bluSensor AIR

data logger for room climate

Manual

your monitoring device for humidity and temperature

Available on the App Store

GET IT ON Google Play

www.blusensor.com

Content

1 Warranty

This device has a 24-month warranty. The warranty period begins with the purchase. For proof of the date please keep the purchase documents, such as receipt, invoice, cash note or delivery note. If items without purchase documents are sent for repair, the repair can only be carried out for a fee. This also applies to insufficiently packaged items. Within the warranty period, all defects resulting from material or manufacturing defects are remedied free of charge. Within the warranty period, warranty is provided by repair or replacement of the device. Excluded parts / devices become our property. The warranty does not automatically renew or extend the guarantee due to the replacement of the device. The original warranty period of the first device remains, which ends after 24 months. The warranty does not cover damage caused by improper use, wear and tear, by third parties or by force majeure. The guarantee does not cover consumables (battery, battery, packaging, etc.) and also does not affect those defects, which impair the value or the usability of the device insignificantly. Claims for damages are excluded as far as they are not based on intent or gross negligence on the part of the manufacturer. Of course, our customer service is available to you even after the guarantee period has expired. After expiration of the warranty or for damages for which we cannot guarantee you will receive a cost estimate.

2 Safety Instructions

Read this manual carefully.

Intended Use

This device is suitable for the measurement of sensor values in the dry areas. Any other use is deemed to be improper. Unauthorized alterations or conversions are not permitted. Never open the device yourself and do not attempt any repair yourself.

Site

Avoid exposure to smoke, dust, shock, chemicals, moisture, heat or direct sunlight. Do not use the unit in potentially explosive atmospheres.

Maintenance

Wipe the unit with a damp cloth or anti - static cloth. Never use a dry cloth. There is a risk of static charge.

This manual is intended for informational purposes, its content is not part of the contract. All data given are merely normal values. The described equipment and options may differ depending on the country-specific requirements and integrated sensors.

Reserve technical changes.

3 Basic Information

3.1 Scope of delivery

- BluSensor measuring instrument
- Operation manual

3.2 Features

- Graphical display on the smartphone or tablet
- Wireless data transmission
- Current measured values
- Long-term records
- Configurable alarms
- Statistical evaluations

4 Scope of application

The BluSensor AIR data logger is ideal for monitoring humidity and temperature in rooms. Due to its size and wireless transmission, it can also be positioned in poorly accessible locations..

All devices of the generation „BluSensor“ have integrated anti-theft protection, which can be used independently of the application-specific sensors.

Recommended accessories:

- Silicone Protective Sleeve
  Art.-No. Rubber Boot G-01-RB

- Wrist Strap
  Art.-No. Wrist Strap G-01-WS

- Neck Strap
  Art.-No. Neck Strap G-01-NS

All accessories are available in our webshop: **www.blusensor.com/shop**.

5 Starting up the device

5.1 Inserting or replacing the battery

Open the **battery compartment** on the back of the unit. Press the thumb slightly on the mark and slide the cover to the side. Insert a 2032 type button cell. A red light appears briefly on the front. Close the battery cover. Your device is now ready for operation. If you have purchased a silicone sleeve, please place your device in this protective sleeve.

5.2 Suitable smartphone or tablet

In order to operate your device, you need a smartphone or tablet with a Bluetooth version as of 4.0. Other versions are not supported. In retail, compatible devices are also referred to as „Bluetooth smart ready".

5.3 Turning on Bluetooth

Go to Settings and turn Bluetooth on.

5.4 Download the app

Go to the app store and download the „BluSensor AIR" app to your smartphone.

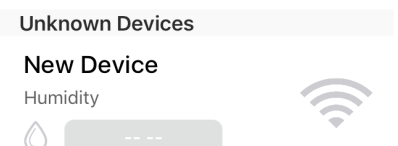
5.5 Range of the device

In order to be able to connect to the device, the smartphone must be in the appropriate range. In the open view, the range is 3m. If there are any obstacles, persons or walls in between, the range can be correspondingly reduced.

