




## PROTRONIX NLB-CO2+RH+T-5-IQRF Battery Sensor with IQRF User Manual

[Home](#) » [PROTRONIX](#) » PROTRONIX NLB-CO2+RH+T-5-IQRF Battery Sensor with IQRF User Manual 

# PROTRONIX

**SENSE & EASY**  
**User manual**

**NLB-CO2+RH+T-5-IQRF | Combined CO2/RH/T battery sensor with IQRF**



The sensor is used to continuously monitor air quality inside buildings and then control ventilation (HVAC) systems according to current levels of air internal air quality. The sensor measures the concentration of carbon dioxide (CO2), relative humidity (RH), and temperature (T).

It can be effectively used in offices, classrooms, shopping centers, homes, restaurants, fitness centers, commercial buildings, etc.

- measures CO<sub>2</sub>, RH, and temperature
- communication over IQRF network
- maintenance during operation is not required

### Description

The measuring of CO is based on the principle of infrared radiation attenuation dependence on the CO<sub>2</sub> concentration in the air (NDIR). Built-in auto-calibration function ensures very good long-term stability. Measurement of relative humidity is based on the principle of capacitive polymer sensor. CO<sub>2</sub>, RH and temperature outputs are available via the IQRF interface. The 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.

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

Parameter	
Power supply – 2xAA	<b>1,5 V</b>
Battery life	24 months
1) CO <sub>2</sub> measuring range	400 – 2000/5000 ppm
CO <sub>2</sub> accuracy	± 35 ppm ±5 % of reading
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 – 95 °C
Storage temperature	<b>0 – 95 °C</b>
Expected lifetime	min. 10 years
Ingress protection	IP20
Dimensions	90x80x31 mm
Communication period	90x80x31 mm

The range 2000/5000 ppm of CO<sub>2</sub> is user selectable.

### CO<sub>2</sub> sensor autocalibration function

Autocalibration compensates for the long-term aging of the key components of the sensor. This function is available only when the sensor power supply is continuous and uninterrupted. Calibration during operation is not necessary.

### LED indication description

Each item of signalization can be deactivated over IQRF communication.

### Turning sensor on:

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

**First 10 broadcasts:**

The first 10 broadcasts will be indicated with a series 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.

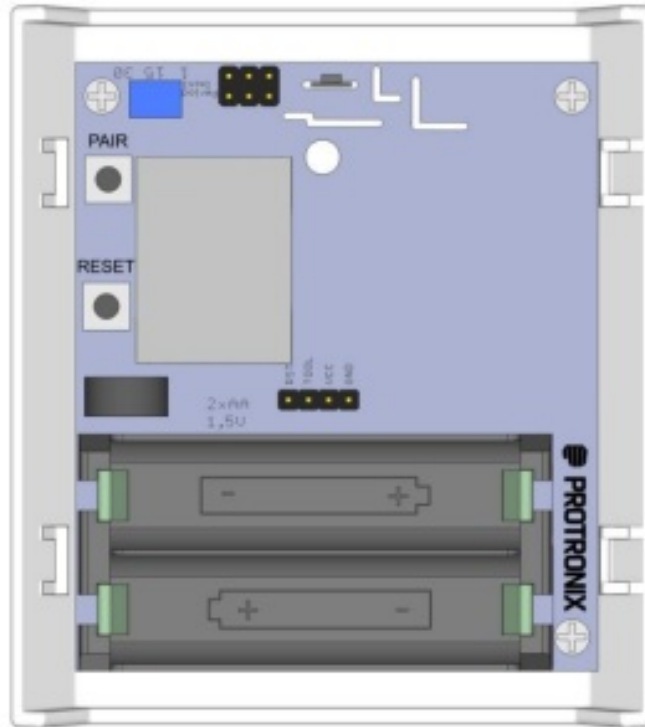
**Battery under 5%:**

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 unbinding is shown in document NLB-IQRFCcommunication.

The RESET button can be used to restart the sensor.

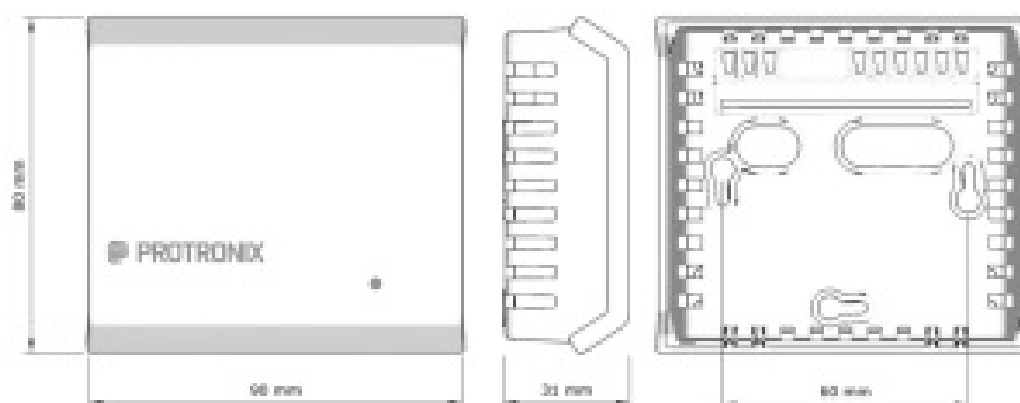
**CAUTION:**

It is necessary to avoid the severe mechanical shock of 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 according to the electronic waste law and the EU directives.

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

Protronix s.r.o.,  
Pardubická 177,  
Chrudim 537 01,  
Czech Republic  
[www.protronix.cz/en/](http://www.protronix.cz/en/)  
[www.careforair.eu/en/](http://www.careforair.eu/en/)




Contents

1 Documents / Resources

2 Related Posts

Documents / Resources

	<p><a href="#">PROTRONIX NLB-CO2+RH+T-5-IQRF Battery Sensor with IQRF</a> [pdf] User Manual</p> <p>NLB-CO2 RH T-5-IQRF, Battery Sensor with IQRF</p>
---	--