

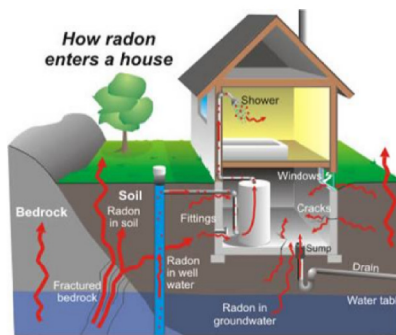
• RADON

What is radon?

Radon is a naturally occurring radioactive gas, and is a potential health hazard through exposure of the population to ionizing radiations. It can be found anywhere on earth in variable concentrations. It is odourless and colourless, and permeates through the ground or walls of buildings.

When the air is not sufficiently renewed, radon can accumulate and lead to lung cancer over time.

With ÆR you will be able to measure the level of radon in your home, be informed of the quality of the air you breathe, and assess if it needs to be ventilated or not.



• HOW DOES IT WORK ?

Ambient air penetrates inside the device by diffusion.

A photodiode detects particles emitted by disintegration and converts them to electric pulses. These pulses are counted by an electronic circuit board over a time period called "measuring period".

At the end of each measuring period, the electronic board calculates the radon concentration as a function of the number of electronic pulses, the measuring period and the calibration coefficients of the device.

• TECHNICAL SPECIFICATIONS

Dimensions : 10.5 cm x 3.6 cm x 8.6 cm

Weight : 310 g

Aluminium housing




High contrast e-paper display screen

Detection by photodiode

Cumulated average over 24 hrs / 1 month / long duration

Temperature and humidity measure

Autonomy : 1 year

			
Name	ÆR	ÆR Plus	ÆR Connect
Battery (LR14 Type C)	Alkaline 1.5V	Alkaline 1.5V	Lithium 3.6V
Measurement period	60mn (Fixed)	15mn (adjustable)	15mn (adjustable)
Data recording	No	Yes	Yes
Download and reset via USB	No	Yes	Yes
Connection to Sigfox (Internet of Things) for remote access to data.	No	No	Yes
Typical sensitivity	45-50 Bq.m ⁻³ /c/h	15-20 Bq.m ⁻³ /c/h	15-20 Bq.m ⁻³ /c/h
Uncertainty (24h at 300 Bq.m ⁻³)	± 32 Bq.m ⁻³	± 18 Bq.m ⁻³	± 18 Bq.m ⁻³
Measurement range	0 – 99,9 kBq.m ⁻³	0 – 99,9 kBq.m ⁻³	0 – 99,9 kBq.m ⁻³



Warning : Warranty applies only under conditions of normal use (Humidity range 40% to 80%, and temperature range 0°C to 40°C)



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ÆR Radon Sensors

USER GUIDE



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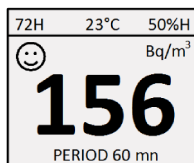


• DISPLAY

The following informations are permanently displayed on screen :

- Time elapsed since the last measure
- Temperature (°C)
- Humidity (%)
- Radon measure (Bq/m³)
- Corresponding sampling duration
- An emoticon will indicate whether the latest radon level measured is above or below the preset threshold.

Values are updated every measurement period.



• USING AER

The radon value displayed is a mean value calculated over a given time period.

To display the value over different time periods, press the switch located on top of the device for 2 seconds.

Upon releasing the switch, the next available time range will be displayed.

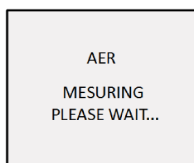
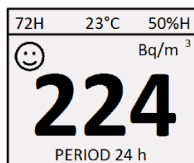
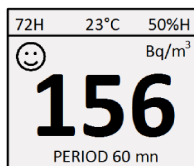
The following information can be displayed :

- Current radon value (average over the latest measurement period)
- Radon average over the last 24 hours
- Radon average over the last month of measure
- Radon average since the last reset

To reset all averages, press the switch located on top of the device for 10 seconds at least.

“Measuring, Please wait” will appear on the screen.

After one measurement period, the screen will display afresh the radon measure, and the averages displayed will be those calculated since the reset.



• RECOMMENDATIONS

- Leave your AER several days in the same location for a more accurate measure !
- Position your AER at shoulder height, to obtain a radon value that is truly representative of the air you breathe. Do not place it at ground level, or too far overhead.
- Reset your AER when changing its location !

• CHANGING THE BATTERY

With a screwdriver remove the two screws at the bottom of the device.

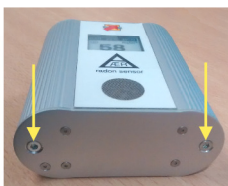
Carefully remove the cover to access the battery.

Remove the used battery, insert the new one.

Only use the type of battery corresponding to your AER model !

Ensure you position the battery correctly, respecting the polarity !

Replace and screw back the bottom cover, taking care not to pinch the battery compartment wires in the process.



• YOUR MEASURES FROM YOUR COMPUTER



Every measurement period, AER records the measures in its memory.

By connecting it to a computer running windows you will be able to :

- Download all recorded measures and view the evolution of radon, temperature and humidity as a function of time and place of location.
- Reset all radon averages and set the time after changing the battery.

How to proceed ?

- Download the AER software : <http://documentation.algade.fr/AER/aer.zip>
- Connect AER to your computer with a standard micro USB cable.
- Wait for Windows to detect and install the USB drivers.
- Open the AER software and follow the instructions displayed on the screen of your computer.

CAUTION : Disconnect your AER from the computer when you have finished using the AERusb software, to avoid discharging the battery!

• YOUR MEASURES FROM INTERNET



Connect to <http://aer.app.algade.fr> and identify yourself to view your measures (*)

(*) subject to availability of the Sigfox network. Sigfox may not be available where the device is located.

SAFETY RECOMMENDATIONS

- This device has been designed for indoor use. Not for outdoor use. Do not submerge nor expose to liquid projections. Do not use when humidity exceeds 80%.
- Do not place near a mobile phone, wifi access point (internet box), microwave or any other device generating electromagnetic interferences.
- Failure to follow these recommendations may induce the display of abnormally high values, non-representative of the actual radon level in the room.
- Do not expose to extreme temperatures (below 0°C or above 40°C)
- If the device has been exposed to these environments, reset the device by pressing the red button located on top of the device.
- Handle with care. Shocks on the device may induce the display of abnormally high values, non-representative of the actual radon level in the room. If the device has been exposed to this situation, reset as previously described.
- Do not cover the meshed aperture located on the front of the device.
- Do not use any other battery but the recommended type.
- Do not insert any objects in the vents and apertures of the device.
- Do not drop the device.
- Do not place the device next to a heater, a stove or any other heat source.
- Do not place the device next to a flame or any source of ignition.
- This product is not intended for children.

WARRANTY

The manufacturer warrants that its hardware product is free from defects in materials and workmanship for a period of two years from the date of original purchase. In the event of a breach of warranty, the manufacturer will be liable, according to the general terms of sales, to repair or replace the equipment, or to refund the purchase price, provided that the product is returned to the manufacturer, proof of purchase included. The protection offered by this guarantee is in addition to the rights conferred by local consumer law and may vary with countries.

This warranty may only apply in connection with the use of the physical product under the conditions provided by the manufacturer. The manufacturer can not be held responsible for malfunctions, breakdowns and degradations of the material product resulting from a use lacking the respect of the safety and use instructions described in this manual. The manufacturer can not be held responsible for malfunctions, breakdowns and deterioration of the material product in any event of force majeure, including climatic and environmental events (floods, fires, etc ...).



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