5.6 Connect the device to the smartphone

Launch the BluSensor AIR app and scan accessible devices. To do this, touch the circle-shaped icon at the **bottom right.**

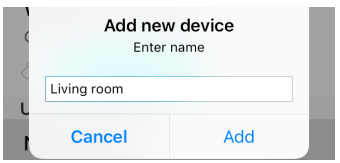
Your device appears in the overview list under the default name „New device".



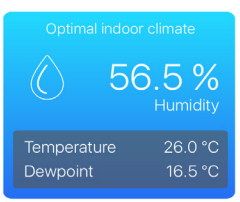
f the device is within range, the connection icon is displayed in a gray color. As soon as you are actively connected to the device, the color changes from gray to blue.

NOTE:
If you cannot find a device, this can be due to the following reasons:
a) the battery of your device is empty or
b) the device is not in the appropriate range or place
c) another user is already connected to the device. In this case, the other user must disconnect the connection manually. You will find more information in the chapter „Settings".
d) You have not activated Bluetooth on your smartphone / tablet.

Tap the „New device" line and you are asked to enter a name.

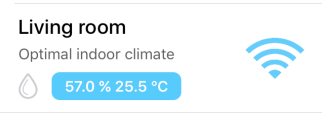


You can assign an individual name, such as a living room, John Smith, or the like. As soon as you are connected to the device, the current sensor values are displayed. The display refreshes every five seconds.



NOTE:
The dew point is additionally calculated and indicates at which temperature items (e.g. windows) begin to fog under the given humidity.

When you go back to the „My devices" device list, you will also see the current values and the connection status in the overview list.

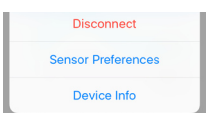


They can be connected to several devices simultaneously. A device can connect at the same time but only with a smartphone or a tablet. In this case, another user would not find the device.

5.7 Configuring the device (sensors)

To configure your device, in the detail view of the sensor values, press the „tool key" icon at the **bottom left.**

You can choose which configuration you want to perform. Select the item „Sensor settings".

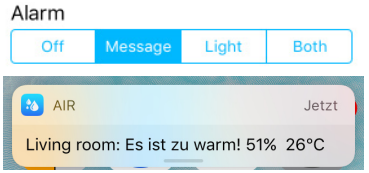


You can use this function

- to change the name of the device,
- to activate the alarm function,
- to change the suggested optimum range for humidity and temperature,
- to set the time interval for the data logger.

Alarms
If you want to send a message to your smartphone when you exceed or exceed the limit values, you

must activate the „Message“ function.



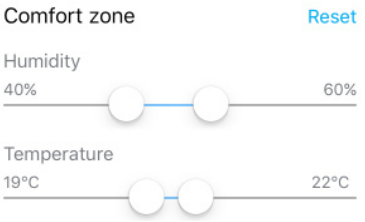
NOTE:
Attention: You will only receive the communication if there is a current connection to your device. To ensure that you do not receive alarms continuously, your device will wait 15 minutes for a new alarm to be sent.

If you select „light“ as an alarm function, a red light on the front of the unit will flash if the sensor values are outside defined limits.

Please note that increased battery consumption is used in this mode. You can also enable both functions at the same time.

Define the optimal range

You can set your optimal range at your own convenience. Use the „Reset“ function to reset your settings back to the factory settings



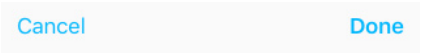
Enable data logger

If you want your device to store the sensor values, you must enable the data logger by selecting a memory interval. You can select from different presets.

Once you have made a selection, the number of available memory values is calculated. For example, if you select 30 minutes as the memory interval, your device stores the sensor values for 341 days. If you do not transfer the measured values from your device to your smartphone or tablet at the end of this period, the values on your device are overwritten with the oldest one. In our case, the first day would be overwritten on the 342th day. They have a total of ca.16.300 memory values available.

Save device configuration

If you have made your individual configurations, you must save them. Please leave the view of the sensor settings with the „Done“ function, which you will find on the lower right.



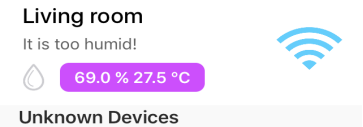
Congratulations

Your device is now ready for use and you can begin your measurements. Please position your device anywhere in the room.

