



**RAMSYS**

# ABPM 205M™

*Mobile Alpha Beta Particulate Monitor*

Sampling of air extracted from ventilation ducts or stacks.



## FEATURES

- Static and dynamic compensation of the radon and thoron solid progenies
- Dynamic gamma background compensation
- Natural and artificial alpha volumetric activity indication
- On-line spectrometry
- Up to 6 months filter cassette autonomy
- Can be used as temporary bypass for ABPM 205L or ABPM 201S when fixed unit is in maintenance with no loss of monitoring capability

## DESCRIPTION

The ABPM 205M monitor forms part of the RAMSYS product line.

It has been developed to sample air extracted from ventilation ducts or stacks. A double silicon detector is associated with a radial fin grid that limits the scattering of the alpha particles. The compensation of the radon and thoron solid progenies is then processed by specific algorithms.

Operating costs are minimized by the autonomous operation through automatic filter advance management.

## PHYSICAL CHARACTERISTICS

- Radiation detected: alpha, beta and gamma
- Detector: dual large area silicon (PIPS)
- Filter type: FSLW
- Typical energy windows:
  - Alpha: 2 MeV to 10 MeV
  - Beta: 80 keV to 2.5 MeV
  - Gamma: 80 keV to 2.5 MeV
- Typical measurement range:
  - Alpha:  $10^{-2}$  to  $3.7 \cdot 10^{+6}$  Bq/m<sup>3</sup> ( $2.7 \cdot 10^{-13}$  to  $10^{-4}$   $\mu$ Ci/cc)
  - Beta: 1 to  $3.7 \cdot 10^{+6}$  Bq/m<sup>3</sup> ( $2.7 \cdot 10^{-11}$  to  $10^{-4}$   $\mu$ Ci/cc)

## ENVIRONMENTAL CHARACTERISTICS

- Normal temperature: +5°C to +40°C (+41°F to +104°F)
- Temperature limit: -5°C to +55°C (+23°F to +131°F)
- MTBF: > 20 000 hours, with preventive maintenance

## PNEUMATIC CHARACTERISTICS

- Standard flow rate: 35 l/min (1.24 scfm)
- Pressure drop: 100 to 350 mbar (1.45 to 5.07 psi)

## MECHANICAL CHARACTERISTICS

- Height: 1090 mm (42.9 in)
- Weight: ~ 38 kg (~ 84 lb)
- Color: gray RAL 7030
- Inlet tube connection:  $\varnothing$  25.4 mm OD (1 in)
- Outlet tube connection:  $\varnothing$  12 mm OD (1/2 in)

## ELECTRICAL CHARACTERISTICS

- Power supply: 230 Vac – 50 Hz or 120 Vac – 60 Hz
- Data link outputs: 1 RS232 and 2 isolated RS485
- Alarm relays: 3 SPDT relays
- I/O: 2 isolated analog outputs and 1 isolated analog input (0/4-20 mA)

## SIGNALING

- Alphanumeric display: measurement, status...
- Sound alarm: buzzer 90 dBA at 1 meter
- Visual alarm: 3 lights (red, yellow, green)

## REFERENCE STANDARDS

- Nuclear: IEC60761
- EMC: 2014/30/EU and 2014/35/EU, IEC61000-6-2 and IEC61000-6-4

## VERSIONS

- 230 Vac or 120 Vac

## ACCESSORIES

- Calibration tools
- Software: MASS2, RAMVISION, SIMS2...
- USB converters
- Ethernet
- Outlet pipe: 3 m (9.8 ft) or 20 m (65 ft)
- Sampling pipe: 1 m (3.3 ft) or 20 m (65 ft)

Featuring:

