

W0910 • W0911 • W0932 • W3910 • W3911 • W7910**PRODUCT DESCRIPTION**

The transmitters Wx9xx with output to the LoRaWAN network are designed to measure temperature, relative humidity and barometric pressure of air in non-aggressive environment. The transmitters are available in a compact design or with connectors for the connection of external probes. The transmitters of relative humidity also provide a value of dew point temperature. Internal replaceable batteries are used for power.

The measured values and service information are displayed cyclically in three steps on the LCD and are sent over an adjustable time interval via radio transmission in the LoRaWAN network to the cloud data store. The device performs a measurement every 1 minute.

Transmitter setup is done remotely via the cloud web interface or locally using a computer, connected communication cable SP003. For each measured variable it is possible to set two alarm limits. The alarm is signalled by the symbols on the LCD display and by sending an extraordinary message to the cloud. Depending on the capabilities of the cloud being used, the alarm information is then sent to the end user via email or mobile phone notification.

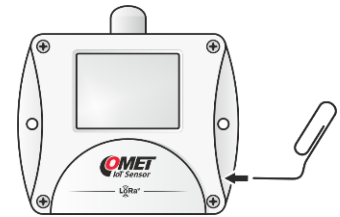
Device type	Measured values	Construction
W0910	T	Internal temperature sensor
W0911	T	Connector for external Pt1000/E probe connection
W0932	T	Internal temperature sensor and connectors for two external Pt1000/E probe connection
W3910	T + RH + DP	Internal temperature and relative humidity sensor
W3911	T + RH + DP	Connector for external Digi/E probe connection
W7910	T + RH + P + DP	Internal temperature, relative humidity and barometric pressure sensors

T...temperature, RH...relative humidity, P...barometric pressure, DP...dew point

SWITCHING THE DEVICE ON AND OFF

The devices are supplied with the battery installed, but in the off state. During the power-on process, the device is also activated in the LoRaWAN network, so the device should be within range of the network in which it will be used and ideally in its target position when powering on.

- to turn it on, use a paper clip to press the control button located behind the hole in the side wall of the device (see picture), and release it immediately as soon as the display lights up (within approx. 1 s)
- to turn off the switched-on device, press the control button with a paper clip and hold it until the sign OFF lights up (approx. 5 s)



Device setting from the manufacturer – message sending interval of 5 minutes, alarms deactivated, altitude for pressure measurement is set 0 m.

INSTALLATION AND OPERATION

The transmitter housing is provided with a pair of holes for fixing (for example, with screws or cable ties). The W0910 transmitter can also stand freely on its bottom base without fastening.

- the devices always install vertically, with the antenna cover up
- the devices and all cables should be located as far as possible from potential interference sources
- to optimize the range of radio transmission, therefore, place the device as high as possible. The mounting location of the device and the method of laying the cables of the external probe choose according to the picture on the other side of this data sheet.

The devices do not require special maintenance. We recommend verifying the measurement accuracy regularly by calibration.

WORKING WITH CLOUD AND READING MEASURED VALUES

On a PC with Internet connection, launch a web browser. Navigate to the cloud address you use and sign in to your account. Each transmitter is identified by its unique address (DevEUI) in the LoRaWAN network. The transmitter has an DevEUI printed on the nameplate along with its serial number. In the list of your devices in the cloud select device with the desired DevEUI or serial number and start viewing the measured values.

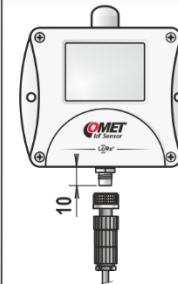
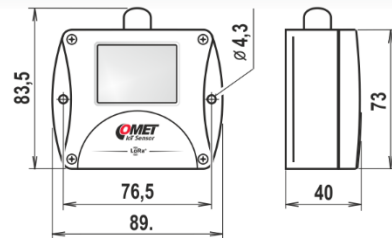
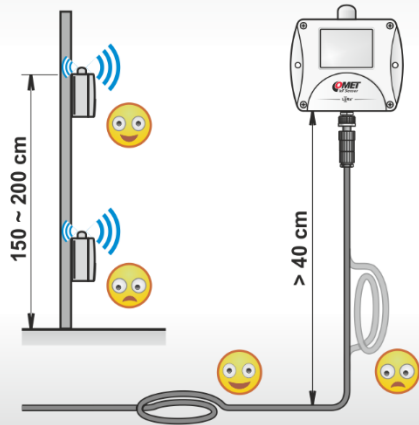
SAFETY INSTRUCTIONS