6. Operation

6.1 Check current sensor values

Select the device that you want to query from the list of devices. Please note that your device must be within the appropriate range.



You can see this by the symbol for the signal strength. The color „blue“ means that you are actively connected to the device. Full-filled sections indicate how good the reception of the signal is. The color „gray“ means that your device is in the appropriate range, but you are not actively connected to it.

:

NOTE:

If you can not find a device, this can be due to the following reasons:

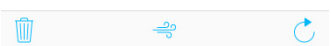
a) the battery of your device is empty or

b) the device is not in the appropriate range or range

c) another user is already connected to the device. In this case, the other user must disconnect the connection manually.

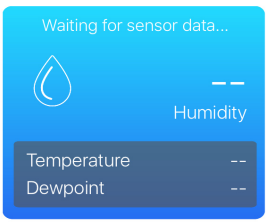
d) You have not activated Bluetooth on your smartphone / tablet.

You can manually reconnect to the device by pressing the circle-like icon in the ***lower right corner.*** *During the connection setup, the symbol changes to a moving circle.*



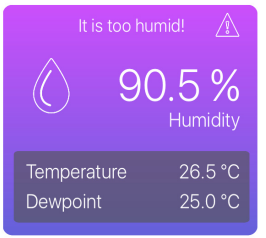
In the device list, the current sensor values are displayed as soon as the device is within range. It also shows whether the measured values are within the limits you specify. If this is not the case, the color of the sensor values changes to another color. In the above example, the air is too humid, as the air humidity limit has been exceeded.

As soon as you switch to the detailed view for the measured values, your smartphone or tablet actively tries to connect to the device. You can recognize this by the text: „Waiting for sensor data“. This process takes a maximum of 5 seconds. The attempt is then terminated.

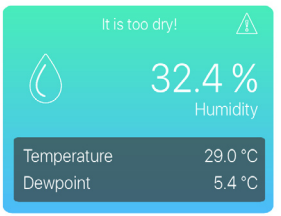


The color of the display changes according to the temperature and humidity conditions. The color blue means that all values are within defined limits.

If the air is too humid, the display changes from the color „blue“ to the color „violet“.



If the air is too dry, the display changes from the color „blue“ to the color „turquoise“.

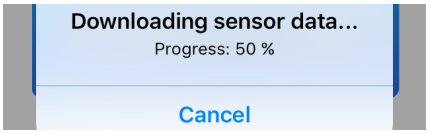


The change of the colors should allow the user to easily recognize the over- or undershooting of the limit values.

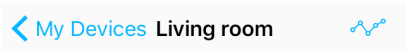
6.2 Querying the statistics

Before you can view the statistics, you must transfer the values stored on your device to your smartphone. To do this, press the download icon in the **lower right corner** of the screen.

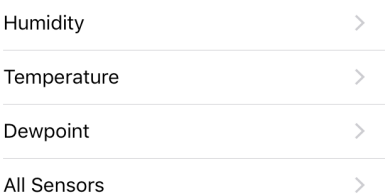
Your values are now transferred to the smartphone. This may take some time.



As soon as the values are fully loaded, you can display the individual values for humidity, temperature, dew point or a graph of all sensors together. To do this, press the statistics icon in the **upper right corner** of the screen.



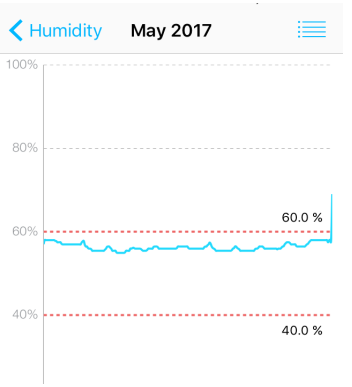
Then you can select the desired sensor.



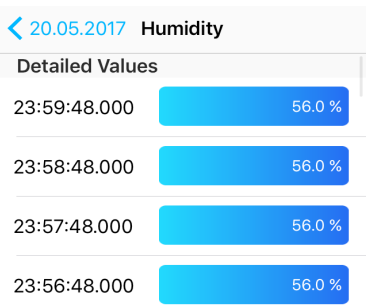
All saved days are displayed.

