WUNTRONIC

IoT-ENABLED WIRELESS MEASURING INSTRUMENTS

Operates on the LoRaWAN network
for wireless connectivity

- **Accurate measuring of**
  - Temperature
  - Humidity
  - Dew point
  - Barometric pressure
- **Affordable wireless communication for long distances**
- **Rugged design**
- **Long battery life, up to 10 years**
- **Short and adjustable transmit intervals**
- **Alarm signalisation via email and mobile application**
- **Data transmitting via LoRaWAN network**

CALIBRATION CERTIFICATE

EXTENDED 3 YEARS WARRANTY

COMET since 1991

LoRa® Internet of Things (IoT)
A solution for long-range, low-power communication

LoRa® (Long Range) is a wireless technology for low-power, long-distance data transmission, ideal for IoT applications. Suitable for battery-powered devices that need extended life. Frequency: 868 MHz in Europe.

- Long Range: Covers up to 15 km in rural areas and 2-5 km in urban areas.
- Cost Efficiency: Uses unlicensed frequencies, reducing costs; messages are

  limited to a minimum interval of 5 minutes, suitable for applications with less frequent data needs.
- Low Power Use: Optimized for long battery life, up to 10 years based on transmission settings.
- Flexible Network: Supports public and private networks for custom infra structure.
- Secure: End-to-end encryption ensures data protection.
- Low Operating Costs: Long battery life and low energy usage minimize maintenance costs.
- Remote Management: Cloud-based settings for intervals, alarms,

  and pressure adjustments reduce the need for on-site access.
- Alarm Function: Sends alerts for exceeded limits, even with long message   intervals, enhancing monitoring flexibility.

Five steps for getting your measured data into COMET Cloud

1. Register the sensor under your account in the COMET Cloud

All configuration parameters of the device, including cable resistance correction for temperature probes, can be set from the cloud. The new configuration can be transferred to the device multiple times a day without delay.
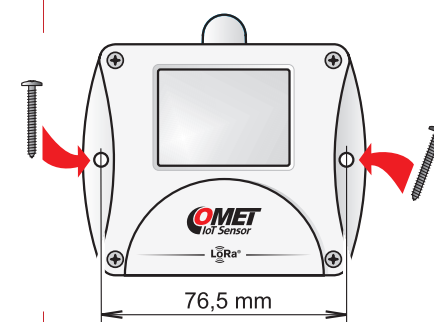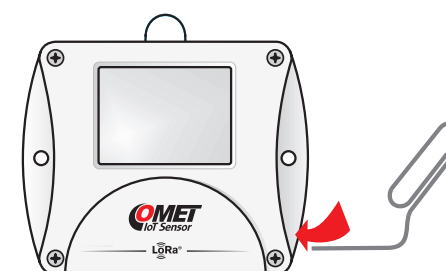
Web browser for data displaying
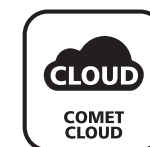
2. Registration of LoRa gateway to COMET Cloud

COMET Cloud
Measured data where you need

COMET Cloud is the internet storage of data measured by COMET sensors. The data is accessible in the internet and displayed in an internet browser. Every user has the access to his account COMET Cloud protected by password. COMET Cloud enables to add sensors, creates organisational structures such sensor groups and user groups. The different rights can be set up for displaying and administration for each user.

- **unlimited space for data**
- **management and organization of**
  - equipments
  - measured points
  - users and their access rights
- **email alarming when**
  - exceeding alarm limits with the option define recipients according to the level of exceedance
  - a fault occurs (connection, measurement error)
- **easy report creating**
- **device setup from COMET Cloud**
- **Mobile applications for Android and iOS for data management and timely notifications**

▶ Tutorials

How to create account
How to add device
How to set role – administrator/user
How to create measured place

