



FEATURES

- Compact skid
- 1E qualification and embedded safety related software
- Available under 10 CFR 50 App.B, ASME NQA-1 and IEC 61226 programs for safety related applications

PING 207S

Particulate Iodine and Noble Gas Monitor

The PING 207S monitor forms part of the RAMSYS product line. It has been developed to continuously measure the particulate, iodine and noble gas volumetric activities in stacks, ventilation ducts or working areas. It integrates all the functions and performances of the PM 205, IM 201 and NGM 216 monitors into a single monitor.

APPLICATIONS

- Effluent release monitoring
 - Stacks, etc.
- Radioprotection of workers
 - Containment atmosphere
 - Control room air, etc.
- Post-accident operations (in combination with PIS 203S and NGM 203S)
 - Containment atmosphere
 - Reactor pressure vessel head leaks
 - Stacks, etc.

RELATED MONITORS

- PM 205S: particulate monitoring only
- IM 201S: iodine monitoring only
- NGM 216S: noble gas monitoring only
- PIS 203S: accident range particulate and iodine sampler
- NGM 203S: high range noble gas monitor
- PING 206S: particulate, iodine and noble gas monitor

radiation monitoring
systems

A Mirion Technologies Division

Featuring:



PHYSICAL CHARACTERISTICS

- **Particulate (PM 205):**
 - Radiation detected: beta
 - Detector: 2" thin plastic scintillator + PMT + embedded LED
 - Filter type: fiberglass 49 mm (1.9 in)
 - Typical energy range: > 30 keV
 - Typical measurement range: $3.7 \cdot 10^{-2}$ to $3.7 \cdot 10^{+3}$ Bq/m³ (10^{-12} to 10^{-7} μ Ci/cc)
- **Iodine (IM 201):**
 - Radiation detected: gamma
 - Detector: 1¼"x1" NaI(Tl) + PMT
 - Iodine cartridge: 57.7 mm (2.27 in)
 - Energy range: 100 keV to 3 MeV
 - Typical energy window: 314 - 414 keV (¹³¹I, E_γ 364.5 keV)
 - 1024 channels spectrum
 - Typical measurement range: 3.7 to $3.7 \cdot 10^{+6}$ Bq/m³ (10^{-10} to 10^{-4} μ Ci/cc)
- **Noble gas (NGM 216):**
 - Radiation detected: beta
 - Detector: 2" thin plastic scintillator + PMT + embedded LED
 - Typical energy range: > 30 keV
 - Typical measurement range: $3.7 \cdot 10^{+3}$ to $3.7 \cdot 10^{+9}$ Bq/m³ (10^{-7} to 10^{-1} μ Ci/cc)

ENVIRONMENTAL CHARACTERISTICS

- Long term temperature: +10°C to +40°C (+50°F to +104°F)
- Periodic temperature: -5°C to +55°C (+23°F to +131°F)
- MTBF: > 20 000 hours
- TID: 100 Gy (10^{+4} rad)

PNEUMATIC CHARACTERISTICS

- Standard flow rate: 28.3 l/min (1 scfm)
- Pressure drop: 50 mbar (0.73 psi)

MECHANICAL CHARACTERISTICS

- Dimensions: provided on request
- Weight: provided on request
- Color: gray RAL 7030 (decontaminable paint)
- Inlet tube connection: Ø 25.4 mm OD (1 in)
- Outlet tube connection: Ø 12 mm OD (1/2 in)

ELECTRICAL CHARACTERISTICS

- Power supply: refer to possible versions
- Data link outputs: 1 RS232 and 5 isolated RS485
- Alarm relays: 9 SPDT relays and 5 DPDT relays
- I/O: 8 isolated analog outputs and 4 isolated analog inputs (0/4-20 mA)

SIGNALING

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

REFERENCE STANDARDS

- Nuclear: IEC60761, IEC61171, IEC61172, IEC61578
- Environmental: IEC60780, IEEE323
- Seismic: IEC60980, IEEE344
- EMC: 2006/95/CE and 2004/108/CE, EPRI 102323, MIL STD 461 E, IEC61000-6-2 and IEC61000-6-4

VERSIONS

- 230 Vac or 230 Vac + 400 Vac 3Ø or 120 Vac + 400 Vac 3Ø
- Solenoid check sources for PM 205, IM 201, NGM 216
- PIS particulate and iodine samplers
- Second pump for redundancy

ACCESSORIES

- Local & remote display units
- Calibration tools
- Software
- USB converters



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