If you have many values, you can also switch to the month or year overview, which will be explained later. As soon as you select a specific tag, the corresponding statistics are displayed in graphical form.

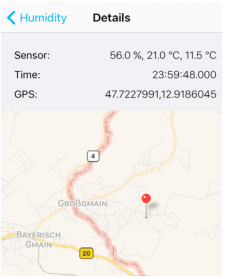
The red dotted line in the graphic shows the defined limit values.



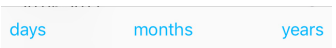
If you switch to the individual value view at the **top right**, the individual values are displayed in tabular form. The color stored shows whether limits have been adhered to, exceeded or fallen short of.



If you have selected „Save location“ in the settings (see chapter 6.10), you can determine the location by selecting a measuring point.

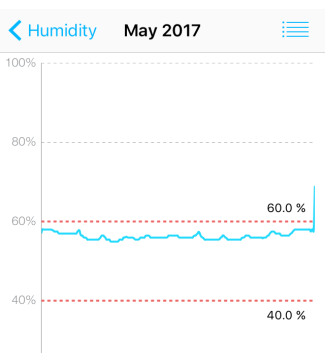


By selecting the date in blue for the individual values, e.g. 17.05.2016, in the **upper left corner**, you return to the graphical overview. If you go back to the list of days, you will see the selection for the month or year.



If you select „Months“, the individual months of the respective calendar year are displayed.

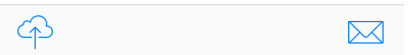
As soon as you select the month in question, for example „May 2016“, the statistics for this month are calculated, the average value per hour is calculated and displayed in the graph.



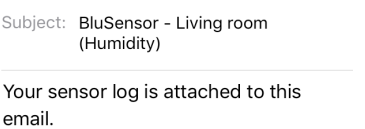
The average values for the corresponding months are calculated and displayed in the annual report.

Export and e-mail function

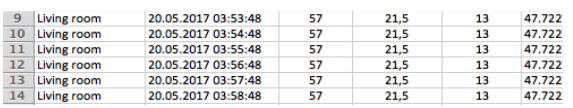
You can also send the statistics as a CSV file for Excel as an e-mail. To do this, you must select the Envelope icon in the **lower right corner** of the list of sensors.



The mail program is opened and the statistics are attached as a CSV file. As a subject, the text „BluSensor“, the name of the device and the selection of the respective sensor are preset. Complete the addressee and send the e-mail.



The CSV file „blusensor.csv“ can be opened with the program „Microsoft Excel“.



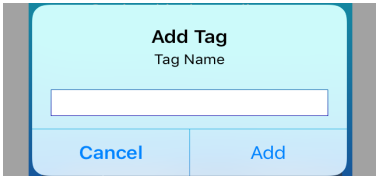
9	Living room	20.05.2017 03:53:48	57	21,5	13	47.722
10	Living room	20.05.2017 03:54:48	57	21,5	13	47.722
11	Living room	20.05.2017 03:55:48	57	21,5	13	47.722
12	Living room	20.05.2017 03:56:48	57	21,5	13	47.722
13	Living room	20.05.2017 03:57:48	57	21,5	13	47.722
14	Living room	20.05.2017 03:58:48	57	21,5	13	47.722

6.3 Marking the measurement

If you want to edit the data using the „Excel“ program and identify certain measurements, you can

use the function „Set marker“ in the detailed view of the sensor values. To do so, tap the „Marker“ icon **in the center.**

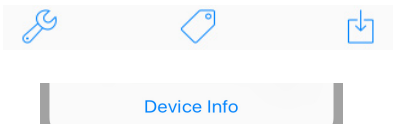
You are asked to enter a name for identification. This can be, for example: „Start measurement of Mr. Smith / living room“.



When you end a specific measurement, you can enter the text „End measurement Mr. Smith“. In the exported CSV file, this label is visible in a separate column.

