

## TECHNICAL DATASHEET – PULSED IONIZATION CHAMBER RADON MONITOR

### GENERAL INFORMATIONS

**Device:** Pulsed ionization chamber radon monitor

**Model:** RN-PRO200 4G

**Firmware version:** 2.0.0

*Compliance with the CEI EN 61577-2 standard “Radiation protection instrumentation — Radon and radon decay product measuring instruments — Part 2: Specific requirements for  $^{222}\text{Rn}$  e  $^{220}\text{Rn}$  measuring instruments”.*



### PRODUCT DESCRIPTION

The device provides continuous measurement of concentration  $^{222}\text{Rn}$  in air. Sampling is performed through passive diffusion. The device is equipped with an ionization chamber that collects the sample air and the ionization charges produced by the decay  $^{222}\text{Rn}$ .

Measurements are recorded at regular 10-minute intervals. Each unit is equipped with a 4G module, ensuring transmission of the acquired data to proprietary servers. The device does not require any configuration or connection to specific mobile applications: it is immediately ready for sampling and only needs to be connected to a standard power source.

## WORKING PRINCIPLE

Radon present in the environment reaches the measurement chamber through passive diffusion. Its decay emits alpha particles that ionize the air molecules within the instrument's sensitive volume, generating ions. These ions are then accelerated by an applied potential difference within the anode - cathode system, producing a measurable electrical pulse.

The device, through specific algorithms, correlates the number of pulses recorded within a given time interval with the radon concentration present in the air.

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### TECHNICAL SPECIFICATIONS

INSTRUMENT TYPE	RADON MONITOR
SENSOR TYPE	PULSED IONIZATION CHAMBER
DIMENSIONS AND WEIGHT	80x140 mm, 380 g
MEASUREMENT RANGE	5 - 3700 Bqm <sup>-3</sup>
MINIMUM DETECTABLE CONCENTRATION	5 Bqm <sup>-3</sup>
OPERATING ENVIRONMENTAL CONDITIONS	Temperature 0-40 °C; Relative humidity < 80%
AVAILABLE INFORMATIONS	By viewing the measurement results on the <i>webdosis</i> ® platform, it is possible to assess the trend of the <sup>222</sup> Rn air concentration over time
CONNECTIVITY	4G
POWER LED	Red blinking light
POWER CONSUMPTION	DC 12 + 0,1 V, 65 mA (12V DC adapter)

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