Try GUEST access at
https://cometsystem.cloud/device/list

3. Mouting sensor

76,5 mm

4. Pressing the activation button

5. Data is sent to COMET Cloud

MEASURED DATA
ALARMS
ALARMS

24.8
28.9

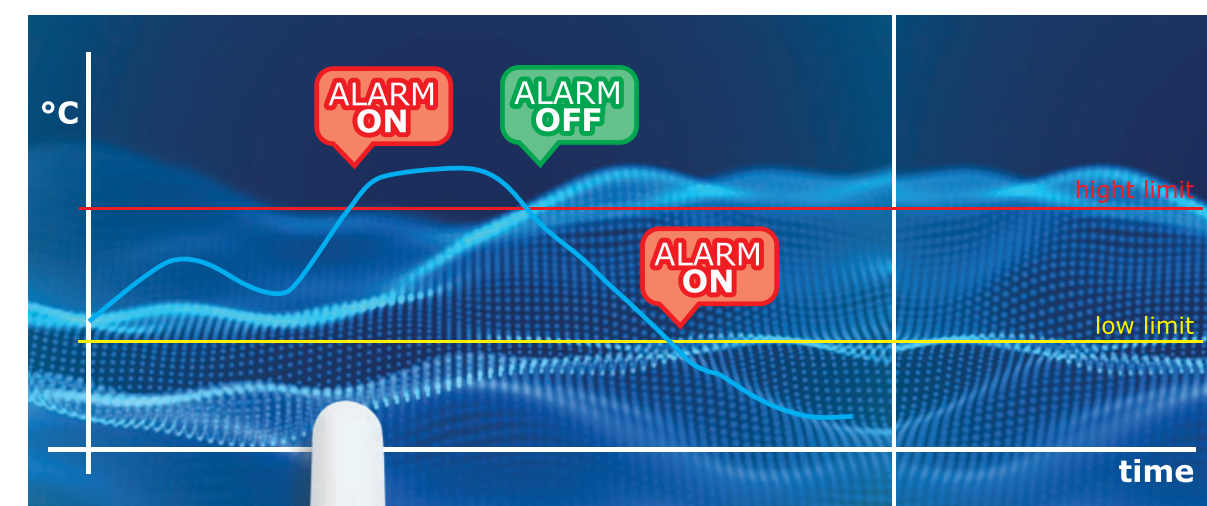**LoRa®** | **T** | **RH** | **DP** | **ATM. PRESSURE**

The Wx9xx series of sensors from COMET SYSTEM enables accurate measurement of temperature, relative humidity, and atmospheric pressure, with data transmitted via the low-power LoRaWAN network. This technology allows data to be sent to a cloud storage, where users can easily view both current and historical values through a standard web browser. Each sensor has an LCD display showing the measured value and battery status, with battery life ranging from 1 to 10 years, depending on transmission frequency and temperature conditions.

Features a large display for enhanced readability, showing the current value, service value and alarm indications.

Antenna.

3.6V / AA size, lasting from 1 year up to over 10 years.

Your measured data into COMET Cloud

Short 5-min transmit intervals with 13 adjustable intervals up to 24 hours.

MEASURED DATA

ALARMS

Temperature and humidity sensor.

Data is transmitted to the COMET Cloud for storage and analysis.

