

Radon Scout Professional

Electronical radon monitor



Applications:

- for **short and long-term measurements** of the activity concentrations of airborne radon (^{222}Rn) in homes, workplaces (including underground), water treatment plants, nuclear facilities, etc.
- for ventilation control when the set limit value is exceeded
- personal dosimetry

Features:

- outstanding sensitivity in dosimeter format
- insensitive to humidity and temperature fluctuations, external radiation, vibrations and mechanical shocks
- several months of autonomous operation with 2x AAA batteries
- optional pressure and CO₂ sensors available
- optional switching output for ventilation control with optional wireless switch for controlling wall and window fans, extractor hoods or similar
- USB interface, external W-LAN module optional
- DAKKS-accredited **calibration according to DIN EN ISO/IEC 17025:2018**

Radon measurement

Detector type	Lucas cell + Si PM	
Range	1 Bq/m ³ ... 1 000 000 Bq/m ³	
Accuracy	<=6%	
Sensitivity	3,7 cpm/(kBq/m ³)	
Stat. error (1σ)	1 h @ 300 Bq/m ³	15%
	1 day @ 300 Bq/m ³	3%
	1 day @ 50 Bq/m ³	8%

Humidity

Range	0% rH ... 100% rH
Accuracy	< 4,5%rH (3% typ.) for 20%rH ... 80% rH

Temperature

Range	-40 °C ... 120 °C
Accuracy	< 0,4°C (0,3°C typ.) for 5°C ... 60°C

Pressure **Only Radon Scout Professional – P**

Range	760 mbar ... 1200 mbar
Accuracy	< 0,5% from measurement range

CO2 **Only Radon Scout Professional – CO2**

Principle of operation	Non-dispersive infrared (NDIR)
Range	400ppm ... 5000ppm (0% to 0.5%)
Accuracy	< 5% ± 50ppm
Response time	10min
Important	CO2 sensor works only when instrument is powered through USB connector (computer, AC/DC adapter, power bank); measurement of other parameters is not affected; automatic calibration with respect to outdoor CO2 level

Instrument

Environmental conditions	0°C ... 40°C 0%rH ... 95%rH non-condensing 800...1100hPa
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Power supply	3,3V DC with 2 x AAA batteries or USB socket battery operation approx. 2.5 ... 3 months low battery indication by red LED (single flash each four seconds) short time buffering of real time clock during battery change
ATEX category	no
Display	alpha numeric LCD with bright backlight
Languages	DE, EN, ES, FR, IT, NO
Displayed values (SI or US)	average radon value or dose since the start of a series of measurements (dose conversion factor adjustable) Current radon value of the last interval with percentage error Temperature, rel. humidity Bar. pressure (RSP – P only) CO2 concentration (RSP – CO2 only) Battery voltage (RSP – P/CO2 only) Date and Time
Data storage	non-volatile memory with circular structure for 16383 data records in any number of test series Saves all parameters including tilt detection each interval (settable from 1 to 255 minutes)
Interface	USB (mini USB socket), external Wi-Fi module optional
Alert indication	red blinking light (four consecutive flashes each four seconds) if Radon concentration exceeds 300 Bq/m ³ Red backlight will be lighted if the CO2 concentration exceeds the threshold of 1000 ppm (RSP – CO2 only) optional switch output for ventilation control (optical relay with potential free contacts, max 40 V, 250 mA, max. 0.75 A)
Operation	slide switch to start/stop sampling button to toggle display page and backlight

**Radon Vision Software
(included in delivery)**

setup, data download, interactive graphical display (zoom, pan, fit data cursor, marker for tilt and start of a new measurement, error bars, smoothing), selective ASCII export (EXCEL format), selective graphical protocol print (space for individual header, user comments), calculation of average concentration / exposure, automatic created file names and path structure, switch over between US / SI-units (Bq/m³/pCi/L)

Dimensions

82 mm x 96 mm x 44 mm

Weight

150 g inkl. Batterien

Scope of delivery

USB cable (for all types)
mains adapter 5 V/DC
transport case
manual & Software (electronic version)
DAkkS-accredited calibration certificate
according to DIN EN ISO/IEC 17025:2018
(1-point calibration with 3000 Bq/m³)