MRS2-L

LoRaWAN®

LoRaWAN Operated Low Power Tipping Spoon Rain Sensor

- Compatible with all LoRaWAN frequencies
- Compact and high accurate
- Designed to meet outdoor harsh environment
- Long-term durable performance in harsh environment
- Ultra-low power

TECHNICAL SPECIFICATION

Sensor

•	Measurement principle	Tipping Spoon
•	Rainfall Accuracy	Up to 250mm/hr: ±3% of total or ± one tip of the spoon(0.2mm) whichever is greater
•	Rain Rate Accuracy	±5% for rain rates up to 250mm/hr
•	Rain Rate Resolution	0.1mm (configurable)

Power

•	Power Supply	Built-in Replaceable Lithium Battery External Power (option)
•	Rated Voltage (V)	3.6
•	Battery Lifetime	100,000+ readings and 20,000+ transmission (More than 10 years for most applications)

Physical

•	Materials	Enclosure: ASA or POM Rain Collector: UV-stabilized ABS plastic
•	Weight (g)	2150
•	Protection Rate	IP66 or IP68 and UV Protected enclosure

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

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NETWORK CONNECTION AND VISUALIZATION

Network Integration

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

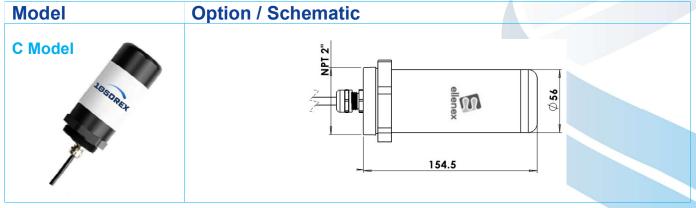### Visualization And Data Management

- 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 Maker, 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
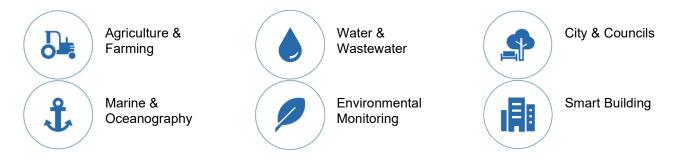
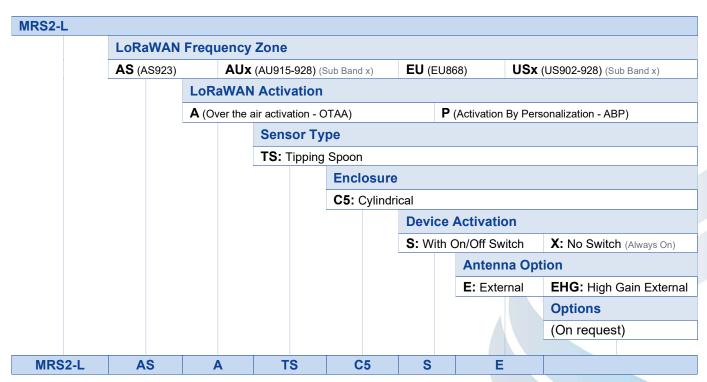|		
Encrypted & ultra-low power	Integratable	Dynamic alerting
Multi-tenant	Scalable	Composable & API first

MODEL GUIDE

Model	Option / Schematic
C Model	

MRS2-L

INDUSTRIES

- Agriculture & Farming
- Water & Wastewater
- City & Councils
- Marine & Oceanography
- Environmental Monitoring
- Smart Building

APPLICATIONS

- Rain Monitoring Systems
- Weather Stations

ORDERING CODE

MRS2-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)		
			Sensor Type				
			TS: Tipping Spoon				
				Enclosure			
				C5: Cylindrical			
					Device Activation		
					S: With On/Off Switch	**X:** No Switch (Always On)	
						Antenna Option	
						E: External	**EHG:** High Gain External
							Options
							(On request)
MRS2-L	**AS**	**A**	**TS**	**C5**	**S**	**E**	

Sample Product Code:

- **MRS2-L-AS-A-TS-C5-S-E**
  LoRaWAN Operated Low Power Tipping spoon rain sensor, frequency of AS923, Over The Air Activated, with cylindrical enclosure, activated by on-off switch and external antenna.

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