

# radon meter

## operating instructions



**süd**  **wind** **CE**

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## 1 INTRODUCTION

Congratulations on purchasing your new **radon system**! You have chosen a high-quality product that will now take care of your radon-affected rooms cares.

The operating instructions are part of this product, hereinafter referred to as the device.

It contains important information on safety, use and disposal. Before using the product, familiarize yourself with all operating and safety instructions. Only use the product as described and for the specified areas of application. Keep this manual in a safe place. If you pass the product on to third parties, please include all documents.

If you have any questions, please feel free to contact us at any time.

The radon system measures the radioactive decay of radon and its decay products in the air. These are added up over 10 minutes and displayed as a radon value in Becquerel per cubic meter (Bq/m<sup>3</sup>). One Bq/m<sup>3</sup> means that one radon nucleus decays per second in one cubic meter of air.

Please note: The radon concentration in buildings varies depending on the season and weather conditions. The highest values are usually measured in winter. In addition, the concentration decreases with the higher floors. There will therefore be significantly more radon in the basement than in the attic.

## 2 WARRANTY

The guarantee begins on the invoice or delivery date and is 24

Months for all devices. During the guarantee period, any defects will be remedied free of charge. If a defect is discovered, you are obliged to report it to the manufacturer immediately. It is at the manufacturer's discretion whether to fulfill the guarantee by sending replacement parts or repairs. If replacement parts are sent, the manufacturer is authorized to exchange the device without losing the guarantee. Repairs at the installation site are excluded. The guarantee only applies to material or manufacturing defects. The guarantee is void if parts are worn or damaged due to misuse or improper handling, the use of force, or interventions that are carried out without prior consultation with our service department. If possible, please keep the original packaging for the duration of the guarantee period in order to adequately protect the goods in the event of a return. Do not send goods to the service department freight collect. Claiming guarantee services does not extend the guarantee period. Claims for compensation for damage that may arise outside the device (unless liability is mandatory by law) are excluded.

**Opening the device will void the warranty.**

## 3 SAFETY INSTRUCTIONS

**CAUTION!** Failure to follow the safety instructions and warnings below may result in electric shock.

1. Please read this manual completely before use.
2. If the device is passed on to a third party, this operating manual must also be handed over.
3. This device complies with the technical standards and the relevant safety requirements for electrical devices.
4. The appliance must not be used by children.
5. Keep the appliance out of the reach of children.
6. Children should be supervised to ensure that they do not play with the appliance. This also applies to cleaning the appliance.
7. Do not allow persons unfamiliar with the appliance or who have not read these instructions to use the appliance.
8. **RISK OF ELECTRICITY AND SHORT CIRCUIT!** Under no circumstances should you open the housing. Do not insert any objects into the housing. In this case, safety is not guaranteed and the warranty becomes void.
9. **RISK OF FIRE AND SHORT CIRCUIT!** Do not immerse the device or any of its accessories in water or use it near water.  
Do not allow liquids to enter the device or sensors.
10. **RISK OF ELECTRIC SHOCK!** If the device falls into water or liquids get into the device, unplug it immediately.  
Before using the device again, check it and, if necessary, have it repaired by qualified personnel.
11. **RISK OF ELECTRIC SHOCK!** Do not use the device outdoors.
12. **RISK OF ELECTRIC SHOCK!** Do not operate the appliance if it is damaged or if it has been dropped or damaged in any way.

### Important:

**The radon sensor should be touched little or not at all during operation and should not be exposed to shocks, vibrations or strong fields (near hair dryers, electric motors, etc.). The radon sensor is an extremely sensitive instrument for measuring radioactive decay. If you handle it carefully (avoid dropping it or tipping it over), the sensor will have a very long lifespan and will serve you faithfully.**

## 4 SETTING UP THE RADON SENSOR

When you start the device for the first time, you must specify which mode it should work in. There are three different ones:

### Mode 1: Radon system alone.

In this mode, the measuring device works purely as a measuring device. The radon values can be read via the display or via the Radon system app (Bluetooth or WLAN).

### Mode 2: Radon system with fan control (junction box or socket housing).

The same as mode 1, except that an additional receiver can be connected that controls fans to reduce radon levels.

### Mode 3: Radon system with dew point control.

In this mode, the measuring device works together with our dew point control. The data cannot be read via the radon system app, but via the ventilation app of the dew point control.

Which mode you choose depends on what you have purchased or what you want to use.

