RPM 2200

Radon/Thoron Gas & progeny product monitor

Applications:

- to measure the radon / thoron equivalent equilibrium concentration (**EECRn** & **EECTh**) and/or the potential alpha energy concentration (**PAEC**)
- for environmental monitoring
- gamma spectrography (optional)
- protection against radioactivity
- building surveillance

Features:

- determination of the radon / thoron equivalent equilibrium concentration (**EECRn** & **EECTh**)
- processor-controlled rotary vane pump for constant air flow
- 400mm² light protected silicon detector
- optimum spectroscopic resolution for separating the individual radon progenies
- touchscreen
- a full alpha spectrum for each measurement point
- remote data transmission and device control
- optional gamma probe (NaI)
- factory calibration

RD sampling head	*Fixed at the front panel of the RPM 2200*
Detector type	400mm² ion-implanted silicon detector alpha 0-10 MeV
Filter	fabric reinforced membrane filter, d=25,4 mm, 1 µm pore size
Pump	rotary vane type 3 l/min, processor controlled
Measurement range	0 … 1 MBq/m³ (EEC)
Sensitivity	approx. 1000 cpm/(kBq/m³) (EEC)
Response time	120 min
Results / Analysis	determination EEC, PAEC for both, radon und thoron storage of record related spectra and time distribution the thoron value is calculated by differentiation of the ^{212}Po over time, so that an excellent time resolution can be achieved
Gamma probe (option)	*Connected to the front panel of the RPM 2200 by cable*
Detector	Sodium-Iodid (NaI(Tl)) with integrated PMT and Bias Scintillation crystal 2“ x 2“
Energy range	25 keV – 3 MeV
Resolution	<7.5% (Cs-137)
Results / Analysis	dose rate, net-activity of seven user defined nuclides storage of record related spectra and time distribution
Probe dimensions	diameter 60mm, length 260mm cable 5m (optional 10m)
Additional sensors	
Standard	flow 0 … 4 l/min, accuracy ± 5%
Meteorology (option)	rel. humidity 0 …100%, uncertainty ± 2% temperature -20 … 40°C, uncertainty ± 0.5°C bar. pressure 800 … 1200mbar, uncertainty 0.5% MW wind direction, wind speed
Air analytics (option)	CO, CO2, CH4, combustible gases, several ranges
Water analytics (option)	pH-value, redox potential, conductivity
Process (option)	pressure, differential pressure, flow, velocity etc.

General

Sampling	simultaneous measurement with all detectors/sensors with respect to the selected sampling cycle
Sampling cycles	storage of up to 16 different sampling cycles with up to 32 steps (pre-defined or infinite repetition) interval 1 Second to several weeks
Data storage	SD Card, 2 GByte
Operation / Display	touchscreen, 6 x 9 cm
Interfaces	USB, RS232
Power supply	12 V NiMH-rec. battery (>100 h continuously) mains adapter 100-240V ~50/60Hz, 1,8A 12 V car battery adapter (optional)
ATEX category	No
Dimensions / Weight	235 mm x 140 mm x 255 mm / 6 kg
Software	dVISION: control and data transfer, visualization, data management dCONFIG: system configuration, creating / changing cycles (also via Net Monitors) dLIBRARY: Nuclid library for NaJ gamma probe (option)
Extensions	available at internal connectors: 8 analogous inputs, 3 counter inputs, 2 status inputs, 6 switch outputs, clock switch, PID regulator/analog.output
GPS (option)	GPS coordinates are recorded and stored together with the measurement results. GIS compatible *.kml files can be exported (can be opened by Google-Earth). antenna connected by cable
Environmental conditions	0…40 °C 0…95 % rH, non-condensing 800…1100 mbar

Accessories

Scope of delivery	charging adapter USB, RS-232 cables aerosol filters (1+10 pcs.) fuse (2 pcs) transport case manual & software (electronic version) factory calibration certificate

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