- Read carefully the **Safety information for IoT SENSOR** before operating the device and observe it during use
- Installation, electrical connection and commissioning should only be performed by qualified personnel in accordance with applicable regulations and standards
- Devices contain electronic components, it needs to liquidate them according to currently valid conditions.
- To complement the information in this data sheet** read the manuals and other documentation, which are available in the Download section for a particular device at www.cometsystem.com

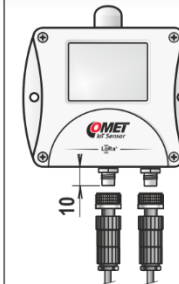
Technical specifications

Device type	W0910	W0911	W0932	W3910, W7910	W3911
Power batteries	Lithium battery 3.6 V, AA size, 2200 mAh (recommended type: Tadiran SL-760/S, 3.6 V, 2200 mAh)				
Adjustable message transmission interval	5 - 10 - 15 - 20 - 30 minutes • 1 - 2 - 3 - 4 - 6 - 8 - 12 - 24 hours				
Internal temperature measuring range	-30 to +60°C	—	-30 to +60 °C	-30 to +60 °C	—
Accuracy of internal temperature measurement	± 0.4°C	—	± 0.4°C	± 0.4°C	—
External temperature measuring range	—	-90 to +260°C	-200 to +260°C	—	according to the probe
Accuracy of external temperature measurement	—	± 0.2°C *	± 0.2°C *	—	according to the probe
Relative humidity (RH) measuring range	—	—	—	0 to 100 %RH	according to the probe
Accuracy of humidity measurement	—	—	—	± 1.8 %RH **	according to the probe
Barometric pressure measuring range	—	—	—	600 až 1100 hPa (W7910)	—
Accuracy of barometric pressure measurement at 23°C	—	—	—	± 1.3hPa (W7910)	—
Dew point temperature measuring range	—	—	—	-60 to +60 °C ***	according to the probe
Recommended calibration interval	2 years	2 years	2 years	1 year	1 year
Protection class of the case with electronics	IP65	IP65	IP65	IP65	IP65
Protection class of the sensors	IP65	according to the probe	according to the probe	IP40	according to the probe
Temperature operating range	-30 to +60°C	-30 to +60°C	-30 to +60°C	-30 to +60°C	-30 to +60°C
Relative humidity operating range (no condensation)	0 to 100%RH	0 to 100%RH	0 to 100%RH	0 to 100%RH	0 to 100%RH
Working position	with antenna cover up	with antenna cover up	with antenna cover up	with antenna cover up	with antenna cover up
Recommended storage temperature range (5 to 90 %RH, no condensation)	-20 to +45°C	-20 to +45°C	-20 to +45°C	-20 to +45°C	-20 to +45°C
Electromagnetic compatibility	ETSI EN 301 489-1	ETSI EN 301 489-1	ETSI EN 301 489-1	ETSI EN 301 489-1	ETSI EN 301 489-1
Weight	150 g	155 g	160 g	155 g	155 g
Dimensions [mm]					

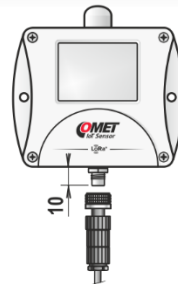
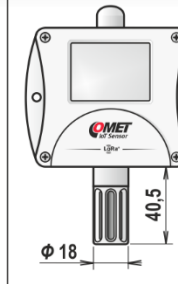
The optimal location of devices in terms of radio range



the Pt1000/E probe



the Pt1000/E probes



the DIGI/E probe

Radio specification

- Radio technology: LoRa®
- Working frequency: Europe 863 - 870 MHz
- LoRaWAN version: 1.0.4
- Maximum transmission power: 25 mW (14 dBm)
- LoRaWAN Regional parameters, version: RP002, 1.0.1
- Typical range from base station: 15 km in open field, 2 km in urban area

* the accuracy of the device without probe in the range -200 to +100 °C (in the range +100 to +260 °C is accuracy ±0,2 % of measured value)

** sensor accuracy at 23 °C in the range of 0 to 90 %RH (hysteresis < ±1 %RH, non-linearity < ±1 %RH)

*** for accuracy of dew point temperature measurement see graphs at device manual