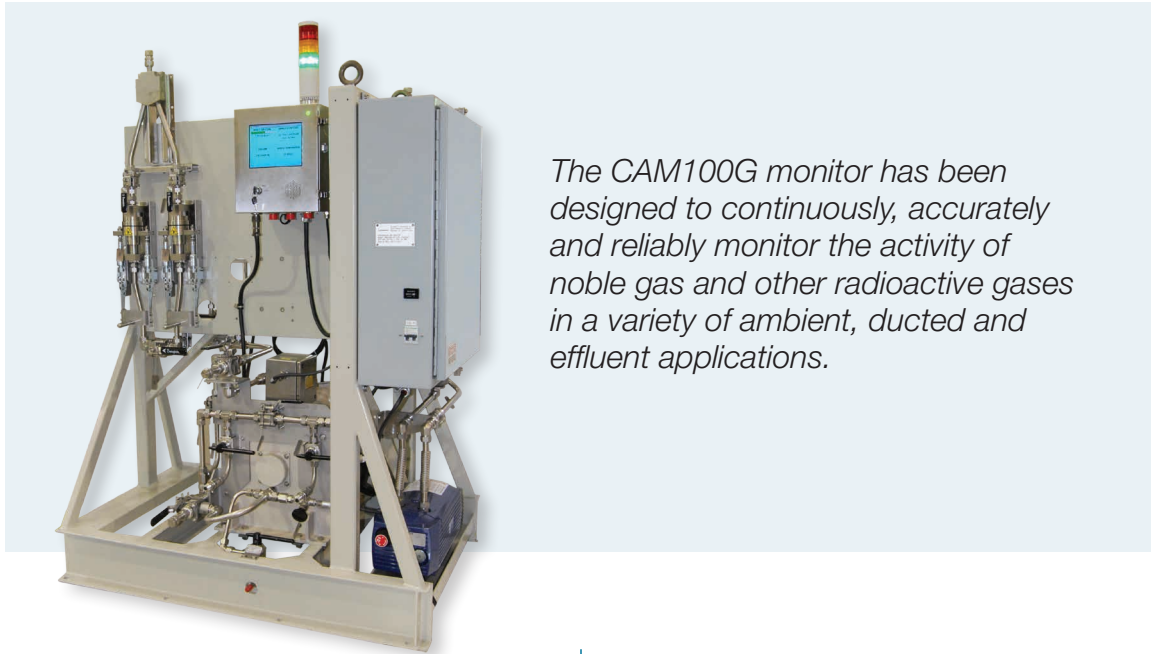




## **CAM100G Radioactive Gas Monitor**



*The CAM100G monitor has been designed to continuously, accurately and reliably monitor the activity of noble gas and other radioactive gases in a variety of ambient, ducted and effluent applications.*

### **FEATURES**

- Low profile, space-saving footprint for easy access and maintenance
- Flow splitter designed to reduce particulate loss and improve collection efficiency at the filter
- Easy, single-hand filter change mechanisms
- Flexible ratemeter supports analog and digital interface with existing control systems; intuitive touchscreen interface provides access to 32 user-configurable virtual channels
- Real-time data acquisition and control
- Low maintenance, simple calibration
- Scintillation detectors with automatic gain stabilization
- Check source for routine performance monitoring
- Gas purge capability
- Grab gas access point simplifies sample collection for laboratory analysis
- Optional stack representative sampling package
- Optional HORIZON™ or RADACS™ integration

### **QUALITY**

The CAM100 Series Samplers are designed and manufactured under a quality system in compliance with the following standards and requirements:

- ISO 9001
- 10CFR21
- 10CFR50, Appendix "B"
- IEEE-730
- ANSI/ASME NQA-1, ANSI/ASME NQA-2, Part 2.7
- CE
- TUV SUD America is a listed NRTL

# CAM100G Radioactive Gas Monitor

## MAJOR ASSEMBLIES

- MG4A Gas Sample Chamber
- MDNR45EPA Extended Range Beta Gas Detector with right angle pigtail matched with PA300E preamplifier
- iR7040 Intelligent Ratemeter
- FA200 in-line particulate/iodine sample collectors
- Sample Pump
- Sample Air Flow Controller
- Pressure Transducer
- Power: 230 V ac 50/60 Hz
- Integrated on a welded steel, seismically qualified open skid/frame
- Stainless Steel sample tubing and components
- <sup>90</sup>Sr Check Source
- Auto Clean/Purge (Optional)
- Integrated Bypass (Optional)

## PHYSICAL

- Noble Gas (MG4A)
- Radiation detected: beta
- Detector: Stabilized Scintillator; 0.25 mm (0.010 in.) thick, 50.8 mm (2 in.) diameter
- Typical energy range: 0.15 – 1 MeV (Max Energy)
- Typical measurement range:  $1.0 \times 10^{+4}$  to  $1.0 \times 10^{+14}$  Bq/m<sup>3</sup> ( $2.7 \times 10^{-7}$  ~  $2.7 \times 10^{+3}$   $\mu$ Ci/cc)

## ENVIRONMENTAL

- Ambient Temperature: 0 °C to +50 °C (+32 °F to +122 °F)
- Ambient Humidity: 0 to 95% relative humidity
- MTBF: >20,000 hours
- TID: 100 Gy ( $10^{+4}$  rad)

## SAMPLE TRANSPORT

- Sample Temperature: 0 °C to 50 °C (+32 °F to +122 °F)
- Internal Pressure: 0 to 1.0 atm (0 to 14.7 PSIG) normal. 1.4 atm (20.5 PSIG) maximum
- Internal Vacuum: 0 to 0.5 atm (0 to 15 in. Hg) normal
- Flow Rate: to 56.63 LPM (to 2 SCFM)
- Pump: Carbon vane, positive displacement vacuum pump

## MECHANICAL

- Mounting: Floor mounted skid.
- Skid Size: 1235 x 864 x 1880 mm (48 x 34 x 74 in.) (L x W x H)
- Skid Weight: Up to 907 kg (2000 lb), approximately

## ELECTRICAL

- Power: 230 V ac 50/60 Hz (other voltages available)
- 15 A service
- One Ethernet (10Base-T)
- Three RS-485 serial, two isolated
- Two RS-232 serial
- Eight safety rated relays. One for faults, seven for alarms, etc.

## DISPLAYS AND ALARMS

- Large, 21 cm (8.25 in.), diagonal industrial, hardened, color touch-screen display
- Bright, tricolor LED; red, amber and green
- Front panel embedded audible alarm annunciator with adjustable volume and local silencing
- Tricolor light tower for optimum visibility and indication of status; red, amber and green

## OPTIONS

- HORIZON Supervisory software package offers the capability for achieving complete system integration. For complete information, see the HORIZON specification sheet
- Stack representative sampling packages designed in accordance with the ANSI-N13.1, 1999, 2011
- Dual Pumps
- Heat trace on Sample lines
- RG1 Reference calibration assembly
- Reference calibration sources
- Semi-Auto Clean Air Purge
- Integrated Bypass



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