



Product Datasheet

LSTT-SR

LPWA Sensor Telemetry Transmitter

LSTT-SR (LPWA Sensor Telemetry Transmitter –Standard Range) is a general purpose telemetry transmitter designed to interface to a wide range of low data rate industrial and environmental sensors.

The LSTT is a self-contained battery powered device that can operate for up to 15 years depending on the power requirements of the connected sensor and the desired reporting interval.

Communicating with Taggle receivers, data can be collected over a wide geographical area. Typical ranges of more than 2km in urban areas and 5km in rural areas are achievable depending on installation and local geography.



Technical Details

General

Dimensions (approx.)	240mm (L) x 85mm(W) x 60mm(D)
Weight (approx.)	500g including mounting plate
Enclosure Material	ABS Plastic

Environmental

Ingress Protection	IP67
Operating Temperature	-10° C to 65° C

Battery

Type	D Size Lithium Thionyl Chloride (field replaceable)
Voltage	3.6V
Life	> 15 years (hourly transmission of 1 data reading) > 6 years (transmission of 1 data reading every 10 minutes)

Transport

UN Code	UN3091
Packing Instruction	970 Section 1
IMP	RLM

Transmitter

Type	Taggle Byron A31
Operating Frequency	922MHz
Signal Type	Direct Sequence Spread Spectrum
Licence	ACMA LIPD Class (Low Interference Potential Device)
Operating Range	> 2km* - Urban >5km* - Rural

*Standard above-ground installation, subject to site conditions

Radio output power

40mW

Antenna

Internal 0dBi omni-directional mono-pole

Sensor Interface

Type 4-20mA or Analog Voltage

Connector & Plug

4 pin M12 screw on, IP67 rated

Power supply

15V/12V/5V @1W

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The LSTT-SR is designed to interface to a range of analog and digital sensors widely used in industrial automation and environmental monitoring applications. Currently supported interfaces include:

- Analog 4-20mA, Analog Voltage, (0-2.5V standard with other ranges available on request)

Future product releases will support for the following interfaces:

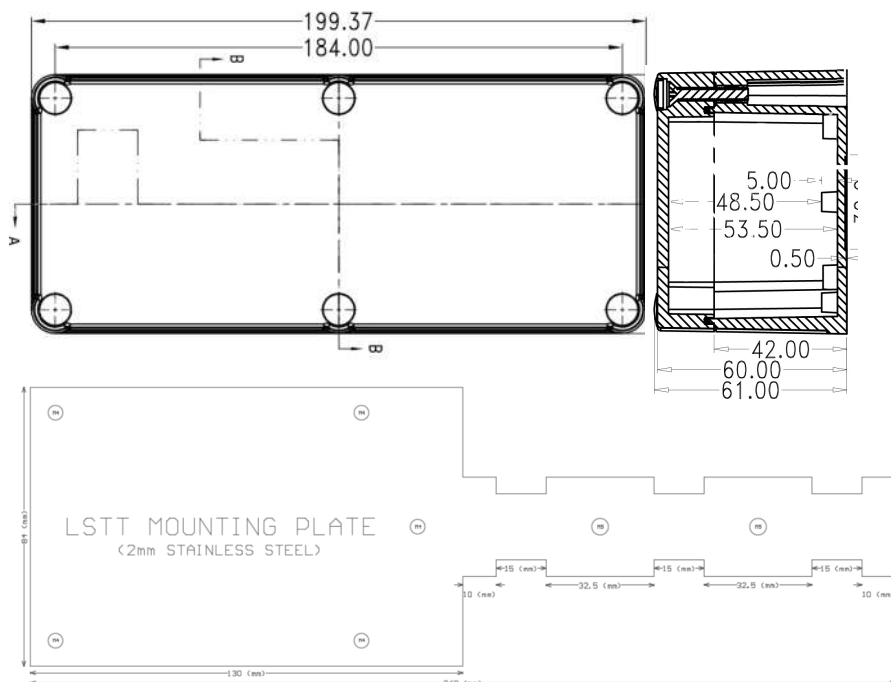
- RS-232, RS-485/Modbus, SDI-12 3.3V SPI and I²C

The LSTT-SR includes an internal 1 Watt switch mode power supply to provide power to the attached sensor at either 5, 12, or 15V. The onboard analog to digital converter is a 12-bit 1Msample/s device which provides a minimum measurement precision of 0.1%. While the transmitter reporting interval is factory programmable from 1 minute to 1 month, a reporting interval of 1 hour is generally recommended. The device can store and deliver up to six readings per transmission (for example, using hourly transmissions the device could record data every 10 minutes or, for daily transmissions, the device could take a reading every 4 hours).

The LSTT-SR is powered from a field replaceable D-Size Lithium Battery Pack. The expected battery life is > 15 years for hourly transmissions with 1 data reading per transmission, and > 6 years* for 10 minute transmissions with 1 data reading per transmission.

The LSTT-SR is supplied with a stainless steel mounting plate to secure the device to an antenna mast using screws or Band-It straps.

* assumes the LSTT is powering at 4-20mA sensor for 1 second for each data reading.



NOTE

In order to minimise RF energy emitted into the shared spectrum, Taggle recommends use of the LSTT-ER only in situations where the LSTT-SR output power is inadequate.