

# IoT wireless thermometer, hygrometer, barometer, LoRaWAN network

code: W7910



The W7910 sensor with LoRaWAN network output measures the temperature, humidity and atmospheric pressure from the built-in internal sensors and can be installed directly in the measured environment thanks to its IP65-rated enclosure. LoRa devices are powered by a replaceable battery with a lifespan of up to 10 years (3 years standard). External power with optional accessories is also available. The sensor can be used with a suitable sensor cap even in more demanding conditions.

Measured values are transmitted wirelessly at adjustable intervals (from 5 minutes to 24 hours) to the COMET Cloud storage, where they are accessible to users via computer or mobile device. The sensors offer remote configuration from the COMET Cloud and feature the capability to monitor up to two alarm thresholds, with any exceedance signaled by an alert sent to the user.

## Key Features

- Wireless transmission of measured values and alarm states
- Battery-powered with low battery indicator (battery life up to 10 years) and external power option
- Remote device configuration via COMET Cloud
- IP65-rated enclosure
- Calibration certificate with declared metrological traceability of standards according to CSN EN ISO/IEC 17025
- Preconfigured Gateway available as an accessory at extra cost. For ease of use, we offer the pre-configured [LoRaWAN Gateway SP041](#), which is fully ready for communication with COMET Cloud and our sensors. This option simplifies the setup process and saves time for users

## Technical data

|                                                                                                   |                                                      |
|---------------------------------------------------------------------------------------------------|------------------------------------------------------|
| TEMPERATURE SENSOR                                                                                |                                                      |
| Measuring range                                                                                   | -30 to +60 °C                                        |
| Accuracy                                                                                          | ±0.4 °C                                              |
| Resolution                                                                                        | 0.1 °C                                               |
| Response time t90 of temperature measurement (temperature step 20°C, air flow approximately 1m/s) | 10 minutes                                           |
| HUMIDITY SENSOR                                                                                   |                                                      |
| Measuring range                                                                                   | 0 to 100 % RH                                        |
| Accuracy                                                                                          | ±1.8 % RH from 0 to 90 % at 23 °C                    |
| Resolution                                                                                        | 0.1% RH                                              |
| DEW POINT                                                                                         |                                                      |
| Measuring range                                                                                   | -60 to +60 °C                                        |
| Accuracy                                                                                          | ±1.5 °C at ambient temperature T <25 °C and RH >30 % |

|                                    |                                                                          |
|------------------------------------|--------------------------------------------------------------------------|
| Resolution                         | 0.1 °C                                                                   |
| ATMOSPHERIC PRESSURE SENSOR SENSOR |                                                                          |
| Measuring range                    | 600 to 1100 hPa                                                          |
| Accuracy                           | ±1.3 hPa at 23 °C from 800 to 1100 hPa                                   |
| Resolution                         | 0.1 hPa                                                                  |
| GENERAL TECHNICAL DATA             |                                                                          |
| Operating temperature              | -30 to +60 °C                                                            |
| Channels                           | internal sensor of temperature, humidity sensor and atmospheric pressure |
| Message transmission interval      | adjustable 5-10-15-20-30 minutes, 1-2-3-4-6-8-12-24 hours                |
| Operating frequency                | Europe 863-870 MHz                                                       |
| Maximum transmission power         | 25 mW (14 dBm)                                                           |
| Typical range of transmitter       | 15 km in the field, 2 km in the city (sensor in building)                |
| Antenna                            | internal, gain 2,15 dBi                                                  |
| Maximum receiver sensitivity       | -136 dBm @BW=125 kHz, SF=12                                              |
| Power                              | Lithium battery 3.6 V, AA size                                           |
| Protection class                   | IP65                                                                     |
| Dimensions                         | 126 x 89 x 40mm                                                          |
| Weight (including batteries)       | 150g                                                                     |
| Warranty                           | 3 years                                                                  |