PROTRONIX NLB-RH+T-IQRF User Manual

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PROTRONIX
SENSE & EASY

User manual

Sensor is used to monitor air quality inside buildings and control ventilation (HVAC) systems according to current levels of air internal air quality. The sensor measures relative humidity (RH) and temperature (T). It is suitable for homes, bathrooms, warehouses, ateliers, etc.

- measures RH and temperature
- communication over IQRF network
- maintenance during operation is not required

Description

Measurement of the relative humidity is based on the principle of capacitive polymer sensor.
RH and temperature outputs are available via IQRF communication. Sensor can efficiently manage ventilation and heat recovery units, based on current air quality.
The current battery state can easily be determined by looking at the LED indicator.
For detailed information about IQRF, use the document **NLB-IQRF-Communication**. For information on the communication protocol, use the document **NLB-Modbus-Communication**.

Technical data

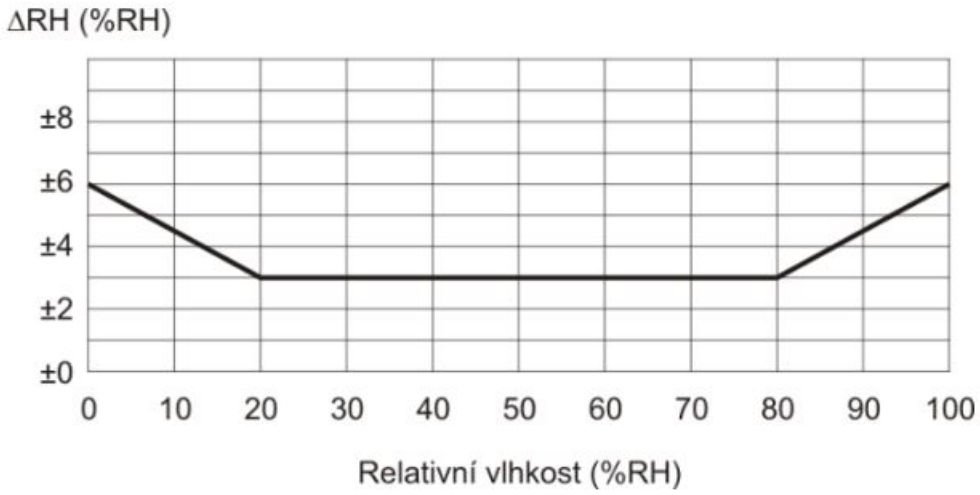
Parameter	Value	Unit
Power supply - 2xAA	1,5	V
Battery life	24	months
RH measuring range	0 – 100 %	RH
RH accuracy 20 – 80 %	± 3 %	RH
RH accuracy 0 – 100 %	± 6 %	RH
T measuring range	0 – 50	°C
T accuracy	± 0,4	°C
Working humidity non condensing	0 – 95 %	RH
Working temperature	0 to +50	°C
Storage temperature	-20 to +60	°C
Expected lifetime	min. 10	years
Ingress protection	IP20	
Dimensions	90x80x31	mm
Communication period	adjustable	minutes

Explanation of abbreviations and technical terms can be found on our website in the **Glossary** section.