6.4 Finding the device

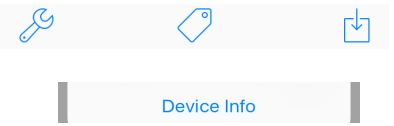
If you have multiple devices and do not know which device you are currently connected to, you can flash the device. In the view of the current sensor values, select the symbol for the „tool key“ **at the bottom left** and then the „Device information“ selection.



As soon as you tap on the blue „Blink“ text, the red warning light lights up briefly to indicate which device you are currently connected to.

6.5. Check battery life

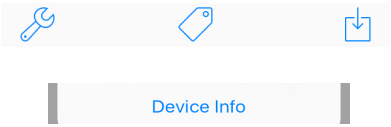
If you want to carry out a longer measurement, it is recommended to check the battery status beforehand. In the view of the current sensor values, select the symbol for the „tool key“ **at the bottom left** and then the „Device information“ selection.



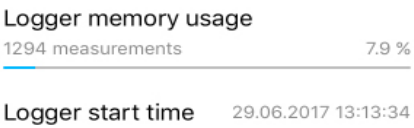
You can see the loading percentage as a percentage as well as in bar form. The sensor itself requires very little energy, but please note that every connection to the smartphone or tablet also costs energy. In the case of long-term measurement it is recommended to use a larger measuring interval.

6.6 Query the amount of memory consumed

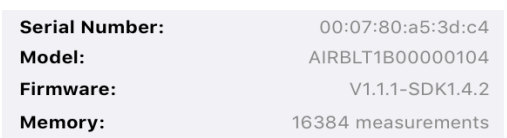
If you do not know exactly how much data is already stored on your device, you can query this information. In the view of the current sensor values, select the symbol for the „tool key“ at the bottom left and then the „Device information“ selection.



On the one hand, you see when the device monitoring was started and on the other hand how many measured values have already been recorded. The percentage indicates how much memory has already been used.



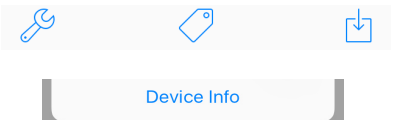
In our example, logging was started on June 29, 2017 at 13:13:34. Since then, 1.294 measured values have been recorded and 7.9% of the memory has been used, i.e. 92.1% are still available. At the top of the gray area, you can see the number of available measured values.



In our case, a total of 16,384 measured values are available, of which 1.294 are occupied, that is, 15.090 can still be stored.

6.7 Reset the device

You can reset your device to its original settings and delete all measured values. In the view of the current sensor values, select the symbol for the „tool key“ at **the bottom lef**t and then the „Device information“ selection.

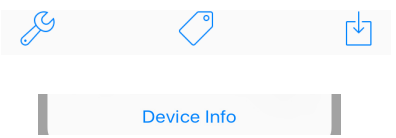


You will find „Reset Device“. Please type the „blue“ text „Reset“.

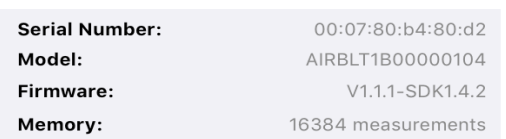
ATTENTION: By selecting this point **all stored values are deleted** and the configuration of the sensor settings is reset to the factory settings.

6.8 Manufacturer‘s information

In the view of the current sensor values, select the symbol for the „tool key“ **at the bottom left** and then the „Device information“ selection.

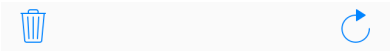


You will find manufacturer information on your device.

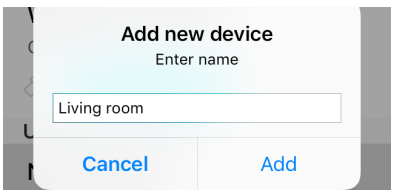


6.9 Managing the device list

Add device:
You can add any number of devices. To do so, tap the circle-shaped icon **in the bottom right** of the device bar.

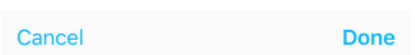


If new devices are within range, they are displayed under the default name „New device“.

