



FEATURES

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

NGM 209M

Mobile Low Range Noble Gas Monitor

The NGM 209M monitor from the RAMSYS product line has been developed to sample air in discharge stacks or ventilation ducts. The dual silicon diode detector (PIPS) integrated in a $4\pi/3$ cm ($4\pi/1.18$ 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.

APPLICATIONS

- Radioprotection of workers
 - Containment atmosphere
 - Control room air, etc.

RELATED MONITORS

- NGM 202L: noble gas monitor
- NGM 203S: accident range noble gas monitor
- NGM 204L: low range noble gas monitor
- NGM 204S: low range noble gas monitor

radiation monitoring
systems

A Mirion Technologies Division

Featuring:



PHYSICAL CHARACTERISTICS

- Radiation detected: beta and gamma
- Detector: dual large area silicon
- Sampling chamber: 76 ml (76 cc)
- Typical energy windows:
 - Beta: 80 keV to 2.5 MeV
 - Gamma: 80 keV to 2.5 MeV
- Typical measurement range: $3.7 \cdot 10^{+4}$ to 10^{+10} Bq/m³ (10^{-6} to $2.7 \cdot 10^{-1}$ μ Ci/cc)

ENVIRONMENTAL CHARACTERISTICS

- Long term temperature: +10°C to +40°C (+50°F to +104°F)
- Maximum periodic ambient temperature: +5°C to +45°C (+41°F to +113°F)
- MTBF: > 50 000 hours, with preventive maintenance
- TID (processing unit): 100 Gy (10^{+4} rad)

PNEUMATIC CHARACTERISTICS

- Standard flow rate: 22 l/min (0.71 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: 1 RS232 and 2 isolated RS485
- Alarm relays: 3 SPDT relays
- I/O: 2 isolated analog outputs (0/4-20 mA)

SIGNALING

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

REFERENCE STANDARDS

- Nuclear: IEC60761
- EMC: 2006/95/CE and 2004/108/CE

VERSIONS

- 230 Vac or 120 Vac

ACCESSORIES

- Calibration tools
- Software
- USB converters
- Remote sampling line with outlet and inlet hoses
- Radiomodem



MIRION
TECHNOLOGIES

Radiation Monitoring Systems
Division

MGP Instruments SA
BP 1
FR-13113 Lamanon
France

T +33 (0) 4 90 59 59 59
F +33 (0) 4 90 59 55 18

MGP Instruments Inc.
5000 Highlands Parkway
Suite 150
Smyrna, GA 30082
USA

T +1.770.432.2744
F +1.770.432.9179

MGP Instruments GmbH
Landsberger Strasse 328a
DE-80687 Munich
Germany

T +49 (0) 89515 13-0
F +49 (0) 89515 13 169

www.mirion.com
144114EN-A