# MAS2-L

![LoRaWAN logo]

## LoRaWAN Operated Low Power Humidity and Temperature Sensor

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

## TECHNICAL SPECIFICATION

### Humidity Sensor

| | |
|---|---|
| • Accuracy (%RH) | ±2 (typ.) |
| • Resolution (%RH) | 0.01 (typ.) |
| • Hysteresis (%RH) | ±0.8 (typ.) at 25°C |
| • Storage Temperature (°C) | -10 to +60 |
| • Operation Temperature (°C) | -10 ~ +70 |

### Temperature Sensor

| | |
|---|---|
| • Accuracy (°C) | ±0.5 (typ.) |
| • Resolution (°C) | 0.01 (typ.) |
| • Specified Range (°C) | -40 to 125 |
| • Storage Temperature (°C) | -10 to +60 |
| • Operation Temperature (°C) | -10 ~ +70 |

### 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 Sensor: Sintered metal mesh encasing |
| • Weight (g) | 1300 |
| • Protection Rate | IP66 or IP68 and UV Protected enclosure |

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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 <br> (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 <br> 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, 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 |

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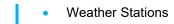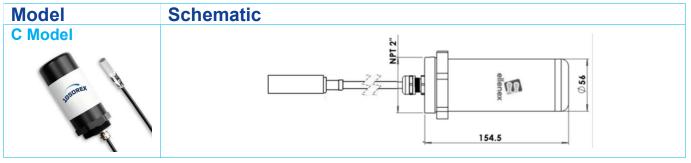
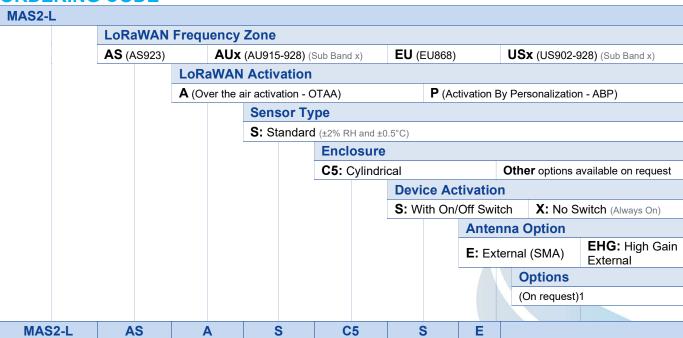Sales@10sorex.com

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## INDUSTRIES

Smart Building & HVAC

Food & Beverage

Mining & Construction

## APPLICATIONS

- Moisture Monitoring Systems
- Weather Stations

## MODEL GUIDE

| Model | Schematic |
|---|---|
| **C Model** |  |

## ORDERING CODE

| MAS2-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** | | | | |
| | | | **S:** Standard (±2% RH and ±0.5°C) | | | | |
| | | | | **Enclosure** | | | |
| | | | | **C5:** Cylindrical | **Other** options available on request | | |
| | | | | | **Device Activation** | | |
| | | | | | **S:** With On/Off Switch | **X:** No Switch (Always On) | |
| | | | | | | **Antenna Option** | |
| | | | | | | **E:** External (SMA) | **EHG:** High Gain External |
| | | | | | | | **Options** |
| | | | | | | | (On request)1 |
| **MAS2-L** | **AS** | **A** | **S** | **C5** | **S** | **E** | |

### Sample Product Code:

- **MAS2-L-AS-A-S-C5-S-E**
  LoRaWAN Operated Low Power Humidity Sensor, Over The Air Activated, with cylindrical enclosure, activated by on-off switch and external antenna.

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