



T24-IAe/i

mantracourt

Wireless 4-20 mA Transmitter Module



Introduction

The T24-IA transmitter module connects to 4-20 mA conditioned sensors such as pressure, %RH, inclinometer, accelerometer, depth, vibration, temperature and flow. It forms part of the T24 modular telemetry system. The data transmitted by the T24-IA 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-IA provides 5 V excitation to power external sensors. This transmitter provides up to nine point linearisation giving quality measurements from a wide range of sensors.

T24 System Overview

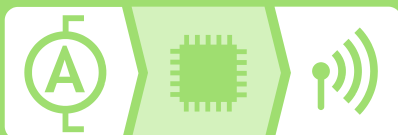


T24 Wireless Telemetry Sensor System is a modular wireless solution for industrial sensor applications.

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

Product Features

- Simple wireless configure and calibration
- Wireless range up to 800 m (2,600 ft)
- Low power mode for long battery life
- Miniature PCB for OEM integration
- Free visualisation software
- Ideal for conditioned transducers



Specifications

Measurement Specifications

Input range	0 to 20 mA
Calibrated range	4 to 20 mA
Input impedance	47 Ω
Input calibration accuracy	0.1%FR
Offset temperature stability (max)	0.5 ppm/°C
Gain temperature stability (max)	50 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	30,000 / 14.75
Transmission rates	From 5 ms to 1 day
Excitation available	5 Vdc @ 50 mA

Battery Life

Transmitting results at 3 per second , no excitation required	
Pair AA cells constantly on	1 month
Pair AA cells 12 sessions per day of 5 mins	2 years
Pair DD cells constantly on	4.5 months
Pair DD cells 12 sessions per day of 5 mins	>9 years

Power Supply

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

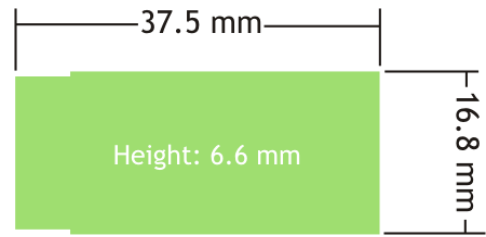
Radio

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

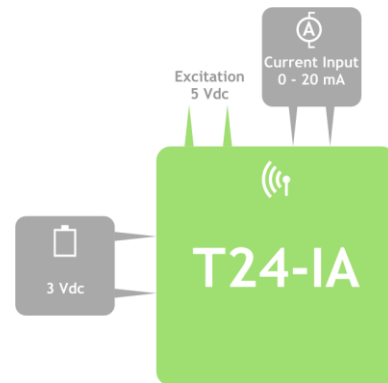
Environmental

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-IAe

Wireless 4-20 mA OEM transmitter module for external antenna

T24-IAi

Wireless 4-20 mA OEM transmitter module with antenna

T24-ACM-IA

Wireless 4-20 mA transmitter module in IP67 enclosure supporting two D batteries or external power supply.

T24-ACMi-IA

Wireless 4-20 mA transmitter module in IP67 enclosure for two AA batteries

T24-ACMm-IA

Wireless 4-20 mA transmitter module in miniature IP50 enclosure

Mantracourt Electronics Ltd

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

Tel: +44 (0)1395 232020

Email: sales@mantracourt.com

mantracourt.com



1 SENSOR
INPUT

3 HOUSING
OPTIONS

Every T24 transmitter module can be ordered in **one of three** IP rated enclosures.

To aid your work, they provide:

- Power Supply
- Water & Dust Protection
- Field Connectivity
- Ready-Made Mounting Solution

ACM

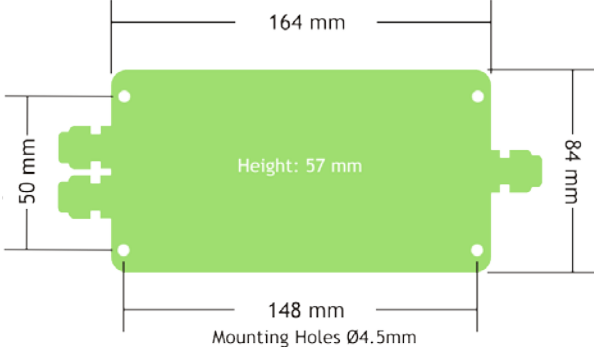
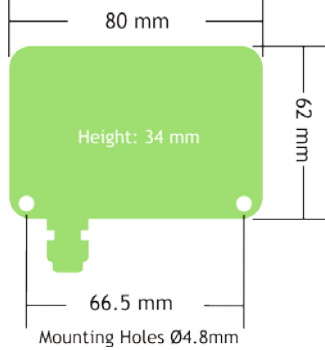
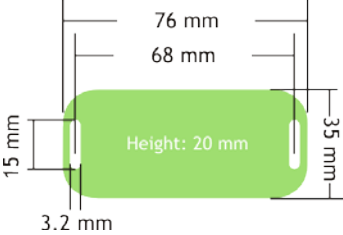









ACMi



ACMm



							
Enclosure	ACM	ACMi	ACMm				
Wireless range / m	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	-40 to +80				
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

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