



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

### Temperature Sensor

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

### Power

• Power Supply	Built-in Replaceable Lithium Battery, External Power (option)	
• Rated Voltage	3.6	V
• Battery Lifetime	Typ. 50,000+ readings / 20,000+ transmission (connected to ellenex platform and standard network quality)	

### Physical

• Materials	Enclosure: ASA or POM Sensor: Sintered metal mesh encasing	
• Weight	1300	g
• 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

# MAS2-L Spec-sheet

## NETWORK CONNECTION AND VISUALISATION

### Network Integration

- Pre-configured to ellenex LNS or configurable to all main network servers (AWS, Netmore, ChirpStack, Helium, Kerlink, Kona Tektelic, Lorient, machine-Q, Orange, Orbiwise, Proximus, Swisscom, TATA, The Things Network (TTN), TTI and any other network)

### Visualization 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, 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 customization available on request



Encrypted & ultra-low power



Integratable



Dynamic alerting



Multi-tenant



Scalable



Composable & API first

## INDUSTRIES



Smart Building & HVAC



Food & Beverage




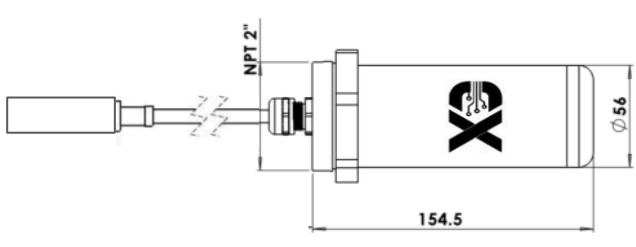
Mining & Construction

## APPLICATIONS

- Moisture Monitoring Systems
- Weather Stations

# MAS2-L Spec-sheet

## MODEL GUIDE

Model	Schematic
<b>C Model</b> 	

## ORDERING CODE

<b>MAS2-L</b>							
<b>LoRaWAN Frequency Zone</b>							
<b>AS</b> (AS923)		<b>AUx</b> (AU915-928) (Sub Band x)		<b>EU</b> (EU868)		<b>USx</b> (US902-928) (Sub Band x)	
<b>LoRaWAN Activation</b>							
<b>A</b> (Over the air activation - OTAA)				<b>P</b> (Activation By Personalization - ABP)			
<b>Sensor Type</b>							
<b>S</b> : Standard ( $\pm 2\%$ RH and $\pm 0.5^\circ\text{C}$ )							
<b>Enclosure</b>							
<b>C5</b> : Cylindrical				Other options available on request			
<b>Device Activation</b>							
<b>S</b> : With On/Off Switch				<b>X</b> : No Switch (Always On)			
<b>Antenna Option</b>							
<b>E</b> : External (SMA)				<b>EHG</b> : High Gain External			
<b>Options</b>							
(On request) <sup>1</sup>							
<b>MAS2-L</b>	<b>AS</b>	<b>A</b>	<b>S</b>	<b>C5</b>	<b>S</b>	<b>E</b>	

### 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.