T24-TAe/i

# Wireless Temperature Transmitter Module

## Introduction

The T24-TA transmitter connects to Pt100 temperature sensors and forms part of the T24 modular telemetry system. The data transmitted by the T24-TA 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-TA works with a PT100 type 385 temperature sensor. Temperature can be transmitted in Celsius, Fahrenheit or Kelvin.

## 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* | |
|---|---|
| **Input range** | -200 to 500 °C |
| **Sensor type** | Pt100 |
| **Accuracy (typical)** | 0.1 °C |
| **Non linearity (excludes sensor)** | 25 ppm of FR |
| **Internal resolution/Bits** | 16,000,000 / 24 |
| **Noise free resolution/Bits at 1 sample per second** | 150,000/17 |
| **Transmission rates** | From 5ms to 1 day |

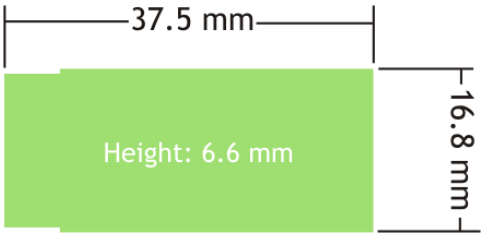
| *Battery Life* | |
|---|---|
| Transmitting results at 3 per second , no excitation required | |
| **Pair AA cells constantly on** | 1 month |
| **Pair AA cells 12 sessions per day of 5 mins** | 2 years |
| **Pair DD cells constantly on** | 4.5 months |
| **Pair DD cells 12 sessions per day of 5 mins**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

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

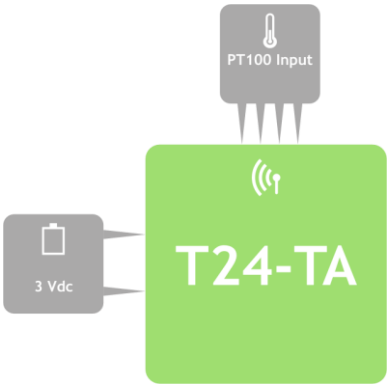
| *Radio* | |
|---|---|
| **Radio type** | Licence exempt transceiver |
| **Radio frequency** | 2.4 GHz |
| **Transmit power** | 10 mW |
| **Range** | Up to 800 m |

| *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-TAe**
Wireless temperature OEM transmitter module for external antenna

**T24-TAi**
Wireless temperature OEM transmitter module with antenna

**T24-ACM-TA**
Wireless temperature transmitter module in IP67 enclosure supporting two D batteries or external power supply

**T24-ACMi-TA**
Wireless temperature transmitter module in IP67 enclosure for two AA batteries

**T24-ACMm-TA**
Wireless temperature transmitter module in miniature IP50 enclosure

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mantracourt

# MADE TO PROTECT

# 1 SENSOR INPUT

# 3 HOUSING OPTIONS

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

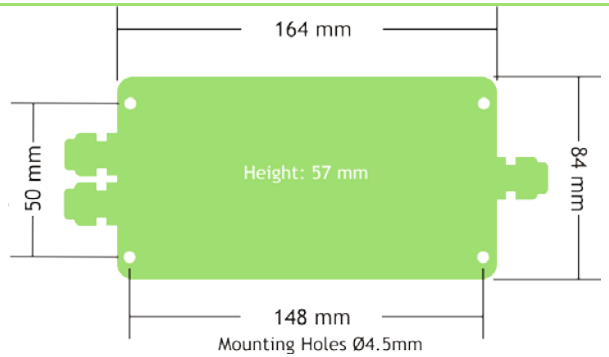
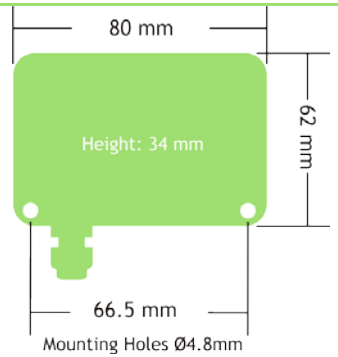
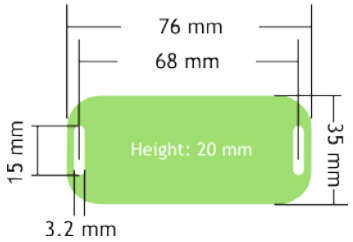
To aid your work, they provide:

- 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<br>SA f Strain(2kHz)<br>IA Current<br>VA Voltage<br>TA Temperature<br>PA Pulse<br>RA Potentiometer | | |
| Order codes: | T24-ACM-SA<br>T24-ACMi-SA<br>T24-ACMm-SA | T24-ACM-SAf<br>T24-ACMi-SAf<br>T24-ACMm-SAf | T24-ACM-IA<br>T24-ACMi-IA<br>T24-ACMm-IA<br>T24-ACM-VA<br>T24-ACMi-VA<br>T24-ACMm-VA<br>T24-ACM-TA<br>T24-ACMi-TA<br>T24-ACMm-TA<br>T24-ACM-SA<br>T24-ACMi-SA<br>T24-ACMm-SA<br>T24-ACM-RA<br>T24-ACMi-RA<br>T24-ACMm-RA |

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

# Distribuidor

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