

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 |

| | |
|-----------------------------|--|
| 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)