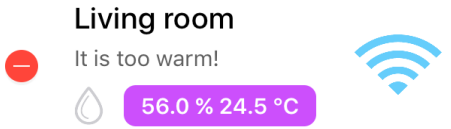


If you want to add a new device, follow the same instructions as described in chapter 5 - Commissioning. If you have several new devices and want to know which device you have currently configured, please follow the instructions in chapter 6.4 - Find device.

Delete device:
If you want to delete your device from the list, tap the symbol for the trash can in the toolbar **at the bottom left.**



A red circle with a minus symbol is displayed on the left of the device.

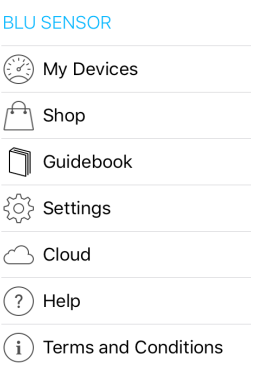


By selecting the red minus symbol, you can delete a device. Once you have deleted a device, all measurements and settings on your device are deleted. However, if you do not want to delete your device, return to the normal view by repeatedly pressing the trash can icon.

6.10 Other settings in your app

If you select the „three points“ in the device list view in the **upper left corner**,

a menu with the following points is displayed on the left:



By selecting the „My Devices“ item, you return to the device list. You can purchase additional products via the menu item „Shop“. Under the „Adviser“ menu item, you will come to our indoor climate guide, which explains topics such as proper ventilation and the prevention of mold infestation. Under the menu point „Help“ you will come to a tutorial video and you can have this manual sent in digital form.

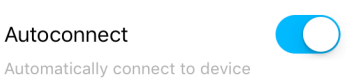
Under the menu item **„Settings“** and **„Cloud“**, you can activate additional useful features of your app.

6.10.1 Setting the temperature unit (° C or ° F):

You can specify whether the temperature is to be displayed metrically, i.e. degrees Celsius ° C or Fahrenheit ° F.

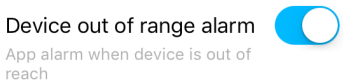
6.10.2 Activate the mode „Automatically connect“

You can also define whether your smartphone should automatically reconnect to the device if it is within range.



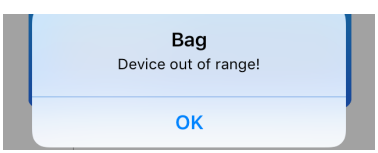
Note:
However, this only works if your BluSensor AIR app is active. Please note that active connections mean increased battery consumption. To display the current values in the device list (overview), you must NOT be actively connected. It is only when you select a device and the detailed values are displayed, an active connection must be present.

6.10.3. Set the alarm „Out of range alarm“



When you enable this feature on your smartphone or tablet, your smartphone or tablet continuously checks if your device is within range. If this is no longer the case, you will receive a message and your smartphone or tablet starts to beep.

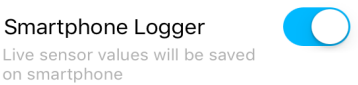
Tip:
You can use this function as a kind of „theft protection“. Put your BluSensor in a pocket and carry your smartphone to the body. Start the BluSensor app and connect to your device, connect to the detailed view. If the signal strength of your device is displayed in blue color in the device list, you are actively connected to the device. If someone is now trying to steal your bag with the BluSensor, you will notice this immediately.



As soon as you confirm the message, the acoustic warning signal goes out.

6.10.4. Smartphone logger

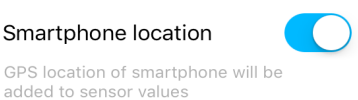
The integrated data logger of the device stores measured values according to individually adjustable intervals (see chapter 5.7) directly on the device, however, the possibility exists that your smartphone or tablet stores the measured values immediately on the smartphone or tablet.



When you activate this mode, **all 5 seconds** of measurements are stored on your smartphone or tablet. This function is suitable for measuring sports sensors.

6.10.5.Smartphone location

When you transfer measured values from your device to your smartphone or tablet, you can store the current location of the smartphone or tablet in the statistics table, in addition to the measured values.



This function is suitable for stationary mounted devices.

NOTE: GPS data is stored on the device. The position data is reached and stored by your smartphone or tablet.