To set the correct mode, you must **turn on the device and simultaneously hold down the OK button for about 4 seconds**. To turn on

Plug the power adapter into the radon sensor and into a power outlet. If you hold down the OK button, the word "Mode" appears. Use the up or down arrow keys to select the appropriate mode and save with OK.

**Note:** The mode only needs to be set once when starting the device for the first time, but can also be changed at any time. The OK button does not need to be pressed for each subsequent restart of the device (e.g. by unplugging the power adapter).

You will now be taken to the main screen:

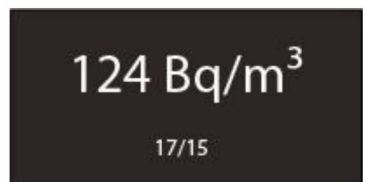
### 4.1 Main screen

The value on the screen is updated every 10 minutes.

In the middle is the current radon average value in Bq/m<sup>3</sup>.

Below, the currently counted decays in this 10-minute interval are shown on the left side of the slash and to the right of it

are the counted decays from the previous 10-minute run. **The first values are displayed after 10 minutes.**



## 4.2 Settings screen

Pressing the **OK button** takes you to the settings screen.

### 4.2.1 Mean

Since radioactivity is a random phenomenon, the values may fluctuate over the intervals. Therefore, a 30-minute average is calculated by default. By pressing the **up or down buttons** on the sensor, you can change this

Change the average interval. You can set it to 10 minutes, 30 minutes and 60 minutes.

The larger the interval, the more accurate the measurement, but it also takes longer for the sensor to display the change in value. The smaller the interval, the less accurate the value, but the faster you can detect changes. Therefore, 30 minutes is a good compromise. Pressing **OK** confirms the selection.

**Example:** You open the window and the radon gas can escape from the apartment.

This causes the number of decays counted to drop significantly. With a 10-minute average, you will notice a sharp drop in the radon concentration within the next 10 minutes. With a 60-minute average, it can take up to 60 minutes for this change to be visible on the display. This could give the impression that ventilation is of no use.

On the other hand, the values in the 10-minute average fluctuate greatly. As a compromise, we have therefore set the 30-minute average as the standard.

**Depending on the mode you have selected, additional settings may be visible, as explained below.**

**All settings can be changed at any time.**

**Once the sensor is turned off and then turned back on, it will retain all saved settings, so setup only needs to be done once.**

### 4.2.2 Sending (only in mode 1 and 2)

Next, you will be asked how you want to communicate with the sensor. Use the **up or down buttons** to change the value. The following options are available:

- 1. Bluetooth:** With the app you can read the sensor via Bluetooth.
- 2. WLAN (only if WLAN was ordered):** The sensor connects to your router and sends the values to our server, from where you can retrieve the data. How to enter the access data is explained in the "APP SETUP" section. Bluetooth is still switched on.
- 3. Off:** You can also set the sensor to not send anything at all. Bluetooth and WiFi are therefore switched off. You can still see the values on the display.

Confirm your entry with OK.

### 4.2.3 Receiver (only in mode 2)

This setting indicates whether the radon system should be connected to a radio receiver or not. The default setting is "Yes". This means that the device can switch on a fan. Confirm your entry with OK.

### 4.2.4 Max (only in mode 2)

The set value [between 10 and 2000 Bq/m<sup>3</sup>] must be exceeded for the ventilation to switch on. Confirm your entry with OK.

### 4.2.5 Min (only in mode 2)

The set value must be exceeded for the ventilation to switch off again. Confirm your entry with OK.

## 5 APP SETUP (optional; only in mode 1 and 2)

The Radonsystem app is available for Android and iOS and can be downloaded from the respective store. Just search for "Radonsystem".

### 5.1 Android

In the Android app, you will see three buttons on the home page:

- 1. Connect via Bluetooth:** Press here to connect the sensor via Bluetooth  
Please note that from Android 10 onwards both Bluetooth and GPS must be switched on. Unfortunately, this is how Android is designed and we cannot change it. We do not retrieve location data.
- 2. View saved measurements:** Here you can view measurements that you have saved on your smartphone over time.
- 3. Activate Internet access:** To enable you to access data from your radon system  
To be able to access our server, you must first be activated. If you have purchased WiFi, your Radon system can simply activate it for you.

#### 5.1.1 Connect via Bluetooth:

Click "Connect" on the Bluetooth screen. It will then search for the sensor and load the data. This may take a moment depending on how many months you have stored. If you are too far away, an error message will appear after 10 seconds.

