

OUMAN WIRELESS

Wireless measuring system

For monitoring the temperature and humidity in buildings
Stable conditions, lower costs



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General description




OUMAN Wireless is a versatile wireless measuring system that gathers information about the conditions in a building. The system comprises a base station and battery-powered wireless sensors. The sensors can also be used as routers to expand the sensor network if powered externally. The base station has a built-in web interface for effortless deployment of the wireless sensor network. The measuring system can be connected to most automation systems.

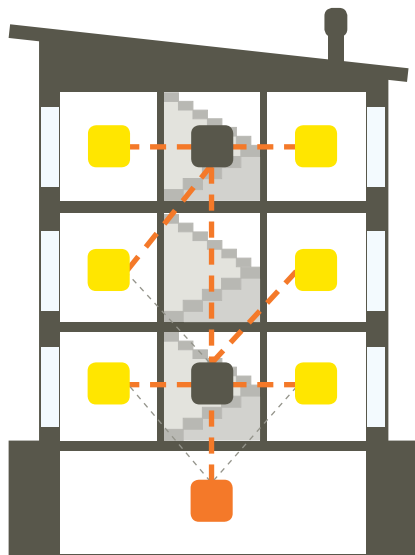
Smart sensor network

The measuring system is self-routing, meaning that the routers and sensors will automatically determine the best route to the base station. The sensor network will adapt to any changes in the building for reliable access to the measurements at all times.

100 sensors

A single base station can link with up to 100 sensors through the sensor network. Each sensor is unique and can be named, for example, to indicate their location. One building can have multiple base stations that operate independent networks.

-  = Base station
-  = Routing wireless sensor
-  = Wireless sensor



Wireless sensor network structure

Easy to deploy

The measuring system is easy and straightforward for technicians to deploy. First, the base station is set into installation mode, and then the sensors are added to the network by putting in their batteries. The signal strength of the sensors can be monitored online using a tablet or smartphone while the sensors are being placed.

Instant internet access

The base station can be connected to the internet through any network socket. Every base station includes a factory-set URL, and it will automatically create a secure connection to the OUNET online monitoring service.



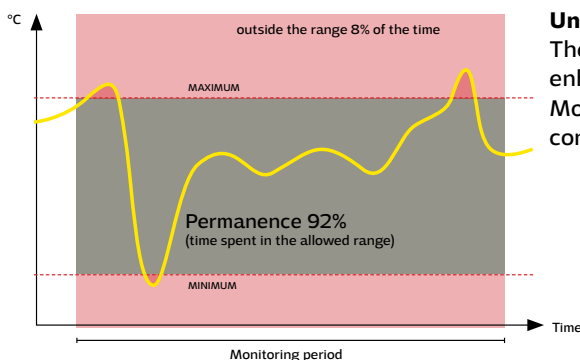
TEST THE USER INTERFACE BY SCANNING THIS QR CODE

Username: user
Password: Wireless



Know the conditions

In addition to displaying measurements, the base station will calculate averages of selected measurements and filter erroneous readings. For quick review, permanence is calculated for all temperatures to reflect how well the temperature has remained within the set limits.



Accurate heating control

The measuring system can be connected to building automation. The base station provides an average reading that can be used to adjust heating according to the actual conditions. This stabilises the conditions in the rooms and saves heating energy!

Connections to automation

The base station has a wide selection of bus connections; it can be connected to an OUFLEX substation, the OUNET online monitoring service, OUMAN unit controllers and other automation systems. The measurements are always accessible via a browser, regardless of what the base station is connected to.

Unit controller support

The base station can be used for direct enhancement of heating control with Modbus-capable OUMAN heating controllers.



All sensors have built-in temperature and humidity measurement. The sensors will also accept external temperature measurement, running data or transmitter measurement. The sensors send all measurement data to the base station at set intervals.

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Base station WL-BASE	
Case	ABS plastic
Operating temperature	0...+50 °C
Protection class	IP20
Measurement interval in installation mode	10 seconds
Measurement interval in normal mode	can be adjusted (1–240 min).
Dimensions	90 × 70 × 59 mm
Installation	Mounted to DIN bar
Operating voltage	24 VAC / 5.5 VA or 10–30 VDC / 3 W
Power consumption at full load	12 VDC 160 mA 24 VDC 85 mA 24 VAC 210 mA
Compatible OUMAN controllers	C203 S203 H23 EH-203 EH-201/L
Connection at fieldbus level substation level	Modbus RTU Modbus TCP



Temperature sensor / Routing temperature sensor WL-TEMP-RH	
Case	ABS plastic
Operating temperature	0...+50 °C
Protection class	IP20
Measurement accuracy	± 0.2 °C
NTC-10 thermistor	10 kΩ / 25 °C
Humidity measurement	
Measurement range	0–100 %rH
Accuracy (0–80%)	±3 %rH
Temperature measurement	
Measurement range	0...+50 °C
Accuracy	± 0.2 °C
External connector (AUX)	
Temperature	
Measurement range	-30...+50 °C
Measuring accuracy (25 °C)	± 0.3 °C
0–10 VDC	
Measurement range	scalable
Accuracy	0.5% / 50 mV
Power source for sensor use	2 × AA batteries
Power source for router use	5–24 VDC
Theoretical calculated battery life (not included):	
Energizer L91 Ultimate Lithium 3100 mAh:	
15 min measurement interval	9.5 years
60 min measurement interval	11 years
Energizer EN91 2800 mAh	
15 min measurement interval	6 years
60 min measurement interval	7.5 years
External power source (operating as a routing temperature sensor)	5 VDC
Dimensions	80 × 85 × 30 mm
Installation	Surface installation

Temperature sensor:

- Built-in antenna
- Sensor coverage is not impaired when the battery is low.
- 868 MHz ZigBee technology