



X24-ACMi-SA

mantracourt

## ATEX / IECEx Telemetry Strain Transmitter Module



### Introduction

**ATEX / IECEx telemetry transmitter module measures strain input and periodically transmits data for receipt by X24 or T24 receivers.**

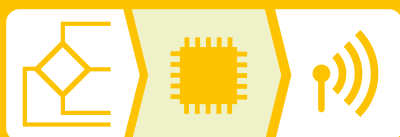
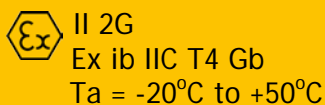
High accuracy ratio-metric input allows for calibration and linearisation for pressure, force, torque and weight measurement in explosive atmospheres.

Housed in an environmentally sealed IP67 enclosure with battery holder for two Lithium Energiser L91 AA batteries.

This flexible transmitter supports a wide range of bridge sensors and is ideal for places that are difficult for a wired connection.

### Product Features

- **Intrinsically Safe Electronics**  
Approved for use in explosive atmospheres Zone 1, Zone 2
- **Flexible**  
Supports a wide range of bridge sensors
- **High accuracy**  
Extremely low temperature drift  
High resolution ratiometric / bridge measurement
- **Power Efficient**  
Long battery life of up to 5 years
- **High Quality Measurement**  
Calibration and linearisation to engineering units
- **Cross Compatible**  
Operates with X24 and T24 receivers



### Accessories



**X24-HD**  
ATEX/IECEx Handheld Telemetry Display



**X24-SAe**  
ATEX/IECEx Telemetry Strain Transmitter OEM Module

## Extend Your Capabilities with our T24 Wireless Modular System



Adaptable and expandable system for safe zones.

Certified transmitters send to 'safe zone' base stations, gateways, analogue and digital outputs.

Find out more at [wirelessensorsystem.com](http://wirelessensorsystem.com)

## Specifications

Specification with 1000R bridge, 2.5mV/V, at 3V supply at 25°C

### Measurement Specifications

<b>Strain gauge excitation system</b>	4 wire
<b>Strain gauge excitation</b>	5 Vdc
<b>Strain gauge resistance (min)</b>	85 Ω
<b>Strain gauge sensitivity (max)</b>	±3.2 mV/V
<b>Offset temperature stability (max)</b>	4 ppm/°C
<b>Gain temperature stability (max)</b>	5 ppm/°C
<b>Non linearity before linearization (max)</b>	25 ppm of FR
<b>Internal resolution/Bits</b>	16,000,000 / 24
<b>Noise free resolution at 1 sample per second</b>	400,000/ 18.75
<b>Transmission rates</b>	From 5ms to 1 day

### Environmental Specifications

<b>Operating Temperature Range</b>	-20 to +55 °C
<b>Storage Temperature</b>	-40 to +85 °C
<b>Humidity</b>	0 to 95 %RH

### Radio

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

### Power Supply

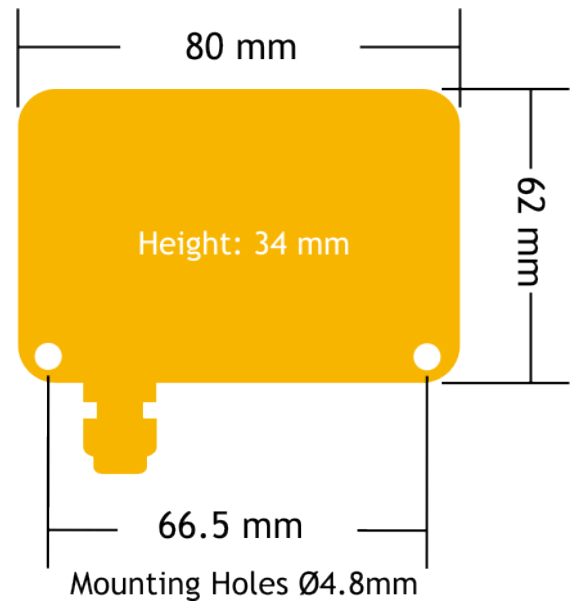
<b>Power Supply Voltage</b>	2.1 to 3.6 Vdc
*Must use Energizer L91 batteries	
1. Power supply must be capable of supplying 300 mA for 250 μs (Required on start-up, waking and during low power operation)	

### Battery Life in Low Power Mode Generating Results at 3Hz with 350R Load Cell

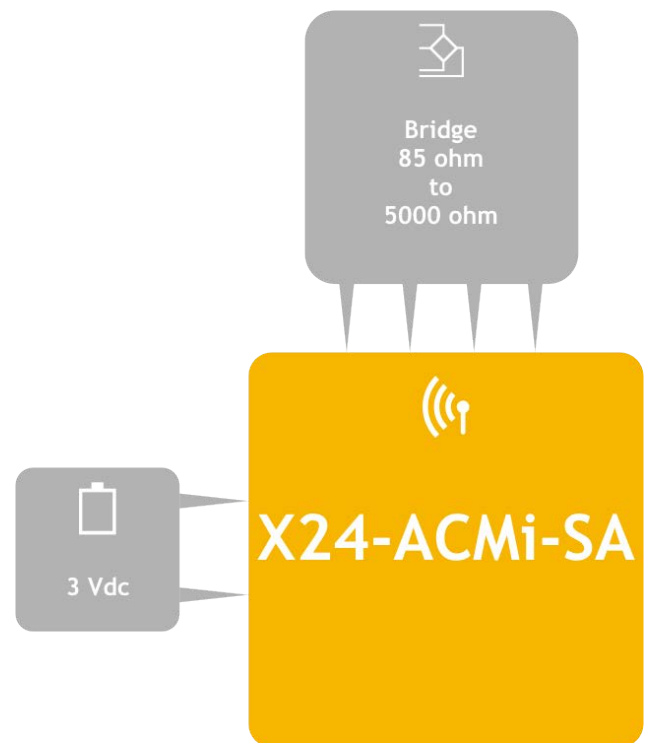
Pair Energizer L91 Lithium AA cells:	Battery Life:
Constantly on transmitting at 3Hz	30 days
12 sessions per day of 5 minutes at 3Hz	2 years
Constantly on transmitting every 20 secs at 3Hz	5 years

\*Calculate your battery life: [www.mantracourt.net/T24BattCalc.asp](http://www.mantracourt.net/T24BattCalc.asp)

## Mechanical



## Electrical



## Order Codes

### X24-ACMi-SA

ATEX / IECEx telemetry Strain Transmitter Module

## Mantracourt Electronics Ltd

The Drive, Farringdon  
Exeter, Devon,  
EX5 2JB  
United Kingdom

Tel: +44 (0)1395 232020  
Email: [sales@mantracourt.com](mailto:sales@mantracourt.com)  
[mantracourt.com](http://mantracourt.com)

