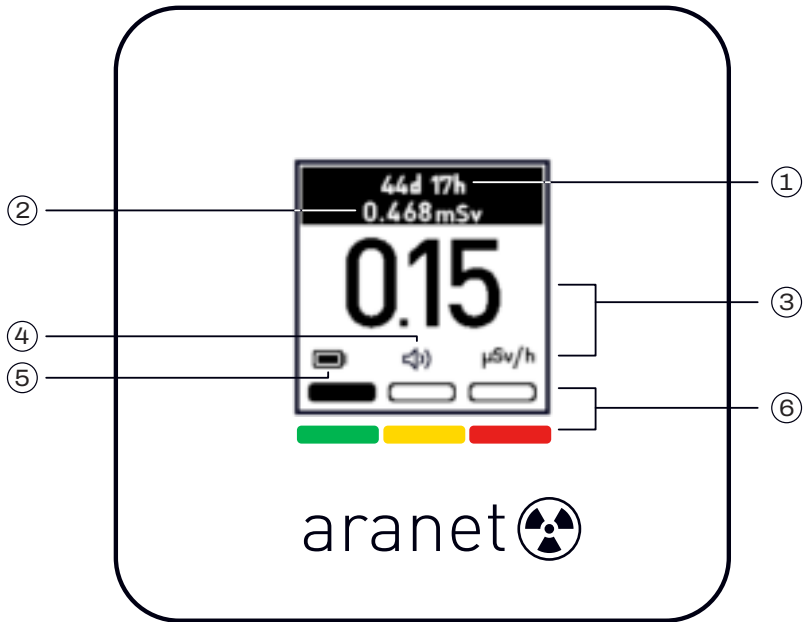




Radiation sensor Quick start guide



Product number:
TDSNUCH1



1. Integration time

4. Buzzer status

2. Total dose

5. Battery level

3. Dose rate

6. Dose rate threshold indication

What does Aranet Radiation measure?

Dose rate

describes how strong the ionizing radiation (γ , β) is at a given moment. It is expressed in microsieverts per hour ($\mu\text{Sv/h}$) or millirems per hour (mrem/h).

If radiation levels rise, the device uses colors (green, yellow, and red) to alert you, dimming the screen for high values (red level). The default threshold levels are based on scientific recommendations¹⁻⁴, but you can adjust them as needed through Aranet Home app.



Green

Normal background radiation $<0.20 \mu\text{Sv/h}$



Yellow

Radiation above typical background levels $0.20\text{-}10.0 \mu\text{Sv/h}$



Red

Prolonged exposure radiation levels linked to health problems, $>10.0 \mu\text{Sv/h}$

Total dose

of ionizing radiation (γ , β) encountered during the integration time is expressed in millisieverts (mSv) or rems (rem). Total dose of ionizing radiation is a critical metric for ensuring environmental safety and personal health. If the average rate at which the total dose has been acquired exceeds $0.20 \mu\text{Sv/h}$, then the upper part of the screen will be dimmed.

This reading can be reset from the Aranet Home app or by pushing the mechanical button behind the battery compartment lid. To perform a reset, press and hold the button for 5 seconds.

¹EURDEP Gamma Dose Rates Advanced Map, Joint Research Centre of the European Commission, accessed 23 October 2023 [Link].

²Radiation Thermometer, CDC – Centers for Disease Control and Prevention, accessed 23 October 2023 [Link].

³Limit values in radiation protection, The Federal Office for Radiation Protection (BfS) of Germany, accessed 23 October 2023 [Link].

⁴Health Effects of Ionising Radiation on People, National Environment Agency of Singapore, accessed 23 October 2023 [Link].

**When a reset is performed, the data will be permanently lost.
You should reset this history only if:**

- The device is passed to you by someone else and the data does not apply to you anymore.
- You just want to start fresh, like at the beginning of a new year, as the data will be permanently lost.



Setting up the device

Insert the batteries, and your Aranet Radiation device is ready to go!
Please wait a few minutes for the first measurement to appear.



Please wait



Ready to use

⚠ CAUTION

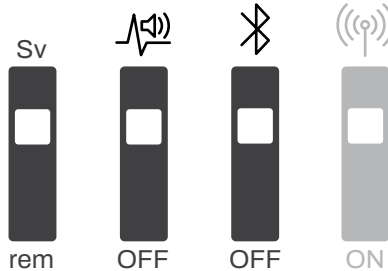
- Do not remove the sticker on the back of Aranet Radiation sensor.
- Aranet Radiation is not impact-resistant. Exposure to strong accelerations can lead to erroneous device measurements.
- Do not expose Aranet Radiation to high-humidity environments.
- Exposing the sensor to X-ray scans, like those at airport baggage controls, temporarily raises the dose rate reading and total dose readings, which can be disregarded or mitigated by removing the sensor batteries during scans.

Configuration switches

Switches can be found behind the batteries.
Use the attached pin to adjust these settings.

Unit switch :

Sv (SI unit, default)
or rem



LoRa transmission
(non-functional for
HOME sensors):
On (default) or Off.

Pulse buzzer:

On (default) or Off.

When this feature is on, the device beeps every time it detects ionizing radiation event, similar to a Geiger counter. More frequent beeps indicate higher radiation levels.

Bluetooth:

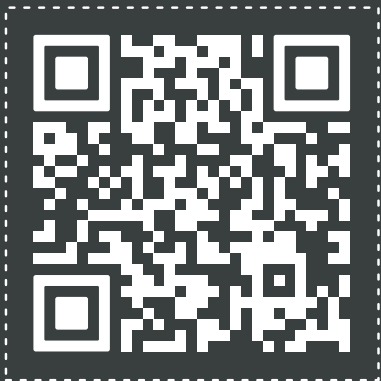
On (default) or Off

For more technical information see
Aranet Radiation sensor data sheet.

See more

Aranet Home app

Scan to download the app or click the button



Go to App



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Aranet Radon Plus

Measure important air quality parameters:
Radon levels, temperature, relative humidity
and atmospheric pressure.

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