

RM4-L



4-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

- | | |
|---|---|
| <ul style="list-style-type: none"> • Interface Options
(RM4-L covers a wide range of industrial sensors interfaces. Unique design of the interface gives ultimate flexibility of up to 4 sensor interfaces for more flexibility at lower cost) | <ul style="list-style-type: none"> • 4 x 4-20mA • 4 x Pulse • 4 x Pt (100, 1000, 2 wire, 3 wire) • 4 x mV • 4 x SDI-12 • 4 x 0-10V_{DC} (or other customized options on request) |
|---|---|

- | | |
|---|---|
| <ul style="list-style-type: none"> • Electric Connection • Operation Temperature (°C) | <p>1m cable, pin connection (or others on request)</p> <p>-10 ~ +70</p> |
|---|---|

Power

- | | |
|--|---|
| <ul style="list-style-type: none"> • Power Supply | <p>Built-in Replaceable 3.6V Lithium Battery, External Power (option)</p> |
| <ul style="list-style-type: none"> • Rated Voltage to Sensors (VDC) | <p>12</p> |
| <ul style="list-style-type: none"> • Battery Lifetime | <p>Typ. 100,000+ readings and 20,000+ transmission
(More than 10 years for most applications)</p> |

Physical

- | | |
|---|--|
| <ul style="list-style-type: none"> • Materials | <p>ASA</p> |
| <ul style="list-style-type: none"> • Weight (g) | <p>450</p> |
| <ul style="list-style-type: none"> • Protection Rate | <p>IP66 or IP68 and UV Protected enclosure</p> |



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Communication

• 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)
• LoRaWAN® Activation Type	OTA (default), ABP
• Sampling Type	Periodic (default), Event triggered
• Sampling Period	Configurable via downlink (default 4 hours)
• Transmission Type	Per sample (default), Event triggered, Conditional
• Parameter Configuration	Over-the-air via LoRaWAN® downlinks Locally via wireless connectivity
• Firmware Update	Locally via Wireless Connectivity, Over The Air

NETWORK CONNECTION AND VISUALIZATION

Network Integration

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

Visualization And Data Management

- 10Sorex 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).

10Sorex 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 customization available on request



Encrypted &
ultra-low power



Integratable



Multi-tenant



Scalable



Dynamic alerting





Composable &
API first



RM4-L

MODEL GUIDE

Model	Option / Schematic
	

INDUSTRIES



Water &
Environment



Agriculture &
Farming



Oil & Gas



Marine &
Oceanography



Mining &
Construction



Smart Building &
HVAC



Transport &
Logistics



Food &
Beverage



Hydraulics and
Compressed Air
Systems

APPLICATIONS

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



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ORDERING CODE

RM4-L								
	LoRaWAN Frequency Zone							
	AS (AS923)		AUx (AU915-928) (Sub Band x)		EU (EU868)		USx (US902-928) (Sub Band x)	
	LoRaWAN Activation							
	A (Over The Air Activation - OTAA)				P (Activation By Personalization - ABP)			
	Interface Options							
	4/20mA		Pulse		Temperature (Pt)			
	0-10V		mV / mV/V		SDI-12			
	Other options available on request							
	Electric Connection							
	P: Pin Connector				3m: 3m wire cable			
	Other options available on request							
	Device Activation							
	S: With On/Off Switch				X: No Switch (Always On)			
	Antenna Option							
E: External				I: Internal				
Options								
(On request) ¹								
RM4-L	AS	A	4/20mA	P	S	E		

Sample Product Code:

- **RM4-L-AS-A-4/20mA-P-S-E**

4-channel LoRaWAN® sensor interface, frequency of AS923, Over The Air Activated, with 4 x 4-20mA sensor interface with 4pin connection activated by 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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