



APPLIED MEASUREMENTS LTD.
Transducer Specialists...

+44 (0) 118 981 7339

info@appmeas.co.uk

www.appmeas.co.uk

T24-AR Wireless Telemetry Active Repeater Module

Key Features:

- Extends and Enhances Transmission Range
- Enables Communication Around Obstacles
- Improves Propagation of Signal
- 5-18Vdc or Battery-Powered (2x 'D' Cells)
- Transparent Operation
- IP67 Rated Enclosure
- Integrated PCB Antenna
- Simple Configuration via PC using Base Station & T24 Toolkit Software
- 3 Years Warranty



The T24 Active Repeater module will enable the T24 range of acquisition modules to span around obstacles, increase range and coverage by retransmitting received messages. The repeater acts as transparent link between acquisition modules and the receiver, powered by either a pair of alkaline 'D' Cells or an external power supply (5-18 Volts). The repeater will allow messages to be repeated once which can effectively double the radio range. Adding multiple repeaters will not increase the range but can increase overall coverage.

Each relay features latching, inversion and hysteresis functionality, and there is also an alarm relay that is triggered by communication loss or any other user-selected error.

Configuration of the T24-AR is performed wirelessly via either the T24-BSu USB Base Station or the T24-BSi Industrial Base Station in conjunction with the T24 Telemetry Toolkit Software.

The active repeater module is housed within a robust IP67 enclosure suitable for most industrial applications.

Industries:

- Civil Engineering
- Lifting & Handling
- Waste Management
- Alternative Energy
- Construction
- Automotive
- Silo & Weighing Industry
- Marine

Applications:

- Wireless Monitoring of Bridge Structures
- Wireless Monitoring of Anchor Loads
- Wireless Bridge Surveying via GPRS
- Wireless Truck Load Weight Monitoring
- Wireless Skip Weighing System
- Wireless Platform Weighing with Ticket Printing
- Wireless Monitoring of Building Foundations
- Wireless Telemetry Strain Measurement of Wind Turbines
- Remote Load Monitoring of Construction Shoring Struts
- Force Measurement in Formula Racing
- Wireless Silo Weighing
- Superyacht Sail-Track Development
- Telemetry Monitoring on High Altitude Roads
- Radio Telemetry Monitoring of Underwater Turbine
- Wireless Mooring Rope Monitoring
- Wireless Valve Control
- Torque Measurement Using Wireless Technology
- Measuring the Power Output of a Motor



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Specification:

| Radio | Min | Typical | Max | Units |
|-------------------|--------|---------------------|--------|-----------------|
| Licence | | Licence Exempt | | |
| Modulation Method | | MS (QPSK) | | |
| Radio Type | | Transceiver (2 way) | | |
| Data Rate | | 250 | | K bits / second |
| Radio Frequency | 2.4000 | | 2.4835 | GHz |
| Power | | 10 | | mW |
| Range* | | | 800 | Metres |
| Channels (DSSS) | | 15 | | |

*Tests conducted in an open field site with the transmitter at the top of a 3m pole. The receiver was mounted 1.5m off the ground.

| T24-AR | Min | Typical | Max | Units |
|--|-----|---------------|-------|-------------|
| Power Supply | | | | |
| Battery Life Pair DD Cells permanently activated | | 240 | | Hours |
| Standby / Low Power Mode | | 5 | 20 | µA |
| Normal Mode on Constantly | | 55 | 60 | mA |
| Reverse Polarity Protection | | -32 | | Vdc |
| Internal Battery Supply Voltage (D Cells) | 2.1 | 3 | 3.6 | Vdc |
| External Power Supply Voltage (Optional Use) | 5 | - | 18 | Vdc |
| External Power Supply Ripple | | | 50 | Mv ac pk-pk |
| Environmental | | | | |
| Operating Temperature Range | -20 | - | +55** | °C |
| Storage Temperature Range | -40 | - | +85 | °C |
| Humidity | 0 | - | 95 | %RH |
| IP Rating | | IP67 / NEMA 4 | | |

**Check operating temperature of batteries intended for use, as batteries used may have reduced operating temperature range.



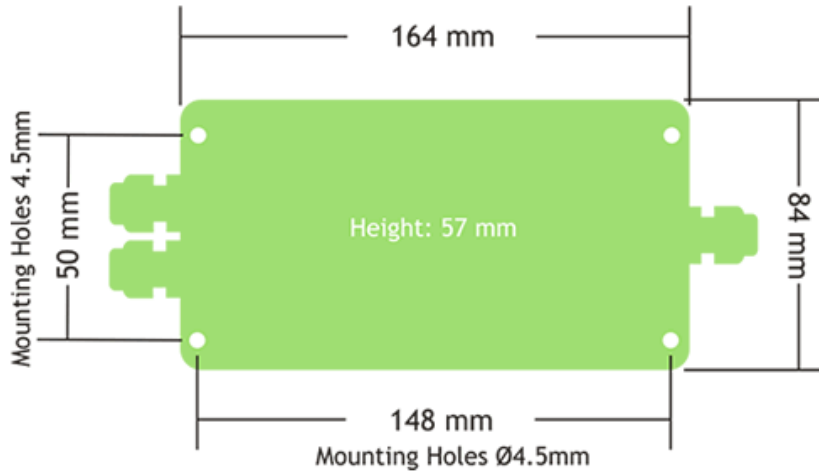
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Dimensions (mm):



Ordering Codes:

| | |
|--------|---|
| T24-AR | Wireless Telemetry Active Repeater Module |
|--------|---|

Associated Products:



[T24-ACM Wireless Sensor Module Enclosure with External Power](#)



[T24-ACMi Mini Sensor Enclosure](#)



[T24-ACMm Mini data transmitter case for strain, 0-20 mA, 0-10 V](#)



[T24-BSi Radio telemetry base station with USB, RS485 or RS232](#)



[T24-BSu Wireless radio telemetry USB base station](#)