



## TYPE: X24-ACMI-SA



# X24-ACMI-SA Wireless Strain Gauge Transmitter Module

## Description

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 and weight measurement in explosive atmospheres with extremely low temperature drift.

Housed in an environmentally sealed IP67 enclosure with battery holder for two Lithium Energizer 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.

The licence free 2.4GHz direct sequence spread spectrum (DSSS) radio technology offers high integrity, error free communications which can co-exist with other wireless technologies such as Wi-Fi, Bluetooth® and Zigbee® and is approved for FCC, IC and European use (ETSI).

The X24 Telemetry range of products are ATEX and IECEx approved members of the larger T24 Telemetry product range. Systems can be put together using X24 in the hazardous areas and T24 in safe areas as required. Free Toolkit software provides simplified configuration of modules and other free software provides logging and visualisation functionality for Windows PCs.

## Specification

Strain gauge excitation system	4 wire
Strain gauge excitation	5 Vdc
Strain gauge resistance	85Ω (min) to 5000Ω (max)
Strain gauge sensitivity (max)	±3.1mV/V
Offset temperature stability (max)	4 ppm/°C
Gain temperature stability (max)	5 ppm/°C
Non linearity before linearisation (max)	25 ppm of FR
Internal resolution/Bits	16,000,000/24
Noise free resolution at 1 sample per second	400,000/18.25
Transmission rates	From 5ms to 1 day
Radio type	Licence exempt transceiver
Radio frequency	2.4 GHz
Transmit power	10mW
Range	Up to 800m (2,600ft)
Power supply voltage	2.1 to 3.6 Vdc
Battery life	30 days - constantly on transmitting at 3Hz
(must use 2 x Energizer L91 batteries)	2 years - 12 sessions per day of 5 minutes at 3 Hz 5 years - constantly on transmitting every 20 seconds
Operating temperature range	-20 to +50 °C
Storage temperature	-40 to +85 °C
Humidity	95% non condensing
ATEX certification details	II 2G Ex ib IIC T4 Gb I M2 Ex ib I
IP rating	IP67

(Specification based on 1000R bridge, 2.5mV/V at 3V supply at 25 °C)

## Features

- Hi accuracy
- Calibration and linearisation to engineering units
- Cross compatible with X24 and T24 receivers
- Worldwide licence exempt 2.4GHz radio
- Up to 800 metre (2600 feet) range maximum
- Environmentally sealed to IP67
- Approved for use in explosive atmospheres, Zones 1 & 2

## Typical Applications

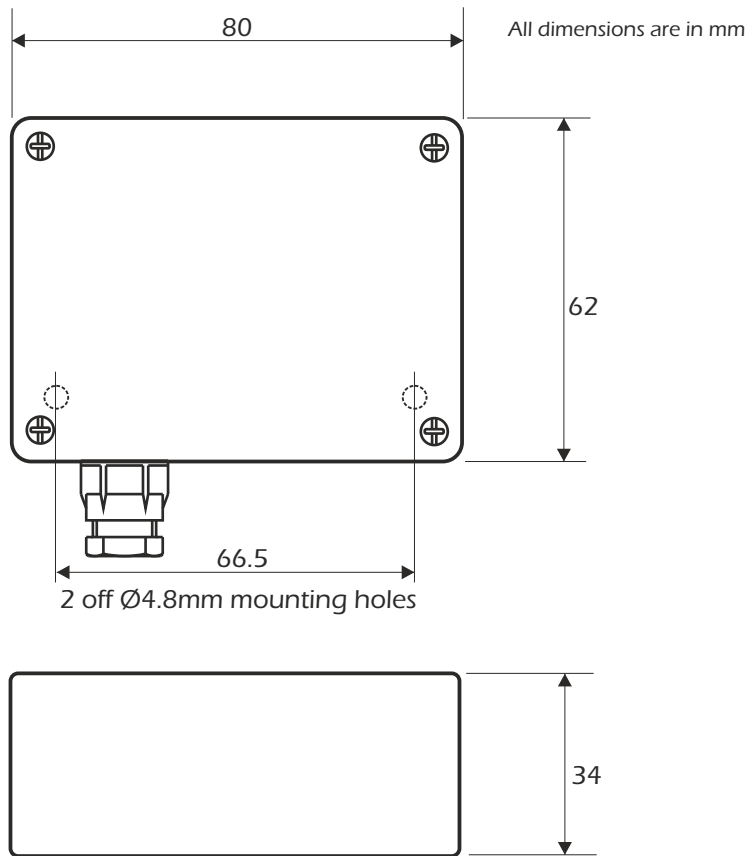
- Vehicle weighing systems
- Vessel weighing systems
- Platform weighing
- Crane weighing and overload protection

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## Dimensions



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Due to continual product development, LCM Systems Ltd reserves the right to alter product specifications without prior notice.

CE Complies with EMC directive. 2004/108/EC

FC The Radio Equipment and Telecommunications Terminal Equipment (R&TTE) Directive, 1999/5/EC. Family: RAD24



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APPROVED

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