

MAS2-N Spec-sheet



NB IoT - Cat-M1 Low Power Humidity and Temperature Sensor

- Compatible with most standard communication protocols (UDP, LwM2M, MQTT, NIDD, etc.)
- Wide range of industrial applications
- High accuracy and repeatability
- 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	50,000+ readings / 10,000+ transmission (connected to ellenex platform and standard network quality)

Physical

• Materials	Enclosure: Industrial POM Sensor: Sintered metal mesh encasing
• Weight	1300 g
• Protection Rate	IP66 or IP68 and UV Protected enclosure

Communication

• SIM Card Type	4FF Nano-SIM, from any Network Provider
• Firmware Update	Over The Air, Locally via Wireless Connectivity
• Sampling Period	Configurable via downlink (default 4 hours)
• Power Consumption	Power Saving: < 5uA, Transmission: < 200mA
• Communication Standards	Cat-NB1 (NB-IoT) Cat-M1 (option of back support by GPRS)
• Communication Bands	B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B26/B28 and B39
• Data Rates	Cat-M1: 375Kbps (DL)/375Kbps (UL), NB-IoT: 32Kbps (DL)/70Kbps (UL)
• TX Power	23dBm
• Min Receiver Sensitivity	Cat-M1: -107dBm NB-IoT: -113dBm

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• Antenna	Internal (Default)/ External <i>(customized options available)</i>
• Optional Features	<ul style="list-style-type: none"> • Attach without PDN (Packet Data Network) • Support for IPV6 • SMS communication • Mobility support (Cat-M1 only)

NETWORK CONNECTION AND VISUALISATION

Network Integration

- Pre-configured or configurable to all main narrow band networks (3, A1, AT&T, China Mobile, DU, Etisalat, KPN, M1 Singapore, Optus, Orange, Proximus, Spark, Sprint, Swisscom, Telefonica, Telstra, T-Mobile, Verizon, Vodafone, 1NCE, Emnify 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, TagIO, 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



Food & Beverage



Smart Building & HVAC



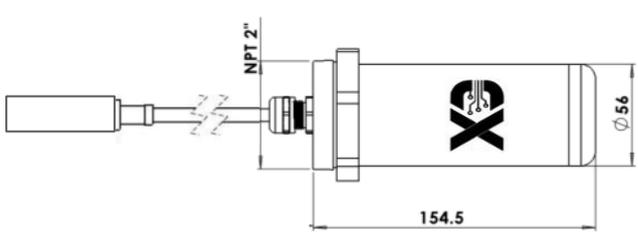
Mining & Construction

APPLICATIONS

- Weather Stations
- Moisture Monitoring Systems

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MODEL GUIDE

Model	Schematic
C Model 	

ORDERING CODE

MAS2-N						
NB-IoT Communication Type						
B: NB-IoT			C: LTE Cat-M1			
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						
I: Internal			EHG: High Gain External			
Options (On request)						
MAS2-N	B	S	C5	S	I	

Sample Product Code:

- MAS2-N-B-S-C5-S-I**

NB IoT Low Power Humidity Sensor, with cylindrical enclosure, activated by on-off switch and internal antenna.