



T24-RAe/i

mantracourt

## Wireless Potentiometer Transmitter Module



### Introduction

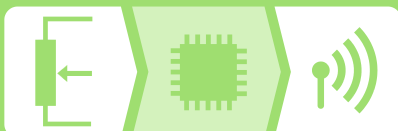
The T24-RA transmitter module connects to resistive sensors such as linear and rotary potentiometers, position and displacement sensors and forms part of the T24 modular telemetry system. The data transmitted by the T24-RA can be received by multiple T24 receivers that include displays, handheld readers, 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.

This transmitter is highly accurate, low noise and uses up to nine point linearisation giving quality measurements from a wide range of potentiometer type transducers.

### 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



### 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

<b>Input range</b>	500 to 100,000 $\Omega$
<b>Sensor excitation voltage</b>	2.5 Vdc
<b>Offset temperature stability (max)</b>	0.5 ppm/ $^{\circ}$ C
<b>Gain temperature stability (max)</b>	50 ppm/ $^{\circ}$ C
<b>Accuracy</b>	0.01% of FR
<b>Non linearity before linearization (max)</b>	25ppm of FR
<b>Internal resolution/Bits</b>	16,000,000 / 24
<b>Noise free resolution/Bits at 1 sample per second</b>	TBC
<b>Transmission rates</b>	From 5ms to 1 day

### Battery Life

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

### Power Supply

<b>ACMi and OEM module</b>	2.1 to 3.6 Vdc
<b>ACM</b>	5 to 18 Vdc

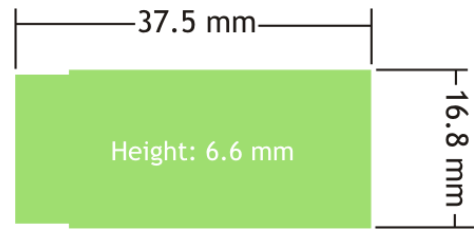
### Radio

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

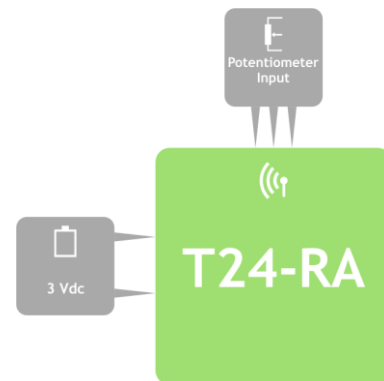
### Environmental

<b>Operating temperature range</b>	-20 to 55 $^{\circ}$ C
<b>Storage temperature range (no batteries)</b>	-40 to 85 $^{\circ}$ C
<b>Maximum humidity</b>	95% non-condensing
<b>IP rating (ACM and ACMi)</b>	IP67/Nema4

## Mechanical



## Electrical



## Order Codes

### T24-RAe

Wireless potentiometer OEM transmitter module for external antenna

### T24-RAi

Wireless potentiometer OEM transmitter module with antenna

### T24-ACM-RA

Wireless potentiometer transmitter module in IP67 enclosure supporting two D batteries or external power supply.

### T24-ACMi-RA

Wireless potentiometer transmitter module in IP67 enclosure for two AA batteries

### T24-ACMm-RA

Wireless potentiometer transmitter module in miniature IP50 enclosure

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

## Distribuidor

**Brasil e América do Sul**

### CONTATO

#### Endereço

Rua Sete de Setembro, 2656 - Centro  
13560-181 - São Carlos - SP - Brasil

#### Telefone

+ 55 (16) 3371-0112  
+ 55 (16) 3372-7800

#### Internet

[www.metrolog.net](http://www.metrolog.net)  
[metrolog@metrolog.net](mailto:metrolog@metrolog.net)