Web browser for data displaying

ALARM
Alarm functions

- two alarms can be set for each measured quantity
- each alarm has an adjustable limit, direction of exceeding the limit, delay and hysteresis
- the content of both regular and extraordinary alarm messages is identical, both contain the measured values of all channels and current alarm states on all channels
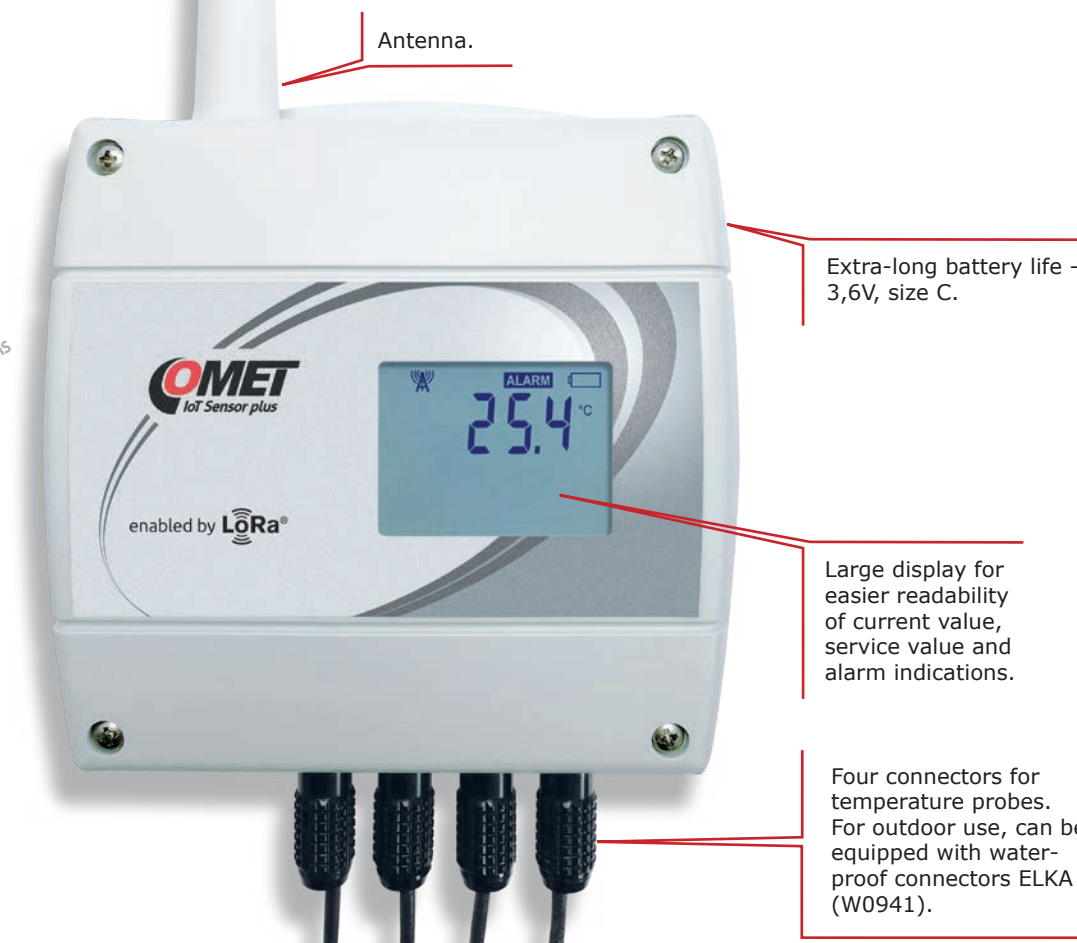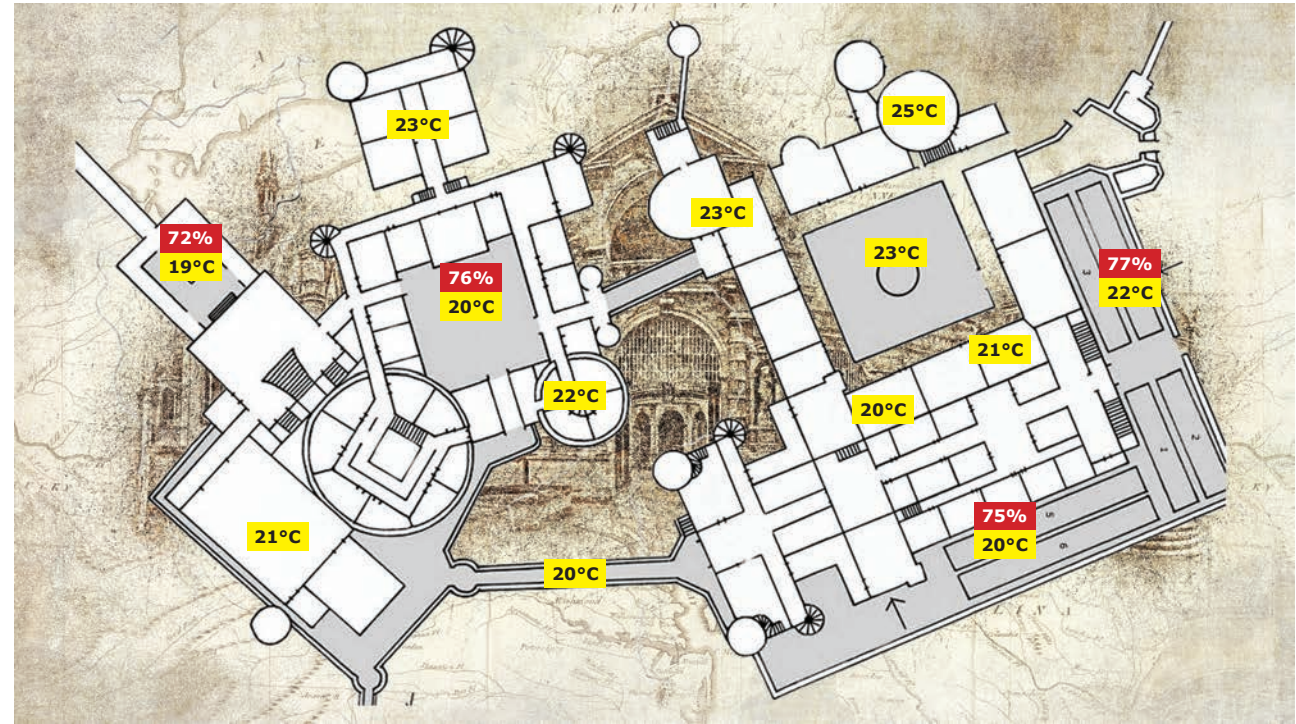
The Wx9xx devices are durable against external influences and offer alarm settings for each measured variable. Alarms can be monitored through the cloud, alerting users when set limits are reached via email or smartphone notifications through an app. With flexibility and a wide range of models, including internal sensors and external probes, Wx9xx sensors are suitable for various industrial and commercial applications, where reliability and long-term measurement accuracy are essential.

