

Radon Scout eXpert

Highly sensitive electronical radon monitor



Applications:

- for precise measurements of airborne radon (^{222}Rn) activity concentrations, as **reference measurements**
- use in the laboratory
- suitable for ventilation control with a switching output

Features:

- outstanding sensitivity of 25 cpm/(kBq/m³)
- measurement is not affected by temperature and humidity fluctuations, external radiation, mechanical shock and vibration due to the unique detector technology
- data transfer with your own software or integration into the existing infrastructure possible
- USB interface, a relay output and optionally integrated WI-FI
- direct operation and measured value evaluation even without an external control unit
- indication of exceeding the radon limit by LED display
- powered by 5V power adapter or two AA batteries
- temperature and humidity sensors standard, CO₂ or barometric pressure sensor optional
- DAkkS-accredited calibration according to DIN EN ISO/IEC 17025:2018

Radon measurement

Detector type	Lucas cell (x8)	
Operating mode	diffusion	
Range	1 Bq/m ³ ... 1,000,000 Bq/m ³	
Accuracy	<=3%	
Sensitivity	>= 25.0 cpm/(kBq/m ³)	
Stat. error (1σ)	1 h @ 300 Bq/m ³	6%
	1 day @ 300 Bq/m ³	2%
	1 day @ 50 Bq/m ³	3%

Internal Sensors:
Humidity

Range	0%rH ... 100%rH
Accuracy	< 4.5% rH (3% typ.) at 20%rH ... 80%rH

Temperature

Range	0°C ... 100°C
Accuracy	< 0.4°C (0.3°C typ.) at 5°C ... 40°C

Pressure (optional)

Range	700 mbar ... 1200 mbar
Accuracy	< 0.5% FSO

CO2 (optional)
Radon Scout eXpert - CO2 only

Principle of operation	non-dispersive infrared (NDIR)
Range	400 ppm ... 5 000 ppm (0% to 0.5%)
Accuracy	± 50 ppm+ 5% of indicated value
Response time	10 min
Important	automatic calibration with respect to outdoor CO2 level

Instrument

Power supply	5 VDC necessary for operation with CO2 Option or Wi-Fi Option, otherwise 3,3 VDC with 2 x AA batteries (approx. 30 days)
ATEX category	no
Data storage	non-volatile memory with circular structure for 16383 data records in any number of test series; saves all parameters including temperature, humidity for each interval (settable from 1 to 255 minutes)
Interfaces	USB optional internal Wi-Fi Modul switching output: Optical relay with potential free contacts; max. 40 V, 250 mA, peak current 0.75A; 2-pole socket Binder Serie 712
Display	20x4 characters LCD with backlight
Alert	red and green LED for alert and operating condition
Operation	Start / Stop slide switch & selection buttons (backlight and switching between displays)
Environmental conditions	0 ... 40°C 0 ... 95% rH, non-condensing 800 ... 1100 mbar
Software	Radon Vision
Dimensions	168 mm x 240 mm x 36 mm + Wi-Fi antenna
Weight	1.240 g incl. batteries
Scope of delivery	Mains adapter 5 VDC 2 x AA batteries DAkkS-accredited calibration certificate according to DIN EN ISO/IEC 7025:2018 (1-point calibration with 3000 Bq/m ³) Wi-Fi antenna (optional)