Remote Temperature & Humidity

LoRaWAN

The **Remote Temperature & Humidity** Sensor is designed to monitor and measure temperature and relative humidity, and transmits the data over a public or private LoRaWAN® radio network.

APPLICATIONS

- Monitoring of equipment temperature and hygrometry

BENEFITS & FEATURES

- LoRaWAN®, Class A
- Easy to install and use
- SHT30F remote temperature & humidity sensor; IP67 sensor; end cap protected by a special PTFE membrane
- Fast response to changes in both measured variables
- IP68 waterproof enclosure
- Up to 8 years of autonomy
- Threshold alerts
- Batch mode report
- Standard report

CERTIFICATION

- RED, RoHS

Sensors delivered without WATTECO marking

The **Remote Temperature & Humidity** sensor is a LoRaWAN® transceiver with an external probe for remote reading of temperature and relative humidity.

Data transmission over the public or private LoRaWAN® network is done periodically or immediately in the event of an alert when the minimum or maximum temperature and humidity thresholds are exceeded.

Installation and commissioning are quick and easy. The sensor is equipped with:
  - a magnetic switch for activation or deactivation via a magnet,
  - LEDs to monitor configuration and pairing to the network.

Each sensor is identified by a QR code on the label and an NFC tag inside the housing.

Measurement data is transmitted individually or aggregated and compressed (batch mode) before being transmitted over the LoRaWAN® network .

Batch mode significantly reduces the amount of data transmitted while preserving the sensor's autonomy.

Powered by a 3.6V/3600mAh battery, the autonomy of the sensor is more than 8 years with a configuration of 2 transmissions per day.

The battery voltage level can be monitored regularly from a distance.

The sensor regularly sends a life frame over the network.

THE LARGEST IOT PRODUCTS RANGE FOR YOUR PROJECT

WATTECO is a European leader in the design and manufacture of smart IoT devices to suit all remote reading and data collection solutions.

WATTECO is a LoRa Alliance® member.

WATTECO

TECHNICAL DATA

RADIOFREQUENCY	Frequency (MHz)	Transmit Power (dBm)	Receiver Sensitivity (dBm)
	EU: 863-870	+14	-140

FIRMWARE	
Protocol	LoRaWAN®, Class A
Activation method	Activation by Personalization (ABP) or Over-The-Air Activation (OTAA)
Data encryption	AES128
Application layer	ZCL (ZigBee Cluster Library) – to be interpreted by the remote server
Measurements & Transmission cycles	Configurable from 10 minutes to 24 hours
Alarms	Configurable min & max thresholds in 0.1°C and 1%rH steps

MEASUREMENTS	Temperature	Hygrometry
Range	-20°C to +80°C (+105°C on request)	0% to 100%rH
Accuracy	± 0.2°C in the range 0°C to 65°C Otherwise ± 0.5°C	± 2°C in the range 10 to 90% otherwise ± 4%
Resolution (in nominal range)	0.1°C	1%

POWER SUPPLY	
Voltage	3.6V / 3600mAh – Replaceable lithium battery Transmitted battery voltage level (configurable in 0.1V steps)
Autonomy in a range of +10°C to +25°C	> 8 years with 2 transmissions per day

USER INTERFACES	
NFC Tag	Product code, serial number, batch number
LEDs	Monitoring of network pairing; signalling sensor status, visible when sensor closed.
Magnetic switch	Reset, ON/OFF

ENCLOSURE	Size (mm)	Fastenings	IP rating	Fire resistance
	92 x 92 x 56	Supplied screws and anchors	IP68	UL94-V0HB

REMOTE PROBE
8 x 40 mm - IP67 - THERMELT 867 - 2.90m cable - unshielded PVC

ENVIRONMENT	Operating temperature	Storage conditions
	-20°C to +55°C	+10°C to +30°C +20%rH to +60%rH

DIRECTIVES & STANDARD
Radio Equipment Directive 2014/53/EU, RoHS

CE ⌧ RoHS

PRODUCT NUMBER

REFERENCE	DESCRIPTION
50-70-200	LoRaWAN® REMOTE TEMP & HUMIDITY - SHT30F WITH 3M CABLE