°C | ALARM ON | ALARM OFF | highs limit | ALARM ON | low limit | time

Antenna.

Extra-long battery life - 3,6V, size C.

Large display for easier readability of current value, service value and alarm indications.

Four connectors for temperature probes. For outdoor use, can be equipped with waterproof connectors ELKA (W0941).

MEASURED DATA

ALARMS

Temperature, humidity and barometric pressure wireless measurment

MEASURED VALUES			temperature					temperature, relative humidity		temperature, relative humidity, bar. pressure
SENSOR MODELS			W0910	W0911	W0932	W0941	W0941E	W3910	W3911	W7910
Order number			W23-510-100	W23-510-110	W23-510-115	W23-510-120	W23-510-125	W23-510-130	W23-510-135	W23-510-140
temperature	Internal	range	-30 to +60 °C	-	-30 to +60 °C	-	-	-30 to +60 °C	according to the probe	-30 to +60 °C
		accuracy	±0.4 °C		±0.4 °C			±0.4 °C		±0.4 °C
	External	range	-	-90 to +260 °C	-200 to +260 °C	-200 to +260 °C	-200 to +260 °C	-		-
		accuracy*		±0.2 °C	±0.2 °C	±0.2 °C	±0.2 °C			
relative humidity		range	-					0 to 100 % RH		0 to 100 % RH
		accuracy**						± 1.8% RH	± 1.8% RH	± 1.8% RH
dew point***		range						-60 to +60 °C	according to the probe	-60 to +60 °C
barometric pressure		range	-							600 to 1100 hPa
		accuracy								±1.3 hPa
class of protection of case with electronics / sensors			IP65 / -			IP20 / -		IP65 / IP40		

