



Wireless Strain Bridge Transmitter Module for Fast Measurements



Introduction

The T24-SAf transmitter connects to strain bridge transducers such as load cells, torque sensors, strain gauges and pressure modules and forms part of the T24 modular telemetry system. The data transmitted by the T24-SAf can be received by multiple T24 receivers that include handheld readers, analogue outputs and computer interfaces.

T24 transmitters have been designed for battery operation and support an ultra low-power sleep mode whilst offering class leading wireless coverage and range. A choice of enclosures enabling battery connection, field connectivity and environmental sealing up to IP67 ensure these modules provide a flexible solution to your wireless sensor requirements.

The T24-SAf is a 2000 samples per second (fixed) version of the T24-SA for high speed monitoring. T24-SAf provides 5 V excitation to drive transducer loads down to 85 ohms. This transmitter is highly accurate, low noise and outputs in nV/V giving quality measurements from a wide range of strain bridge transducers.

Product Features

Ultra-fast update rate of 2000 per second Wireless range up to 800 m (2,600 ft) Low power mode for long battery life Miniature PCB for OEM integration Free Visualisation software

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.

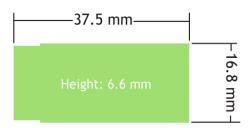
Measurement Specifications	
Strain gauge system	4 wire
Strain gauge excitation	5 Vdc
Strain gauge resistance (min)	85 Ω
Strain gauge sensitivity (max)	3.2 mV/V
Offset temperature stability (max)	4 ppm/°C
Gain temperature stability (max)	5 ppm/°C
Non linearity before linearization (max)	25 ppm of FR
Internal resolution/Bits	16,000,000 / 24
Noise free resolution/Bits at 1 sample per second	8,000/ 13
Transmission rate	2000Hz

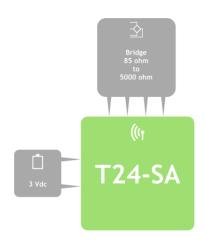
Battery Life		
Based on transmitting results at 3 per second , 350R strain bridge		
Pair AA cells constantly on	30 hours	
Pair AA cells 12 sessions per day of 5 mins	30 days	
Pair DD cells constantly on	5.5 days	
Pair DD cells 12 sessions per day of 5 mins	4.5 months	

Power Supply	
ACMi and OEM module	2.1 to 3.6 Vdc
ACM	5 to 18 Vdc

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 ℃
Storage temperature range (no batteries)	-40 to 85 °C
Maximum humidity	95% non-
	condensing
IP rating (ACM and ACMi)	IP67/Nema4





T24-SAfe

Wireless strain bridge (fast) OEM transmitter module for external antenna

T24-SAfi

Wireless strain bridge (fast) OEM transmitter module with antenna

T24-ACM-SAf

Wireless strain bridge (fast) transmitter module in IP67 enclosure supporting two D batteries or external power supply.

T24-ACMi-SAf

Wireless strain bridge (fast) transmitter module in IP67 enclosure for two AA batteries

T24-ACMm-SAf

Wireless strain bridge (fast) transmitter module in miniature IP50 enclosure

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