

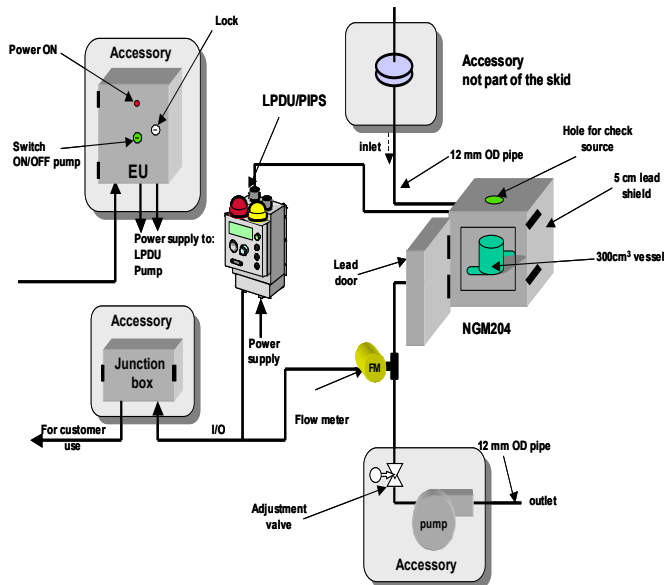


NGM 204 L

Low range noble gas monitor

- continuous air monitoring and display of the radioactive noble gas volumetric activity
- visual, audible and electrical signal alarms when threshold levels are exceeded
- dynamic gamma radiation compensation
- calculation of the total released activity through a stack flow rate signal provided
- high reliability (MTBF > 20 000 hours)
- minimum periodic maintenance

The NGM 204 L 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 (PIPS) 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 β/γ radiation from sample volume and the γ ambient radiation. The second one detects γ radiation from sample volume and the γ ambient radiation. This allows noble gas β measurement with dynamic γ compensation by the processing algorithm. This monitor is also available in mobile or seismic version.



Physical characteristics

- radiation detected: beta and gamma
- detector: double silicon
- sample volume: 300 cc (18.3 in³)
- lead shielding: 4π/5 cm (4 π/2 in)
- measurement range (IEC60761):
 - 3.7 10⁴ to 10¹⁰ Bq/m³ (10⁻⁶ to 2,7 10⁻¹ μCi/cc)
- energy range:
 - 80 keV to 2,5 MeV
- temperature range: +0°C to +55°C (32°F to 131°F)

Electrical characteristics

- power supply: 120V 60Hz - 230V 50Hz
- interfaces:
 - RS 232 Serial link for parameter configuration of the monitor through PC and MASS application software
 - two 0/4 - 20 mA analog outputs, one 0/4 - 20 mA analog isolated input, three programmable relays, two RS 485 isolated serial links

Qualification

- EMI/RFI: EN 55022, IEC 61000-6-2, IEC 61000-6-4

Mechanical characteristics

- protection index: IP 65 and IK 07
- open frame steel structure (decontaminable paint): grey RAL 7030
- sizes: 864 x 725 x 440 mm (34 x 28.5 x 17.3 in)
- weight: ~220 kg (495 lb)
- interfaces:
 - inlet and outlet sampling: pipe φ 12 mm OD (0.47 in)

Alarm signaling (applicable to LPDU only)

- audio indicators: buzzer sound alert rated at 90dBa at one meter
- visual indicators: programmable operation lights such as red for high alarm, yellow for alert alarm, green for normal operation

Accessories

- RAMSYS softwares
- sampling unit 35 l/min (7.7 gallon/min)
- junction box to get all signals on a terminal block
- dust hydrophobic filter
- set of calibration (Co⁶⁰ or Cl³⁶ source and its fixture)
- plates for wall or ground mounting

RAMSYS: Radiation
Monitoring System