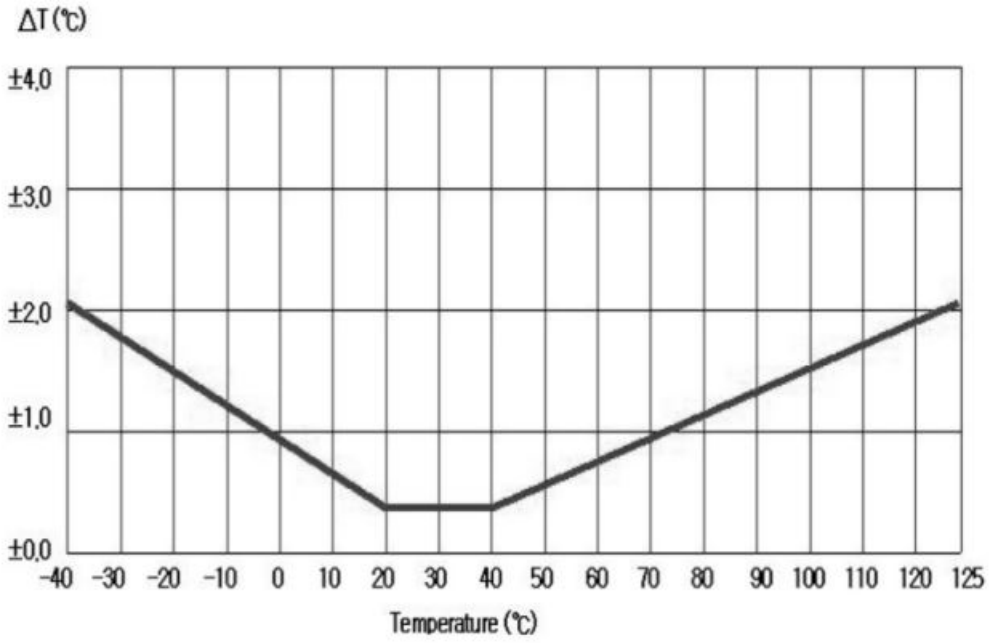
RH sensor autocalibration function

Built-in autocalibration function compensates for longterm aging of the key components of the sensor. This function is available only when sensor power supply is continuous and uninterrupted. Calibration during operation is not necessary.

Typical RH measurement accuracy at 25 °C



Typical T measurement accuracy



LED indication description

Turning sensor on:
After turning the sensor on, the measurement period in minutes will be indicated.

First 10 broadcast:
First 10 broadcasts will be indicated with series of three flashes.

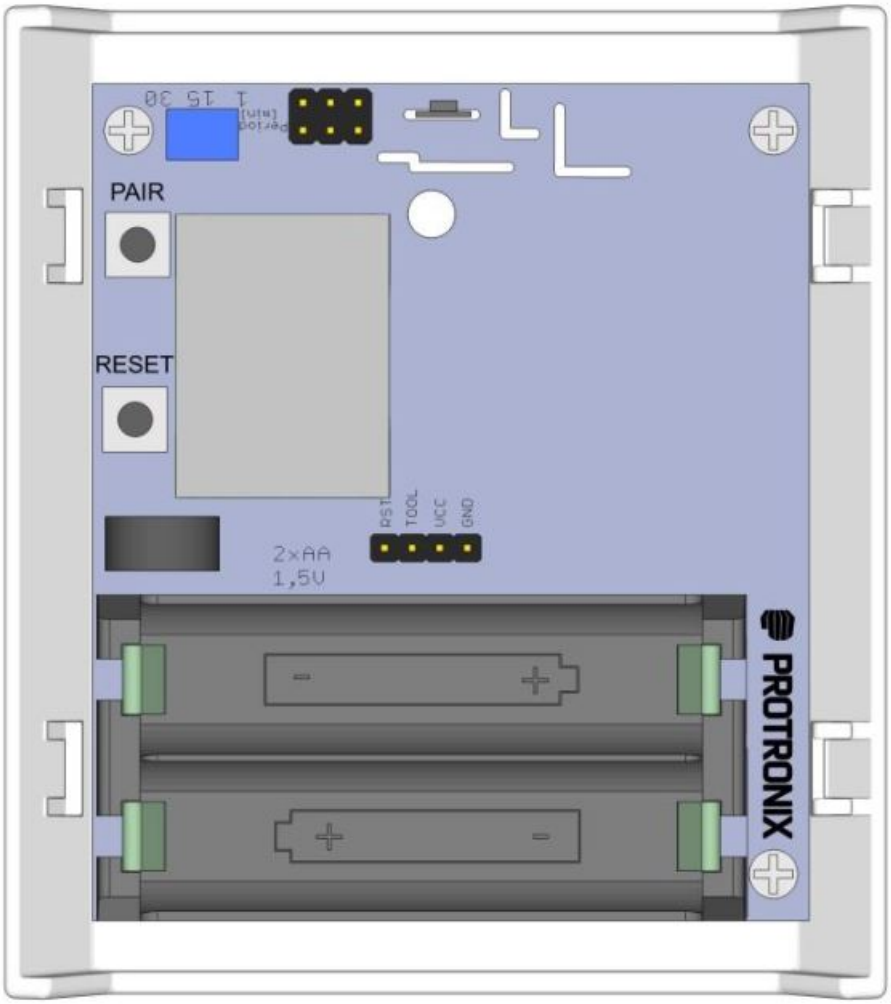
Battery under 20%:
If there is less than 20% energy remaining, LED will indicate this state with flashing once an hour, after broadcasting the data.