**Both the Bluetooth connection and the disconnection are confirmed with a beep.**

The charts will only be displayed after one hour.

When the charts are displayed, you can view the daily and monthly views and change the day.

**When the radon system is restarted, the radon values stored in the device are deleted and can no longer be read via Bluetooth.** If you want to delete the values without restarting, there is a "Delete" button at the bottom. You can therefore save the measurement using the three dots in the menu at the top right (you will then find this on the home screen under "View saved measurements") or export it as a CSV file by email. Both are also important if you want to organize your measurements according to room, etc.

### 5.1.2 View saved measurements:

Here you can view the measurements that you have read out and saved via Bluetooth. Here, too, there is an export function via email as a CSV file.

### 5.1.3 Activating Internet access

This menu item is only important if you ordered Wi-Fi when you purchased your device.

Your radon system can give you access to the Internet so that you can retrieve the data from our server. To do this, connect to the sensor via Bluetooth.

This will now unlock you and you can then return to the app's home screen.

A new button "Connect via Internet" will now appear here. If not, you will need to restart the app once for the changes to take effect.

### 5.1.4 Connecting via the Internet

Here, your radon system has been added to the list of your devices by the previous activation. Click on the device to retrieve the data already sent from the server. You can add new devices at any time using the button at the bottom right.

To do this, you need the device ID (also called AppID) of the new sensor. How to find this is explained in the chapter "Device ID". You can choose the name freely.

#### 5.1.4.1 Edit WLAN access data

Important: If you want to retrieve data for the first time, you must provide the device with your router's Wi-Fi access data once. Otherwise, no Wi-Fi connection is possible. To do this, click on the three dots in the menu at the top right. Here, too, connect to the sensor via Bluetooth and enter the access data.

Then press "Send".

Now look at the display of the Radon system. After a few moments, the transmission should be successful. If you have mistyped, "error" will appear on the display after a while. You can view the access data by pressing the left button on the Radon system and check whether you have mistyped. It could also be that you are too far away from the router. You can change the access data at any time as described above and try again. If it worked (i.e. there is no "error" on the screen), you should see the first data in the app within the next hour.



If you press the **down arrow button** and "Send" is set to "Wi-Fi", the sensor will test the Wi-Fi connection and send the current value, which you can then see on the app. This is useful if you move the device somewhere else and want to check if the device is still within range of the router.

## 5.2 iOS

In the iOS app, you will see three buttons on the home page:

1. **Connect via Bluetooth:** Press here to connect the sensor via Bluetooth to read out.
2. **View saved measurements:** Here you can view measurements that you have saved on your smartphone over time.
3. **Activate Internet access:** To enable you to access data from your radon system  
To be able to access our server, you must first be activated. If you have purchased WiFi, your Radon system can simply activate it for you.
4. **Delete device data:** If you want to delete the values without Restart, press this button.

### 5.2.1 Connecting via Bluetooth

Click "Connect" on the Bluetooth screen. It will then search for the sensor and load the data. This may take a moment depending on how many months you have stored. If you are too far away, an error message will appear after 10 seconds.

**Both the Bluetooth connection and the disconnection are confirmed with a beep.**

The charts will only be displayed after one hour.

When the charts are displayed, you can view the daily and monthly views and change the day.

**When the radon system is restarted, the radon values stored in the device are deleted and can no longer be read via Bluetooth. You can therefore save the measurement in the top right of the menu (you will then find this on the home screen under "View saved measurements") or export it as a CSV file by email. Both are also important if you want to organize your measurements according to room, etc.**

### 5.2.2 View saved measurements:

Here you can view the measurements that you have read out and saved via Bluetooth. Here, too, there is an export function via email as a CSV file.

### 5.2.3 Activating Internet access

This menu item is only important if you ordered Wi-Fi when you purchased your device.

Your radon system can give you access to the Internet so that you can retrieve the data from our server. To do this, connect to the sensor via Bluetooth.

This will now unlock you and you can then return to the app's home screen.

A new button "Connect via Internet" will now appear here. If not, you will need to restart the app once for the changes to take effect.

### 5.2.4 Connecting via the Internet

Here, your radon system has been added to the list of your devices by the previous activation. Click on the device to retrieve the data already sent from the server. You can add new devices at any time using the button at the top right.

To do this, you need the device ID (also called AppID) of the new sensor. How to find this is explained in the chapter "Device ID". You can choose the name freely.

