

Neuron Humidity IP67

The Humidity IP67 sensor measures relative humidity in the air. In addition it measures the ambient temperature. The sensor comes with an external over molded humidity probe with IP67 protection. Typical application is to ensure the right environment in storage, production or office areas.



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

Typical Applications

- Pharmaceuticals
- Food Processing
- Industrial processes in steel production
- Vegetable storage
- Concrete production
- HVAC
- Cleanrooms
- Paper manufacturing

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

Essentials

| | |
|--------------------------|------------------------|
| Measuring Range | 0-95% RH, -20°C - 70°C |
| Measuring Frequency | Every 2 min. |
| Report Frequency | Every 2 min. |
| Expected Operating Time* | Up to 10 years |

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




General Description

The Neuron Humidity IP67 is an energy efficient solution for measuring humidity and ambient air temperature in harsh environments.

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

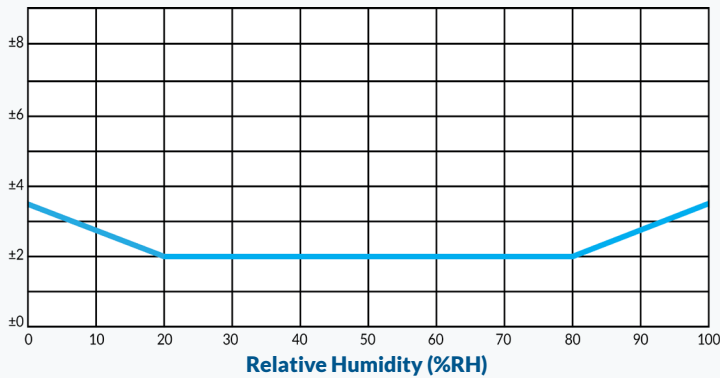
Principle of Operation

The Neuron Humidity IP67 measures and transmits the humidity and temperature every 2 minute.

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.

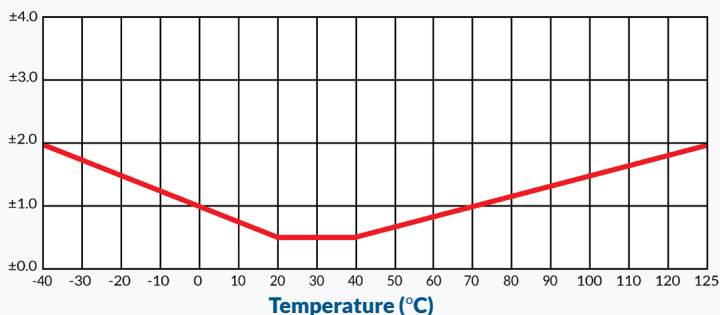
Typical %RH Accuracy

Δ RH (%RH)



Typical Temperature Accuracy

Δ T (°C)



Technical Specification

Operational Specification

| | | |
|---|---|--------------|
| Measuring Range | 0-95% RH | -20°C - 70°C |
| Resolution | 0.1% RH and 0.1°C | |
| Accuracy Hum. | ± 2% RH (20-80% RH) ± 3.5% RH (0-20% RH and 80-100% RH) | |
| Accuracy Temp. | ± 0.5°C (see graph) | |
| Long Term Drift | Hum.: <0.5% RH/year Temp.: <0.05°C/year (Normal conditions) | |
| Measuring Frequency* | Every 2 min. | |
| Report Frequency* | Reports every 2 min. | |
| Trigger for Critical Data Transmission* | 5% pp RH change in measurement | |
| Operating Environment | Ambient temperature: -20 - 70 °C Relative humidity: 0-95% (non-condensing) Altitude: < 2000m above sea level Pollution degree: 3 | |
| IP Grade | IP 67, indoor use. | |
| Radio Frequency | 863-870 MHz / 902-928 MHz | |
| Battery Type | Lithium Manganese Dioxide, 3.0V | |
| 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 | Radio Transmitter: Polyurethane / Neodymium magnet Humidity probe: Plastic |
| Dimensions | Radio Transmitter: 71x52x15 mm Humidity probe: 46x12.5 mm Cable: 1.8 m |

Ordering Information

| | Europe/The Middle East/Africa Part number | North America/Australia/New Zealand Part number |
|----------------------|---|---|
| Neuron Humidity IP67 | 422788 | 422794 |

Regulatory

| Certifications | Directives/Standard |
|---|---|
|   | RED 2014/53/EU Radio Equipment Regulations 2017 |
|   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.

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.

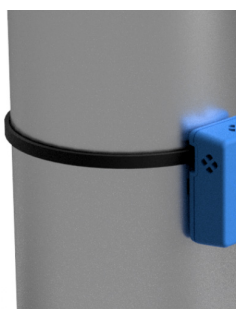
You can find all you need to get started with Neuron Sensors at our support site: support.el-watch.com »



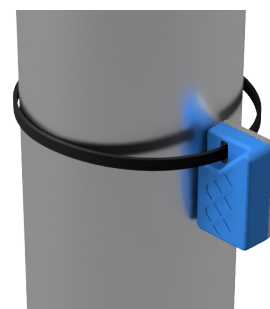
Place elevated with distance to fixed objects



Keep antenna clear off the metallic surface

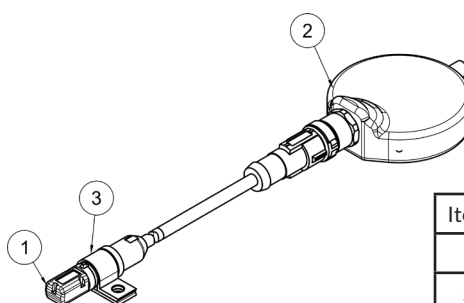
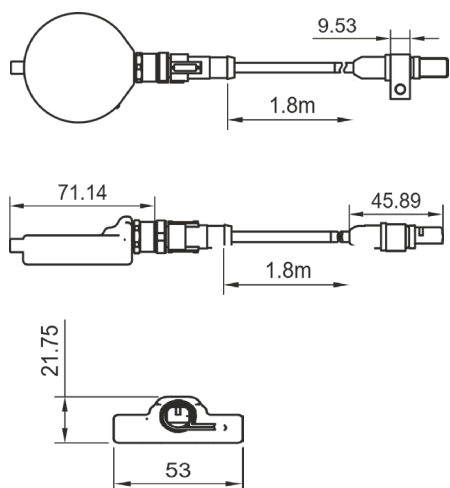


Sensors with IP21 Enclosure



Sensors with IP67 Enclosure

Dimensions



| Item | Qty | Part |
|------|-----|-------------------|
| 1 | 1 | Humidity sensor |
| 2 | 1 | Radio transmitter |
| 3 | 1 | Fastening clip |

