



Single-Channel LoRaWAN[®] Low Power Transmission Interface for Industrial Applications

- Compatible with all LoRaWAN[®] frequencies
- Wide range of industrial applications
- Designed to meet outdoor applications
- Long-term durable performance in harsh environment
- Ultra-low power

TECHNICAL SPECIFICATION

Sensor

•	Interface Options (RS1-L covers a wide range of industrial sensors interfaces. Unique design of the interface gives ultimate flexibility of choosing the right sensor interfaces)	Analogue: mV // mV/V // 4-20mA // 0-5V // 0-10V Digital: I2C // RS232 // RS485 // Modbus // HART SDI12 // TTL UART	
		Temperature: Pt100, 2 or 3 wire; Pt1000, 2 or 3	
		wire Pulse: Pulse (Reed Switch) (or other customised options on request)	
•	Electric Connection	1m cable, pin connection (or others on request)	
٠	Operation Temperature	-10 ~ +70	°C
Powe	er		
•	Power Supply	Built-in Replaceable Lithium Battery, External Power (option)	
٠	Rated Voltage	3.6	V
•	Battery Lifetime	100,000+ readings and 20,000+ transmission (More than 10 years for most applications)	
Phys	ical		
•	Materials	ASA or POM	
•	Weight	350	g
•	Protection Rate	IP66 or IP68 and UV Protected enclosure	
Com	munication		
٠	LoRaWAN® Version, Class	1.0.2revB, Class A (Class C on request)	
•	LoRaWAN® Frequency Zone	AS923, EU868, US902-928, AU915-928 (other zones available on request)	
٠	LoRaWAN® Activation Type	OTA (default), ABP	
•	Sampling Type	Periodic (default), Event triggered	
•	Sampling Period	Configurable via downlink (default 4 hours)	
٠	Transmission Type		
•	Parameter Configuration	Over-the-air via LoRaWAN® downlinks Locally via wireless connectivity	
•	Firmware Update	Locally via Wireless Connectivity, Over The Air	





NETWORK CONNECTION AND VISUALISATION

Network Integration

 Integratable to all main networks (Actility, Alibaba, Cisco, Digita, Everynet, Helium, Kerlink, kpn, Loriot, machine-Q, Objenious, Orange, Orbiwise, Proximus, Senet, Sens, Swisscom, TATA, The Things Network(TTN), TTI and any other network)

Visualisation And Data Management

• Ellenex white label microservice platform, and Integratable to all main IIoT platforms directly or through the api (AWS, Azure, PTC ThingWorx, Bosch IoT, Cisco Jasper & Kinetic, Sierra Numerex, MathWorks, ThingSpeak, GE Digital Predix, LandisGyr, Siemens MindSphere, Cumulocity, myDevices, Ubidots, TagoIO, AllThingsTalk, HPE IoT and any other major IoT platform).

Ellenex Platform Main Features

- Encrypted ultra-low power communication protocol
- Advanced device inventory
- Integration APIs for enterprise systems
- Multi-tenant role-based access control
- Data export and import
- White-label platform for enterprise runs on private account
- Variable alarm setting for high and low thresholds and multi-channel alerting
- Sampling and transmission interval configuration
- Transmission condition configuration
- Other configurations and customisation available on request



Encrypted & ultra-low power

Multi-tenant



Integratable



Dynamic alerting



Composable & API first



Model	Option / Schematic
C Model	C model comes with cylindrical shape housing suitable for battery operated applications with IP68 / IP66 rate and clamp mounting. This model has 2 option of 4 wire cable connection and the 4pin connection.
E Model	E model comes with rectangular shape housing suitable for battery or external powe operated applications with IP65 rate, and wall mounting. This model has 2 option of wire cable connection and the 4pin connection.

INDUSTRIES



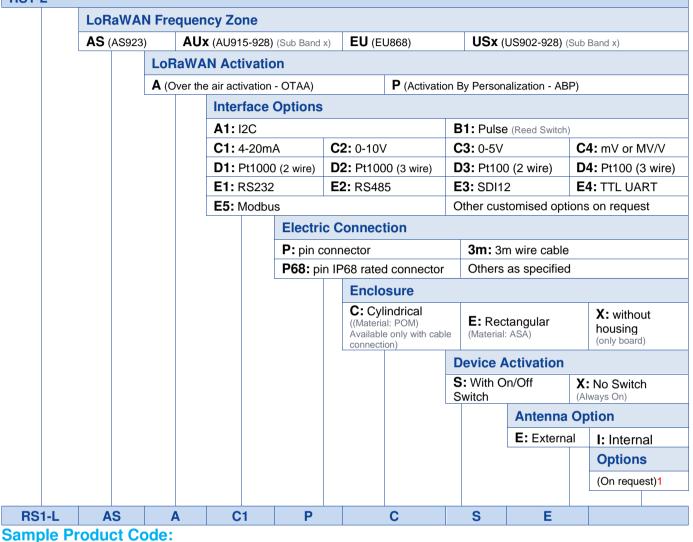
APPLICATIONS

- Pump Performance Monitoring
- Water Pipeline Pressure Monitoring
- Pressurised System Monitoring
- Chiller and Cooling System Monitoring
- Hydraulic and Pneumatic Systems Monitoring
- Liquid Storage Level Monitoring
- Spraying System Monitoring
- Air Compressor Monitoring



ORDERING CODE

RS1-L



• RS1-L-AS-A-C1-P-C-S-E

Single-channel LoRaWAN[®] sensor interface, frequency of AS923, Over The Air Activated, for 4-20mA output with cylindrical housing, pin connection, with on-off switch and equipped with external antenna.

¹⁾ Product Options:

- EP: sensor with external power supply connector for 12V supply (only for E type enclosure, adaptor is not included)
- **EPB**: connector for 12V supply with internal battery backup (only for E type enclosure)
- HG: high-gain external antenna
- **WF**: Active WiFi module on device for communication/ firmware update through Mobile phone NFC module (only for E type enclosure)
- HCB: high-capacity battery (only for E type enclosure)

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Ver. 6.8-01/23 Integrated IoT Solutions

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