### 5.2.5 Edit WLAN access data

Important: If you want to retrieve data for the first time, you must provide the device with your router's Wi-Fi access data once. Otherwise, no Wi-Fi connection is possible. Here, too, connect to the sensor via Bluetooth and enter the access data. Then press "Send".

Now look at the display of the Radon system. After a few moments, the transmission should be successful. If you have mistyped, "error" will appear on the display after a while. You can do this by pressing the left button on the Radon system.

look at the access data and check whether you have mistyped it. It could also be that you are too far away from the router. You can change the access data at any time as described above and try again. If it worked (i.e. there is no "error" on the screen), you should see the first data in the app within the next hour.

If you press the **down arrow button** and "Send" is set to "Wi-Fi", the sensor will test the Wi-Fi connection and send the current value, which you can then see on the app. This is useful if you move the device somewhere else and want to check if the device is still within range of the router.

### 5.2.6 Delete device data

If you want to delete the radon values in the sensor, for example because you want to carry out a new measurement at the same location, you can do so here. Please note that no settings or access data will be deleted here, only the measured radon values. The rest will remain.

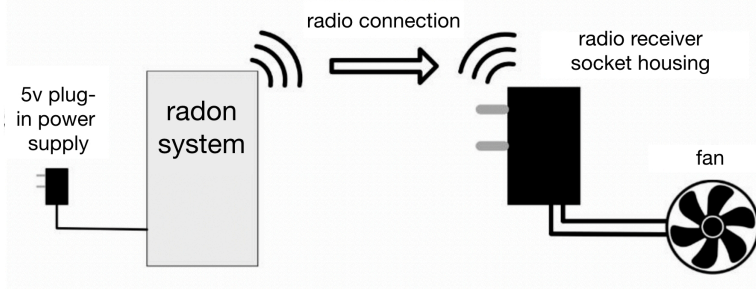
This also requires a Bluetooth connection.

# 6 RADIO RECEIVER / FAN CONTROL (only in mode 2)

The radon system is now set up. In mode 2, however, you still have the option of connecting a radio receiver as a fan controller. This is available in two versions: as a socket housing and as a junction box. The socket receiver is only intended for a normal 230 V fan, whereas the junction box is intended for one or more Ambientika fans, because these can also switch a 70 second delay for cross ventilation.

If the radon system detects an increased radon concentration, it switches on a fan using the radio receiver provided. This fan removes the harmful radon from the premises. When the concentration has dropped again, the fan is switched off. Both variants are presented below:

## 6.1 Socket housin



### Assembly:

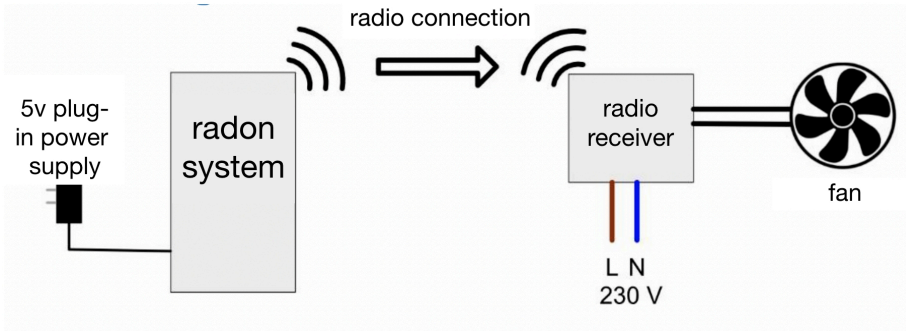
Connect a fan (230V) to the radio receiver. 4 terminals are provided for this. (SL = protective conductor, N = neutral conductor, Open = opening phase, Closed = closing phase).

Normal fans (no metal housing) do not have a protective conductor, which is why nothing is connected to SL. The Close terminal is only for window openers. Fans only need the N and Open terminals, with the blue wire (neutral conductor) being connected to N and the phase being connected to Open.

After connecting the cables, close the housing and plug the radio receiver into a power outlet.



## 6.2 Junction box



### Assembly:

Connect up to four fans to the Radio receiver. 4 terminals are provided for this. The two terminals labeled "Output 1" are switched directly. The two terminals labeled "Output 2" are switched on with a 70 second delay. The mains supply line is connected to the terminal labeled "Input" (phase L and neutral conductor N).

After connecting the cables, close the junction box and switch on the radio receiver.



## 6.2 Testing the connection

Now switch back to the radon system: You can test the radio connection by **briefly pressing the right arrow key**. After pressing, a small star appears on the display in the top right corner. This indicates that the signal is currently being sent to the radio receiver.



