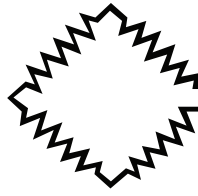




T24-PAe/i



# Amber Instruments Ltd

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## Wireless Pulse Input Transmitter Module



### Introduction

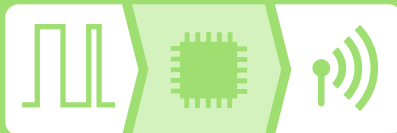
The T24-PA transmitter module collects and processes pulse related measurements, such as speed of rotation, proximity, flow and count, forming part of the T24 modular telemetry system. The data transmitted by the T24-PA can be received by multiple T24 receivers that include displays, handheld readers, 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-PA provides 5 V excitation. Inputs accept volt free contacts, open collector and 5 V logic.

### 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

Period input range	333 $\mu$ S to 2 s
Frequency input range	0.5 to 3,000 Hz
RPM input range (1 pulse / rev)	30 to 180,000 RPM
Volt free input pull-up resistor	42 k $\Omega$
Pulse input voltage range	0.8 to 6 V
Accuracy as % input error at 1 Hz (max)	0.15%
Accuracy as % input error at 1 kHz (max)	0.25%
Internal resolution	0.25 $\mu$ s
Reset count input	volt free
Reset count input pull-up resistor	20 to 50 k $\Omega$
Excitation available	5 Vdc @ 40mA
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

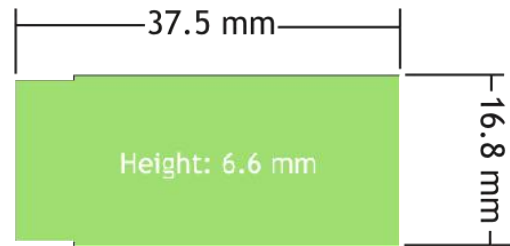
### Radio

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

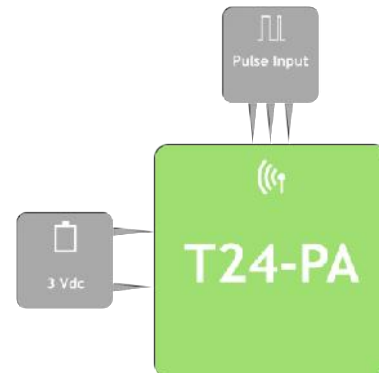
### Environmental

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

## Mechanical



## Electrical



## Order Codes

### T24-PAe

Wireless pulse input OEM transmitter module for external antenna

### T24-PAi

Wireless pulse input OEM transmitter module with antenna

### T24-ACM-PA

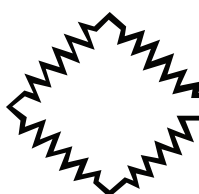
Wireless pulse input transmitter module in IP67 enclosure supporting two D batteries or external power supply

### T24-ACMi-PA

Wireless pulse input transmitter module in IP67 enclosure for two AA batteries

### T24-ACMm-SA

Wireless pulse input transmitter module in miniature IP50 enclosure



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Torque Transducers, Load Cells (general purpose, weighing & fatigue rated). Multi-Axis Force/Torque, Weighing Instruments, Process Instruments, Portable Data Loggers, Pressure Sensors, Proximity Sensors, Laser (Distance Measuring) Sensors, & more.

# 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

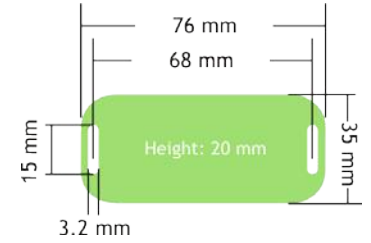
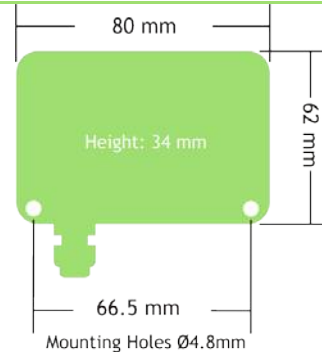
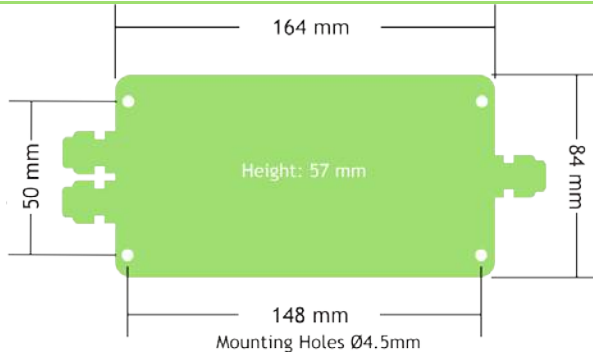









## ACMi



## 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)	 <b>SA</b> Strain	 <b>SA f</b> Strain(2kHz)	 <b>IA</b> Current	 <b>VA</b> Voltage	 <b>TA</b> Temperature	 <b>PA</b> Pulse	 <b>RA</b> 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