Battery under 5%:
If there is less than 5% energy remaining, LED will indicate this state with flash after every data broadcast.

Bonding button PAIR

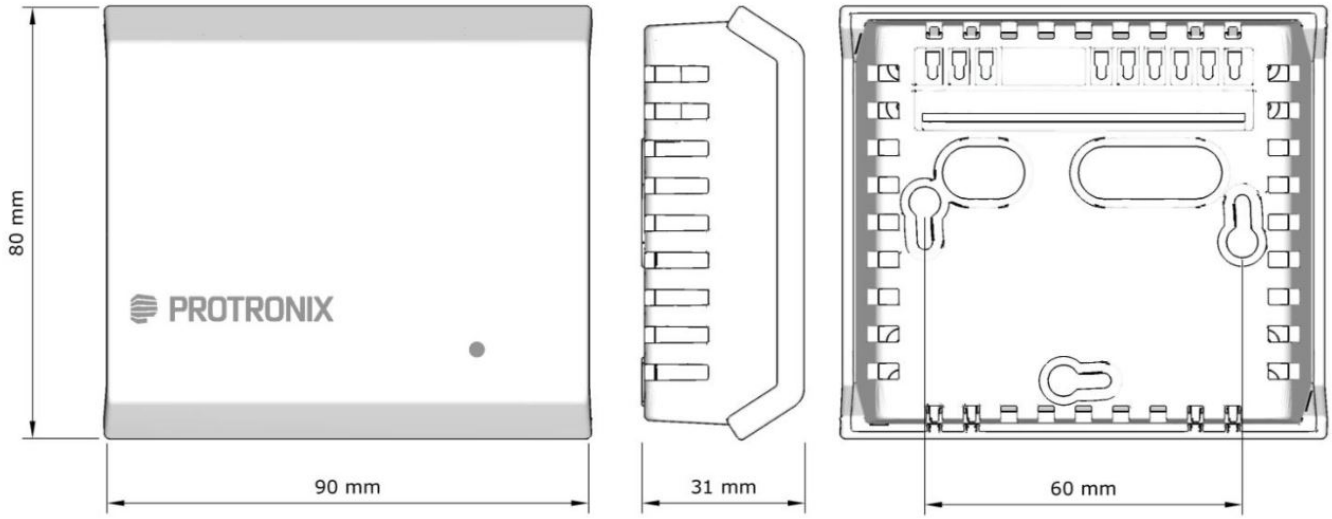
Button is located on the electronics board. Detailed instructions on how to proceed with bonding and unbonding is

shown in document **NLB-IQRFCommunication**. The RESET button can be used to restart the sensor.



Sensor assembly

Dimensions



Box color

Front: white – RAL9016
Base: gray – RAL7035

Way to use

The product is intended for indoor use only. You can read the **recommendations for sensor placement** on our web pages.

End of product life

Discard the product in according to the electronic waste law and the EU directives.

The producer reserves the right of technical changes in order to product improvements its properties and functions without previous notice.

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www.protronix.cz/en/

www.careforair.eu/en/

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Documents / Resources

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