If your devices are mobile and you want to have the respective current GPS position for the individual measured values, you have to provide an

inexpensive smartphone or tablet, which is connected to the devices and has activated the mode „Smartphone Logger“. For this application it is recommended to activate the mode „Connect automatically“. Please note that in this mode, you will have increased power consumption on the device as well as on your smartphone or tablet.

6.10.6. Cloud

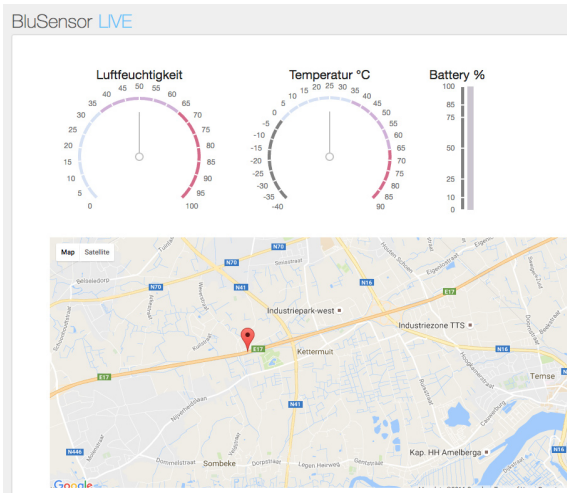
You have the option to transfer the current sensor data directly into the cloud via your smartphone or tablet. Activate the „BluSensor LIVE“ function.

Start the BluSensor AIR app and connect to your device, e.g. by going to the detail view. If the signal strength of your device is displayed in blue color in the device list, you are actively connected to the device. The data from the device is now transferred to the cloud via your smartphone or tablet.

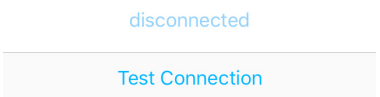
NOTE:
It is not possible to transfer the data directly from the device to the cloud in this variant. You would need your own SIM card for your device and you would have to pay additional fees.

NOTE:
This mode increases the power consumption of your device and your smartphone or tablet.

To see the values „live“ on the Internet, start a browser and go to: „http://live.blusensor.com“. The current values are displayed here.



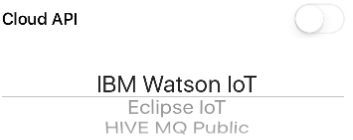
If you have problems and no values are displayed, you can test whether your connection to the cloud is working on your smartphone or tablet. Select the „Test connection“ function.



If you are unable to connect, this is most likely on your smartphone or tablet or your rate. On your smartphone or tablet, start the Internet browser and try to access another page.

For further questions, please contact our support at: support@blusensor.com

Some of our devices also offer the possibility To transfer data to other Clouds. Select the „Cloud API“ function and select the cloud partner of your trust.

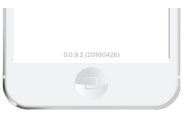


For the connection to work, you need the login data of your provider. Select „Configure“. Contact your Cloud Partner and set your login data accordingly.

6.11 Canceling the Smartphone / Tablet app

IPhone:

If you are not familiar with any of these, you can stop your smartphone / tablet app abruptly. To do this, **press the Home Button twice.** This is located on the front of your smartphone / tablet in the middle of the bottom.



Several windows appear. The BluSensor AIR App is located on the far right. Slide this app up with your finger. This will terminate your app and restart it.

6.12 Running extensions

We are constantly striving to incorporate additional features and algorithms into our BluSensor AIR app and incorporate customer feedback directly into the BluSensor AIR app. These functions, such as „properly ventilate“, can also be used without devices and therefore are not part of this manual.

7 Technical data

Radio frequency	2,4 GHz Bluetooth Low Energy allowed
Ambient temperature	-40 °C to +85°C relative permissible
Humidity	0% - 99% allowed
Storage temperature	-40 °C to +85°C
Battery	CR 2032
Dimensions	115 x 63 x 12 mm
Mass	24 g

Due to continuous product improvement, specifications and design are subject to change without notice.

Further details can be obtained from our datasheet (see www.blusensor.com/help)

Notes:

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www.blusensor.com