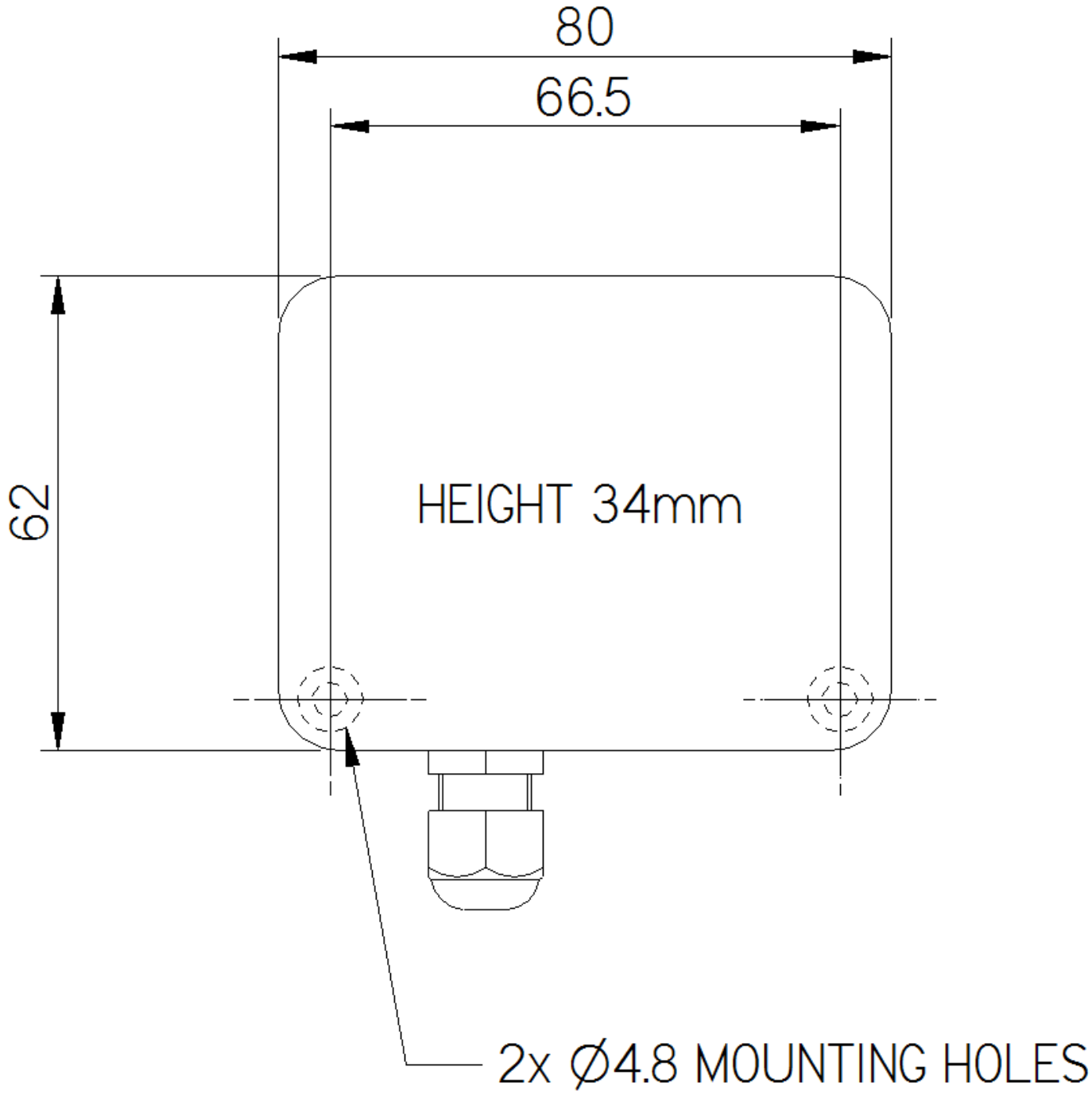
Notes

- * 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



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