



RAMSYS

NGM 204L™

Low Range Noble Gas Monitor

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



FEATURES

- Dynamic gamma radiation compensation
- Calculation of the total released activity through a stack, when the flow rate signal is provided
- Compact and reliable
- Minimum periodic maintenance

DESCRIPTION

The NGM 204L monitor from the RAMSYS product line has been developed to sample air in discharge stacks, ventilation ducts or working areas.

The dual silicon diode detector integrated in a $4 \pi/5$ cm ($4 \pi/2$ 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 sample volume and the gamma ambient radiation. This allows noble gas beta measurement with dynamic gamma compensation by the processing algorithms.

PHYSICAL CHARACTERISTICS

- Radiation detected: beta and gamma
- Detector: dual large area silicon
- Sampling chamber: 300 ml (300 cc)
- Typical energy windows:
 - Beta: 80 keV to 2.5 MeV
 - Gamma: 80 keV to 2.5 MeV
- Typical measurement range:
 - ^{85}Kr : $3.7 \cdot 10^{+4}$ to $3.7 \cdot 10^{+14}$ Bq/m³ (10^{-6} to 10^{+4} $\mu\text{Ci/cc}$)
 - ^{133}Xe : $3.7 \cdot 10^{+4}$ to $1.8 \cdot 10^{+13}$ Bq/m³ (10^{-6} to $5 \cdot 10^{+2}$ $\mu\text{Ci/cc}$)

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
- TID: 100 Gy (10^{+4} rad)

PNEUMATIC CHARACTERISTICS

- Standard flow rate: 35 l/min (1.24 scfm)
- Pressure drop: according to the filter dust loading

MECHANICAL CHARACTERISTICS

- Dimensions: 864 mm x 725 mm x 440 mm (34 in x 28.5 in x 17.3 in)
- Weight: ~ 220 kg (~ 495 lb)
- Color: gray RAL 7030 (decontaminable paint)
- Inlet tube connection: \varnothing 12 mm OD (1/2 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 (LPDU only) 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 (Applicable to LPDU only)

- Alphanumeric display: measurement, status...
- Sound alarm: buzzer 90 dBA at 1 meter
- Visual alarm: 3 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
- Local processing and display unit (LPDU) or local processing unit (LPU)
- With or without dust filter holder
- Pumping unit
- Monitor wall or floor fixing plate

ACCESSORIES

- Calibration tools
- Software: MASS2, RAMVISION, SIMS2...
- USB converters

Featuring:

