

SP2A Pulse Counter

25mW Transmitter
for Pulse Output
Meters and Sensors



KEY FEATURES

- Low Power (25mW) telemetry device suitable for most radio environments
- Suitable for use with both dry contact closure (reed switch, relay) and voltage (open collector, FET) pulses. This covers most water meters, rain gauges, electricity meters (kWhr), float-switch level sensors and on/off sensors of any type
- 10+ year battery life based on hourly transmissions*
- IP68 rating provides high degree of protection against ingress of dust and moisture
- Light-weight and easy to install
- Suitable for both urban and rural deployments
- Low-cost, no maintenance device
- Transmits meter or sensor data, meter alarm such as tamper (where available), as well as battery status

The SP2A is a battery powered wireless telemetry unit designed for domestic and commercial water meters and various sensors that have digital (on/off) or pulse outputs. The SP2A supports low cost, utility scale deployments based on Taggle Systems' Byron 900MHz band digital spread spectrum radio technology.

The SP2A is the "low-power" 25mW transmitting device within the Taggle second generation transmitter range.

The SP2A accumulates both forward and reverse flow pulses from the connected device in a low-power, deep-sleep mode, and

transmits the accumulated count values once per hour.

Transmitting hourly, the SP2A has an expected battery life of over 10 years* depending on configuration.

All transmissions are collected by the Taggle receiver network, which can handle up to 30,000

transmissions per receiver, every hour utilising the 900MHz ISM/LIPD band.

The 25mW of power provided by the SP2A is efficient to meet most radio requirements, and as such, is the most widely used within the Taggle transmitter range.



TECHNICAL DETAILS

Dimensions	215mm (L) x 38mm (D)
Weight (approx)	250g +/- 10%
Enclosure Material	Ultradur PBT
Ingress Protection	Hermetically sealed; IP68
Temperature	-10°C to 60°C (Average temperature not to exceed 30°C)
Sealed	Electronics and battery fully potted
Cable/length	40cm standard - customisable

APPLICATIONS

- Automatic Metering Infrastructure including residential, commercial and industrial meters
- Rain gauges
- Electricity meters (kWhr)
- Float-switch level sensors
- On/Off sensors of almost any type

OPERATING MODE

When in Operating Mode, the SP2A is programmed to wake from a low-power, deep-sleep mode at intervals set during assembly.

It then interrogates the attached meter or sensor and translates the data into a secure format for transmission on the Taggle network. The device will then return to a deep sleep mode until the next time interval expires.

HISTORY OF THE SP2A

The SP2A is the second generation of the Taggle ADC-1 Communication Module, which has been in successful deployment across Australia since 2011.

The ADC-1 has proven diversity after being used in many applications and across many diverse radio environments. It's flexibility across meter and sensor types and ease of installation, has proven the device to be a vital part of the Taggle product range.

BATTERY

Type/Size	3.6 V Lithium Thionyl Chloride (non-replaceable) C-cell
Battery life	10 years*

SENSING/INPUTS

Input Types	Dry contact closure (reed switch, relay) and voltage (open collector, FET) pulses
Max Pulse Rate	1kHz

COMMUNICATIONS

ASIC	Taggle Byron A31
Operating Frequency/Band	915-928MHz LIPD band
Signal Type	Direct Sequence Spread Spectrum
Communication Type	One-Way Communication
Operating Range	~2-5km Urban ~5-30km Rural (Dependent on local installation conditions)
Power	25mW

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LICENSE AND CERTIFICATION

ACMA LIPD Class License
FCC Part 15.247

*Battery life is average battery life with hourly transmissions with an average temperature between 10°C and 30°C

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