



T24-ACMi-SA



Wireless Strain Bridge Transmitter Module



Introduction

The T24-ACMi-SA 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-ACMi-SA can be received by multiple T24 receivers that include displays, handheld readers, analogue outputs, relay modules 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. Configurable transmission rates from once per day to 200 per second cope with a wide range of measurement and monitoring applications. 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.

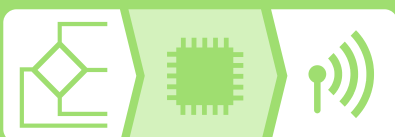
The T24-ACMi-SA provides 5V excitation to drive transducer loads down to 85 ohms. This transmitter is highly accurate, low noise and uses up to nine point linearisation giving quality measurements from a wide range of strain bridge transducers.

Product Features

- Simple wireless configure and calibration
- Wireless range up to 800 m (2,600 ft)
- Low power mode for long battery life
- Free Visualisation software

Industry Solutions

- **Construction**
Monitoring tension & compression on shoring struts
Crane/Under Hook Scales
- **Automotive**
Torque measurement on rotating shaft
Wheel balance in high performance cars



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)	±3.1 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
Transmission rates	From 5ms to 1 day

Battery Life

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

Pair AA cells constantly on	3 weeks
Pair AA cells 12 sessions per day of 5 mins	2 years

Power Supply

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

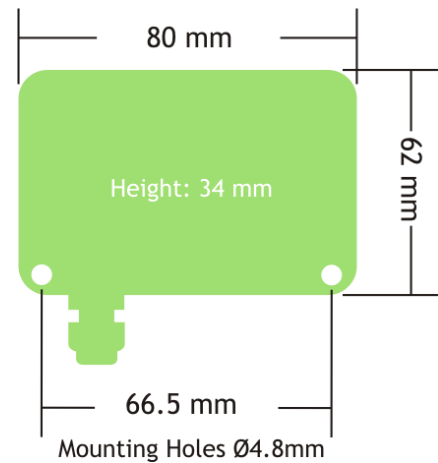
Radio

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

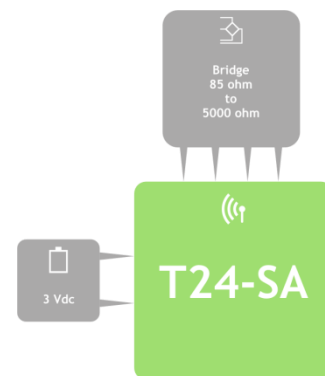
Environmental

Operating temperature range	-20 to 55 °C
Storage temperature range (no batteries)	-40 to 85 °C
Maximum humidity	95% non-condensing
IP rating (ACM and ACMi)	IP67/Nema4

Mechanical



Electrical



Order Codes

T24-ACMi-SA

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

Mantracourt Electronics Ltd

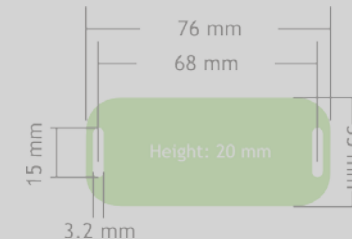
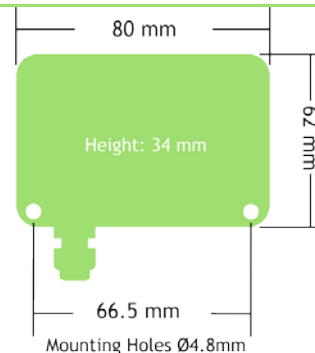
The Drive, Farringdon
Exeter, Devon, UK
EX5 2JB





Not available to purchase online.
Please request a quote or contact us.

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Enclosure	ACM	ACMi	ACMm
Wireless range / m	800 m (2,600 ft)	800 m (2,600 ft)	500 m (1,600 ft)
Power supply	3-18 Vdc or 2xD cell	3 Vdc (2xAA)	3 Vdc (2xAAA with BB1)
Battery life at 1 transmission per second*	1 year	5 months	2 months
Antenna	ANTA	ANTA	PCB Printed
Radio frequency		2.4 GHz	
Operating temperature /°C	-20 to +55	-20 to +55	-20 to +55
Environmental protection		IP67	IP50
Module size / mm	164 x 84 x 57	80 x 62 x 34	76 x 35 x 20

Software & configuration T24 Toolkit & T24LOG100

Input modules (determined by order code)							
	SA Strain	SA f Strain(2kHz)	IA Current	VA Voltage	TA Temperature	PA Pulse	RA Potentiometer
Order codes:	T24-ACM-SA T24-ACMi-SA T24-ACMm-SA	T24-ACM-SAf T24-ACMi-SAf T24-ACMm-SAf	T24-ACM-IA T24-ACMi-IA T24-ACMm-IA	T24-ACM-VA T24-ACMi-VA T24-ACMm-VA	T24-ACM-TA T24-ACMi-TA T24-ACMm-TA	T24-ACM-SA T24-ACMi-SA T24-ACMm-SA	T24-ACM-RA T24-ACMi-RA T24-ACMm-RA

Not available to purchase online. Please request a quote or contact us.

*For more information please refer to the T24 Acquisition Module Battery Life Calculator