

# Radon Scout Professional

Electronical radon monitor



## Applications:

- for **short and long-term measurements** of the activity concentrations of airborne radon ( $^{222}\text{Rn}$ ) 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 CO<sub>2</sub> 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

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

### Humidity

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

### Temperature

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

### Pressure **Only Radon Scout Professional – P**

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

### CO2 **Only Radon Scout Professional – CO2**

<b>Principle of operation</b>	Non-dispersive infrared (NDIR)
<b>Range</b>	400ppm ... 5000ppm (0% to 0.5%)
<b>Accuracy</b>	< 5% ± 50ppm
<b>Response time</b>	10min
<b>Important</b>	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

<b>Environmental conditions</b>	0°C ... 40°C 0%rH ... 95%rH non-condensing 800...1100hPa
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Closer to your application

<b>Power supply</b>	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
<b>ATEX category</b>	no
<b>Display</b>	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
<b>Data storage</b>	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)
<b>Interface</b>	USB (mini USB socket), external Wi-Fi module optional
<b>Alert indication</b>	red blinking light (four consecutive flashes each four seconds) if Radon concentration exceeds 300 Bq/m <sup>3</sup> 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)
<b>Operation</b>	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/m<sup>3</sup>/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/m<sup>3</sup>)