



T24-LT1

mantracourt

Wireless Running Line Tensiometer



Introduction

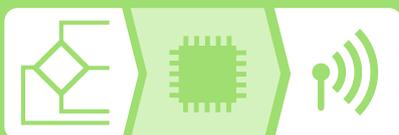
The T24-LT1 transmitter module provides OEM's with a versatile wireless Running Line Tensiometer which when connected to an appropriate piece of hardware gives cable tension, pay-out and speed. The T24-LT1 connects to a load pin and quadrature sensor. The quadrature sensor is usually constructed from reed switches and magnets arranged to give overlapping pulses so that both count and direction can be determined. These pulses can then be scaled to give distance and speed in engineering units. The load pin measurement is the same as the successful T24-SA module and can be calibrated and scaled to give tension in engineering units.

The data transmitted by the T24-LT1 can be received by multiple T24 receivers that include displays, handheld readers, analogue outputs, relay modules and computer interfaces. For the running line tensiometer a dedicated handheld display has been designed known as the T24-HLT which allows viewing of the three measurement values transmitted by the T24-LT1.

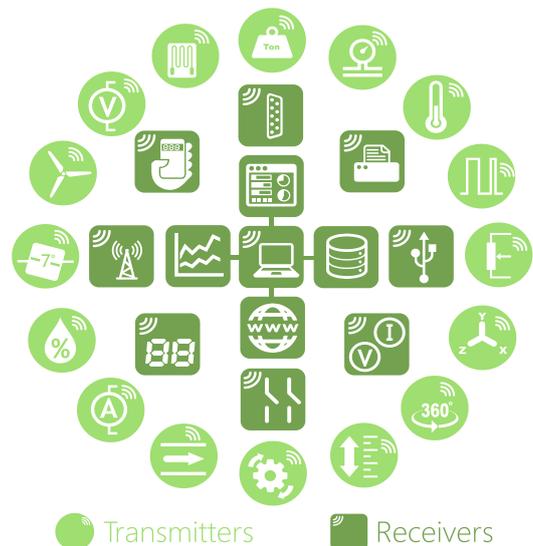
T24-LT1 has been designed for battery operation and supports an ultra-low-power sleep mode whilst offering class leading wireless coverage and range. Typical battery life based on a pair of AA cells gives 12 days continuous operation at transmission rate of 3 readings per second.

Product Features

- Facilitates construction of a wireless line tensiometer.
- Provides Load (Tension), Pay-out and Speed measurements
- Wireless range up to 800 m (2,600 ft)
- Low power mode for long battery life
- Same strain gauge technology as T24-SA
- Simple connection to quadrature sensor
- Miniature PCB for OEM integration
- Dedicated Handheld display available
- Free Toolkit software
- Compatible with other T24 receivers



T24 System Overview



T24 Wireless Telemetry Sensor System is a modular wireless solution for industrial sensor applications.

High accuracy, high quality measurement is interfaced with simple yet powerful configuration and monitoring software.

Specifications

Measurement Specifications

Strain gauge excitation system	4 wire
Strain gauge excitation	5 Vdc
Strain gauge resistance (min)	85 Ω
Strain gauge sensitivity (max)	±3.2 mV/V
Offset temperature stability (max)	4 ppm/°C
Gain temperature stability (max)	5 ppm/°C
Non linearity before linearization (max)	25 ppm of FR
Internal resolution/Bits	16,000,000 / 24
Noise free resolution at 1 sample per second	400,000/ 18.75
Quadrature inputs type	Volt free
Maximum Pulse Frequency	25Hz (1500 rpm)
Minimum Pulse frequency	0.5Hz (30 rpm)

Battery Life

Based on transmitting results at 3 per second , 350R strain bridge

Pair AA cells constantly on	12 Days
Pair AA cells 12 sessions per day of 5 mins	290 Days

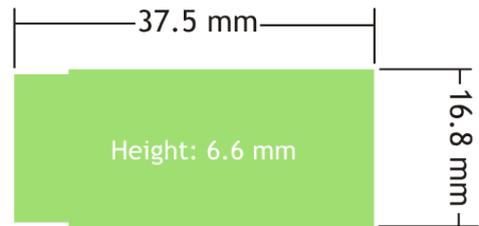
Radio

Radio type	Licence exempt transceiver
Radio frequency	2.4 GHz
Transmit power	10 mW
Range	Up to 800 m

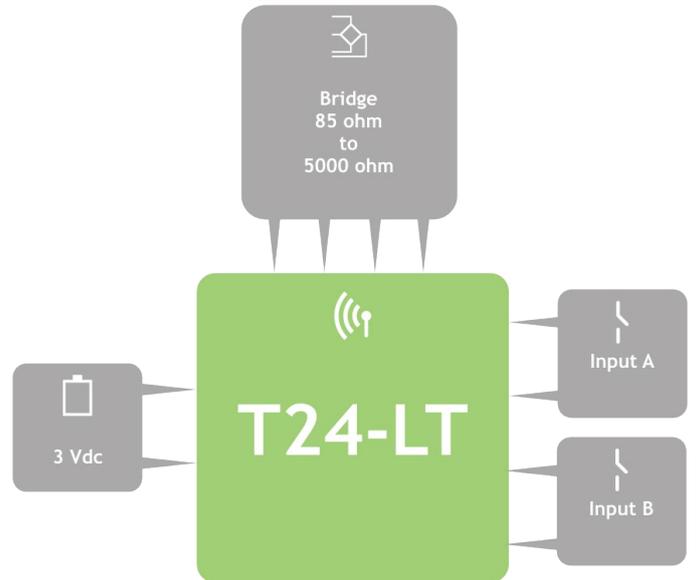
Environmental

Operating temperature range	-20 to 55 °C
Storage temperature range (no batteries)	-40 to 85 °C
Maximum humidity	95% non-condensing

Mechanical



Electrical



Order Codes

T24-LT1
Wireless Line Tensiometer OEM transmitter module (Requires external antenna)

T24-HLT
Running line tensiometer Handheld Telemetry Display

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