



RAMSYS™

NGM 209M™

Mobile Low Range Noble Gas Monitor



Monitoring air in working areas, discharge stacks or ventilation ducts.

DESCRIPTION

The NGM 209M monitor from the RAMSYS product line has been developed to monitor air in working areas, discharge stacks or ventilation ducts.

The dual silicon diode detector integrated in a 4 π/3 cm (4 π/1.18 in) lead shielded sample volume guarantees high reliability of the measurements.

The first silicon diode detects the beta/gamma radiation from sample volume and the gamma ambient radiation (background). The second one detects gamma radiation from the sample volume and the gamma ambient radiation. This allows noble gas beta measurement with dynamic gamma compensation by the processing algorithms.

FEATURES

- ✓ Dynamic gamma radiation compensation with shielded gas detection sensor
- ✓ Operate as a stand-alone monitor and/or can be integrated in a RAMSYS network using a wireless network (radio modem) or a RS485 serial link

NGM 209M™ MOBILE LOW RANGE NOBLE GAS MONITOR

PHYSICAL CHARACTERISTICS

- Radiation detected: beta and gamma
- Energy windows: 80 keV to 420 keV
- Detector: dual large area silicon
- Sampling chamber: 76 ml (76 cc)
- Energy range: 80 keV to 2.5 MeV
- Typical measurement range:
 - ^{85}Kr : 10^{+3} to $3.7 \cdot 10^{+9}$ Bq/m³ ($2.7 \cdot 10^{-8}$ to 10^{-1} $\mu\text{Ci/cc}$)
 - ^{133}Xe : 10^{+3} to 10^{+10} Bq/m³ ($2.7 \cdot 10^{-8}$ to $2.7 \cdot 10^{-1}$ $\mu\text{Ci/cc}$)

ENVIRONMENTAL CHARACTERISTICS

- Normal temperature: +5 °C to +40 °C (+41 °F to +104 °F)
- MTBF: > 20 000 hours, with preventive maintenance
- TID: 100 Gy (10^{+4} rad)

PNEUMATIC CHARACTERISTICS

- Standard flow rate: 27 l/min (0.95 scfm)
- Pressure drop: according to the filter dust loading

MECHANICAL CHARACTERISTICS

- Dimensions: 1270 mm x 360 mm x 303 mm
(50 in x 14.2 in x 12 in)
- Weight: ~ 30 kg (~ 66 lb)
- Color: gray RAL 7030 (decontaminable paint)

ELECTRICAL CHARACTERISTICS

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

SIGNALING

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

REFERENCE STANDARDS

- Nuclear: IEC60761-1 and IEC60761-3
- 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™ applications...
- USB converters
- Remote sampling line with outlet and inlet hoses
- Radio modem



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