# OUMAN WIRELESS

## Wireless measuring system

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


Saving energy, creating comfort

OUMAN

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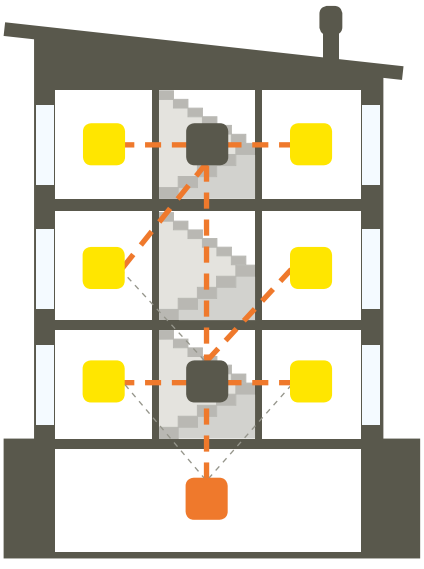
# General description

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.

**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.

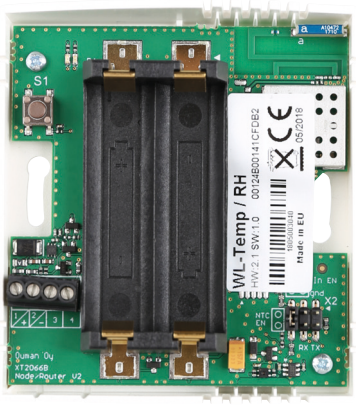
**Unit controller support**
The base station can be used for direct enhancement of heating control with Modbus-capable OUMAN heating controllers.

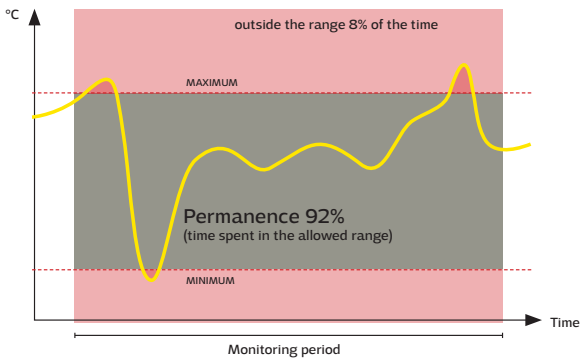
**Accurate heating control**
The measuring system can be connected to building automation. The base station provides an average reading that can be used to adjust heating according to the actual conditions. This stabilises the conditions in the rooms and saves heating energy!

**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.



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<br>or<br>10–30 VDC / 3 W |
| Power consumption at full load | 12 VDC 160 mA<br>24 VDC 85 mA<br>24 VAC 210 mA |
| Compatible OUMAN controllers | C203<br>S203<br>H23<br>EH-203<br>EH-201/L |
| Connection at fieldbus level<br>substation level | Modbus RTU<br>Modbus TCP |


**Temperature sensor:**

- Built-in antenna
- Sensor coverage is not impaired when the battery is low.
- 869 MHz

| WL-TEMP-RH Temperature sensor and humidity sensor | |
|---|---|
| **Case** | ABS plastic |
| **Operating temperature** | 0°C...+50°C |
| **Protection class** | IP20 |
| **Temperature** meas. accuracy +10...60°C<br>Measurement area | ± 0,3°C<br>-30...+100°C |
| **Humidity meas.** accuracy 20...80%rh<br>Measurement area | ± 3 %rH<br>0...100%rH |
| **Any of the following measurements can be implemented by using the AUX connection:** | |
| • **AUX temperature measurem.**<br>- Measurement area<br>- Measurement accuracy (25 °C) | <br>-30°C...+50°C<br>± 0.3°C |
| • **AUX 0-10VDC transmitter**<br>- Measurement area<br>- Measurement accuracy | <br>scaleable<br>0.5% / 50mV |
| **Power source** operating as non-routing temperature sensor<br>Power source operating as router | 2 x AA batteries<br>5...24 VDC |
| **Battery life (not included in delivery):** | |
| **Energizer L91 Ultimate Lithium 3100 mAh:**<br>15 min measurement interval<br>60 min measurement interval | <br>9.5-15 years<br>12-20 years |
| **Energizer EN91 2800 mAh**<br>15 min measurement interval<br>60 min measurement interval | <br>6-10 years<br>7.5-13 years |
| **External power source** (operating as routing temperature sensor) | 5 VDC |
| **Dimensions** | 80 x 85 x 30 mm |
| **Installation** | Surface installation |