

TEMPERATURE & HUMIDITY

LoRaWAN Temperature & Humidity Display Sensor

Live readings on the wall, full history in ioX-Pulse.



Overview

The LoRaWAN Temperature & Humidity Display Sensor measures ambient temperature and relative humidity and shows both on a 2.7 in digital display, so anyone in the room can read conditions at a glance. Every reading is also sent over LoRaWAN to ioX-Pulse, where you see live values and history on your dashboards and get alerts when a reading drifts outside your limits.

A factory-calibrated Sensirion SHT31 sensor sits in an anti-condensation probe housing for stable long-term readings. An 8,000 mAh battery runs the sensor for up to 5 years, depending on how often it reports, and the on-board datalog stores readings if the network drops and sends them when it returns.

Key Features

- **2.7 in digital display.** Shows temperature, humidity, signal and battery. Switch between °C and °F remotely, or turn the readings off.
- **High-precision sensing.** Sensirion SHT31 sensor, ±0.2 °C (±0.4 °F) temperature accuracy.
- **Alarms and datalog.** Temperature and humidity alarms; stored readings are sent once the network is back.
- **Up to 5 years on one battery.** 8,000 mAh Li-SOCl₂ battery, Bluetooth setup and over-the-air firmware updates.

Applications

- **Offices and classrooms.** Show comfort conditions on the wall while ioX-Pulse tracks every room.
- **Warehouses and storage rooms.** Check stock conditions on site and get an alert when they drift.
- **Healthcare.** Clinics, pharmacies and supply rooms that need visible, logged conditions.
- **Retail and hospitality.** Keep stores, hotels and public spaces comfortable.
- **Public restrooms and facilities.** Track humidity to plan ventilation and cleaning.

MODEL

LRW-TH01-DGD

FREQUENCY BAND

US915 for the United States; other bands on request

ORDER

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Technical Specifications

Display	
Screen	2.7 in digital display
Shows	Temperature, humidity, signal strength and battery level
Units	°C or °F, set remotely
Display control	Readings can be switched off remotely
Sensing	
Sensor	Sensirion SHT31, factory calibrated, in an anti-condensation probe housing
Temperature range (device)	0 to 50 °C (32 to 122 °F), set by the display's operating range
Temperature accuracy	±0.2 °C (±0.4 °F)
Temperature resolution	0.1 °C (0.2 °F)
Temperature drift	Less than 0.03 °C (0.05 °F) per year
Humidity range	0 to 99.9 %RH
Humidity accuracy	±4 %RH (20 to 95 %RH)
Humidity resolution	0.01 %RH
Humidity drift	Less than 0.25 %RH per year
Wireless	
Protocol	LoRaWAN 1.0.3, Class A, OTAA
Frequency bands	US915, EU868, AU915, AS923, KR920, IN865, EU433, CN470 (ordered by band)
RF output	Up to +22 dBm
Receive sensitivity	Down to -139 dBm
Reporting	Every 20 minutes by default, configurable; on-demand uplink by button
Features	
Alarms	Configurable temperature and humidity thresholds
Datalog	Stores readings when the network is unavailable and sends them when it returns
Setup	Bluetooth 5.1 configuration; remote configuration by LoRaWAN downlink
Firmware	Over-the-air updates
Power	
Battery	8,000 mAh Li-SOCl ₂ (2 x ER18505), non-rechargeable
Battery life	Up to 5 years, depending on reporting interval
Sleep current	5 µA
Physical	
Operating temperature	0 to 50 °C (32 to 122 °F)
Body	87 x 95 x 30 mm (3.4 x 3.7 x 1.2 in)
Width with mounting tabs	104 mm (4.1 in)
Probe length	29.5 mm (1.2 in) below the body
Mounting	Wall mount, two screw tabs


ioX-Pulse

Connect this sensor to ioX-Pulse to see live readings and history on your dashboards, and get email, SMS or in-app alerts when conditions drift.

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