After a few seconds, the fan (or several fans, depending on how many you have connected) should switch on and a small dot will appear on the display in the bottom right corner. **If the dot is visible, ventilation is taking place. If the dot is not visible, ventilation is not taking place.** Pressing the right arrow key again switches the fan off. You can now let the device ventilate automatically.

If the fans do not turn on, please check that you have connected them to the correct terminals. The fans on the 70-second delay terminals will only turn on after 70 seconds. Also check that the radio receiver is receiving power. It may also be that the distance to the radon system is too great.

## 7 DEW POINT CONTROL (only in mode 3)

The following section covers setting up the radon system if you want to connect it to the dew point control.

**Important:** The dew point control searches for the radon sensor immediately after starting and then reads the sensor every 10 minutes. Therefore, switch on the radon system first and then the dew point control. If you do it the other way round, the first connection will only be established after 10 minutes. That's not a problem because the radon system only shows the first values after 10 minutes anyway, but this way you only see after 10 minutes whether the connection to the radon sensor is working.

### Switching on the dew point control:

The dew point control is used as described in the dew point control manual described. You can set up the sensors, set up the app and adjust the humidity settings as usual. There is just one new setting: the **radon limits** at which the ventilation is switched on. Click through the settings until you get to the last setting. It says "Radon".

If this setting is not available, the radon sensor must first be activated for the dew point control. You do this by restarting the dew point control and **holding down the left and right buttons at the same time for a few seconds when starting**. You can now set "Radon sensor" to "Yes" and confirm with OK. You can now go back to the settings and continue:

The value at which the ventilation is switched on is set under "Start". Radon has priority over moisture. However, the working time is adhered to. Ventilation continues until the radon concentration has fallen below the "End" value. You can also set this here. From then on, attention is paid to moisture again, as described in the dew point control instructions.

Once you have made all the settings, the sensors are set up and the radon sensor is searched for for the first time. The following message will now appear on the display: "Connect to radon sensor..." If it then says "Data received" or at least no error message appears, then the sensor has been read successfully.

The same applies to the error messages ("Error0Radon" to "Error4Radon") as to the WLAN error messages described in the manual. In general, an error only occurs if the sensor is switched off or is too far away.

You will then be in **automatic mode**: A fourth screen will now be added to the screens in automatic mode. This shows the currently read radon concentration in the room.

## App:

If you ordered our ventilation app, you can also have the radon values displayed there. To do this, go to the bottom of the day view (after the humidity values have been loaded) and click on the green "Add radon sensor" button. Note that this only works if the control system has already sent data to the cloud. If there is no data at all, just try again later or force the sending once by **holding down the top button** until "WiFi test" appears.

Note: If you don't see the green button, you need to update the app. To do this, simply reload it like a website.

If you have not ordered the app, you can view the radon values on both the display of the radon sensor and the control unit.

## 8 DEVICE ID

The device ID is a unique number for each radon system. It is stored in the device and can be shown on the display by pressing the **up button**. The number is an 8 to 18-digit number combination.

You only need the device ID for the following scenarios:

- Adding new radon systems in the app
- Purchase the upgrade to unlock the Wi-Fi function
- When picking up the rental device in the shop, if you select WLAN

## 9 TECHNICAL DATA

type designation	radon meter
Electrical connection	220-240 V ~ 50 Hz, 5V power supply
technology	ionization pulse chamber
measuring range	0 to 10000 Bq/m <sup>3</sup>
deviation	< 10%
Wi-Fi connection	2.4 GHz
storage period	1 year

# 10 CLEANING, CARE AND STORAGE

1. Please read the safety instructions before cleaning.
2. Also unplug the power cord.
3. To clean the device, use a slightly damp cloth and, if necessary, a mild cleaning agent. Be very careful when cleaning. The housing is open to the outside so that the measurement can be carried out with sufficient accuracy. The use of water for cleaning should be avoided.
4. Make sure that no water enters the housing. Never immerse the device in water or other liquids during cleaning or operation. Do not hold any part of the device under running water.
5. When storing and operating the device and its accessories, select a location protected from dust, moisture and direct sunlight. Keep the device out of the reach of children.

## 11 ENVIRONMENTAL PROTECTION



The packaging materials are recyclable. Please do not throw the packaging in the household waste, but recycle it.

Old devices contain valuable recyclable materials that should be recycled. Please dispose of old devices via suitable collection systems.



The EU declaration of conformity can be requested from the manufacturer's address.

