Neuron Humidity

The Humidity sensor measures relative humidity in the air. In addition it measures the ambient temperature. Typical applications are an overview of the indoor environment in all types of rooms or outdoors (as long as it is not very exposed to the weather). The sensor is attached with double-sided tape or strips where you want an overview.

Features

- Long life battery - up to 10 years lifetime
- Continuous measurement and instant alarm
- Adjustment of parameters such as measurement frequency on request
- Define your own alarm levels in the Neuron app
- Receive alerts as push notifications, emails or SMS
- Easily connect the sensor to the system with the QR-code on the sensor. Ensures immediate and accurate registration in the app on your phone/PC/tablet
- The sensor transmits data to your nearby Neuron Gateway which then again communicates with the Neuron Cloud

Essentials

Measuring Range	0-100% RH, -40 - 85 °C
Measuring Frequency	Every 30 sec
Report Frequency	Every 2 min, or immediately after measurement if trigger for critical data transmission is reached
Expected Operating Time*	Up to 10 years

**Depends on measurement frequency, amount of critical data transmissions and ambient temperature*

Typical Applications

- HVAC
- Transformer Substations
- Industry
- Storage
- Greenhouse

Neuron System Benefits

Sensor - Gateway - Cloud - App

- **Robust sensors**
  Suitable for rough environments
- **Wireless**
  Wireless sensor with integrated battery
- **Long lifetime**
  Typical 10 years battery life
- **Quick installation**
  Wireless, installed and operational in minutes
- **Collect and deliver data**
  Data delivery through API and app
- **Broad offering**
  More than 50 different sensor types available

General Description

The Neuron Humidity is an energy efficient solution for measuring humidity and ambient air temperature.

Due to wireless transmission of the signal, it is also easy and timesaving to install.

Principle of Operation

The Neuron Humidity measures the temperature every 30 seconds. If the humidity has changed with more than 5% RH since the last transmission, the sensor reports immediately. Otherwise, it reports every 2 minutes.

The symbol ⚠ on the product label refers to this data sheet for important information regarding intended use, requirements for the operating environment etc. If the equipment is used in a manner not specified by El-Watch, the protection provided by the equipment may be impaired.

Technical Specification

Operational Specification

Measuring Range	0-100% RH	-40 - 85°C
Resolution	0.1% RH and 0.1°C	
Accuracy	± 2% RH and ± 0.2°C	
Measuring Frequency*	Every 30 sec	
Report Frequency*	Reports every 2 min. Or immediately if trigger for critical data transmission is reached, see below	
Trigger for Critical Data Transmission*	5% RH change in measurement	
Operating Environment	Ambient temperature: -40 - 85 °C Relative humidity: 0-80% (non-condensing) Altitude: < 2000m above sea level Pollution degree: 3	
IP Grade	IP 21, indoor use.	
Radio Frequency	863-870 MHz / 902-928 MHz	
Battery Type	Li-SOCI2, 3.6V	
Expected Operating Time**	Up to 10 years	

** Adjustable on request*

*** Depends on measurement frequency, amount of critical data transmissions and ambient temperature*

Physical Specification

Materials	POLYblend 65 FS
Dimensions LxWxH	37x25x14mm

Ordering Information

	Europe/The Middle East/Africa Part number	**North America/Australia/ New Zealand** Part number
Neuron Humidity	421926	422421

Regulatory

Certifications	**Directives/Standard**
CE UKCA	RED 2014/53/EU Radio Equipment Regulations 2017
FC Industry Canada	FCC Part 15C
Safety	IEC 61010-1:2010

Installation

Neuron sensors are ready for use out of the box and will start logging data after registering the sensor in the app. Even though Neuron sensors deliver great range and long battery life, following some simple guidelines for mounting of the sensor and gateway can greatly improve signal coverage and lifetime of the sensor.

To ensure optimal antenna performance and signal strength, the sensor should be placed elevated with some distance to fixed objects. Keep in mind that RF-signals are greatly affected by close metallic surfaces.

For sensors with an external antenna, the antenna should be clear off the metallic surface.

You can find all you need to get started with Neuron Sensors at our support site:
support.el-watch.com »

For sensors operating in environments with greatly varying temperatures, care should be taken to avoid putting the sensor in unnecessary stress. Very high or low temperatures will affect the battery life and the signal strength of the sensor. While some sensors must be close to the source of heat or cold, other sensors have external probes which allow the sensor to be placed at a distance.

Fastening

The small, compact blue Neuron sensors are fitted with fastening holes for use with cable ties. The sensors are also delivered with double-sided tape that may be used for fastening of the sensors.

All the black Neuron sensors, like the Neuron IR380 and Neuron Vibration, are fitted with a strong magnet at the back for easy fastening. If there is no magnetic surface, then double-sided tape is a good solution.

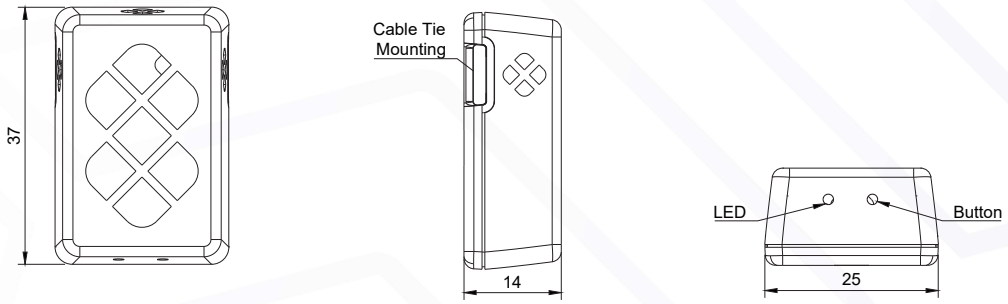
Place elevated with distance to fixed objects

Keep antenna clear off the metallic surface

Sensors with IP21 Enclosure

Sensors with IP67 Enclosure

Dimensions



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Additional information about Neuron sensors, installation, userguides, and more at our support website: support.el-watch.com