* accuracy of device w/o probe in measuring range of -90 to 100 °C
(in range +100 to +260 °C is accuracy ±0,2 % of measured value)
** Accuracy of sensing element; from 0 to 90 %RH at 23 °C
*** for accuracy of dew point see graps at device manual

the probes Pt1000/E family

2x probes Pt1000/E

Pt1000/E probes

Pt1000/C probes

Φ 18

the probes DIGI/E family

Φ 18

2 channels   **4 channels**   **2 channels**
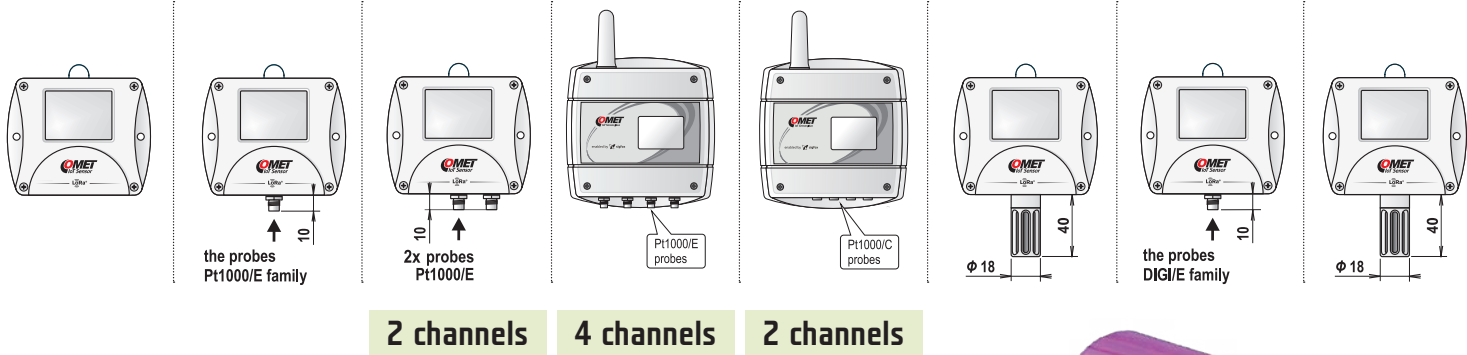
In the COMET Cloud, you can view measurements of temperature, relative humidity, dew point, atmospheric pressure.

External temperature probes

Temperature probes attached to cables are specifically designed for measuring temperatures in certain applications. These probes are available in lengths of 1, 2, 5, and 10 meters. To ensure high--precision measurements, it is not recommended to use probes that exceed 20 meters in length. Unless otherwise specified, the probes are manufactured to Class A accuracy standards.

Ultra thin temperature probe.

Universal, watertight temperature probe rated IP68, designed for long-term monitoring of temperature in liquids.

Pt1000TG3/E
(-50°C to +200°C)

Pt1000TG68/E
(-80°C to +200°C)

Cryogenic temperature probe designed for ultra-low temperature measurements.

Cost-effective probe featuring a plastic housing and slow response time, rated with IP67 for protection.

Pt1000TR125/E
(-190 to +150°C)

Pt1000TR160/E
(-30°C to +80°C)

Battery powered

The device is powered by an internal Lithium battery, whose lifetime is dependent on the transmission range and operating temperature.
The battery operation lifetime is from 1 year to 10 years.

A4206
Replacement Lithium battery 3,6V, size C

A4203
Lithium battery 3,6V/AA

Battery life

| MODEL	W0910, W0911, W0932, W3910, W3911, W7910	W0941, W0941E
sending interval	battery life (mobile operation)*	
5 minutes	1 year	3.0 years
10 minutes	2 years	6.0 years
15 minutes	2.5 years	7.5 years
20 minutes	3 years	9.0 years
30 minutes	4 years	>10 years
1 hour	6 years	>10 years
2 hours	7 years	>10 years
3 hours	8 years	>10 years
4 hours**	8.5 years	>10 years

* Battery life in standard operation is approximately up to 2.5 times longer than in Mobile Operation mode at maximum range.
** Other possible intervals are 6, 8, 12, and 24 hours.

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QR-Code for an offer
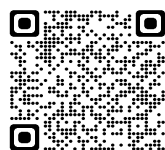
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