



# X24-SAe

## ATEX / IECEx Telemetry Strain Transmitter OEM Module



### Introduction

**ATEX / IECEx telemetry transmitter module measures strain input and periodically transmits data for receipt by X24 or T24 receivers. PCB module provides OEM sensor manufacturers with a quick route to manufacture and supply approved strain bridge sensor products.**

This intrinsically safe board is approved for both Gas Zone 1 and 2 and Dust Zones 21 and 22.

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

The X24-SAe provides 5 V excitation to drive transducer loads down to 85 ohms. This transmitter is highly accurate, low noise and uses up to nine point linearisation giving quality measurements from a wide range of strain bridge transducers.

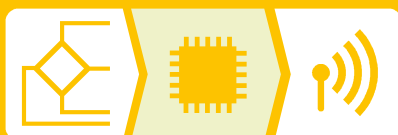
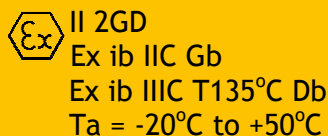
The OEM product X24-SAe has component approvals which allow holders of a QAN or a QAR to "fast track" the design and manufacture of their own ATEX/IECEx products through the equipment certification process using a notified body such as BASEFA, CSA group or UL.

### Product Features

- **OEM Capabilities**  
High performance PCB for OEM integration
- **Intrinsically Safe Electronics**  
Approved for use in explosive atmospheres Zone 1, Zone 2, Zone 21, Zone 22
- **Long Range Transmission**  
Wireless range of up to 800 m (½ mile)
- **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-ACMi-SA**  
ATEX / IECEx Telemetry Strain Transmitter Module



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

## 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.

## Specifications

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

### Measurement Specifications

Strain gauge excitation system	4 wire
Strain gauge excitation	5 Vdc
Strain gauge resistance (min)	85 Ω
Strain gauge sensitivity (max)	±3.1 mV/V
Offset temperature stability (max)	4 ppm/°C
Gain temperature stability (max)	5 ppm/°C
Non linearity before linearization (max)	25 ppm of FR
Internal resolution/Bits	16,000,000 / 24
Noise free resolution at 1 sample per second	400,000/ 18.75
Transmission rates	From 5ms to 1 day

### Environmental Specifications

Operating Temperature Range	-20 to +50 °C
Storage Temperature	-40 to +85 °C
Humidity	0 to 95 %RH

### Radio

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

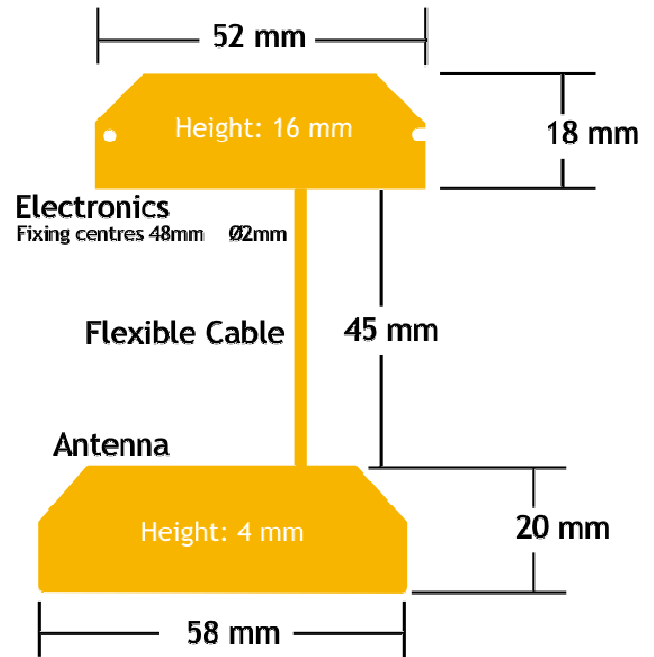
### Power Supply

Power Supply Voltage	2.1 to 3.6 Vd
1. Power supply must be capable of supplying 300 mA for 250 μs (Required on start-up, waking and during low power operation)	

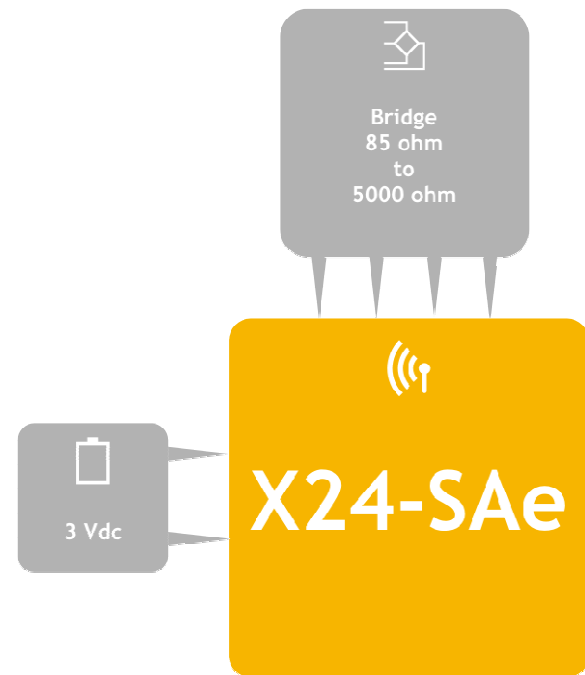
### Battery Life in Low Power Mode with 350R Load Cell

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	5 years

## Mechanical



## Electrical



## Order Codes

### X24-SAe

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Communication today and tomorrow