



OLM4 On-Line Process Monitor



OLM4 Monitor shown in optional skid configuration

OLM4 On-Line monitors are designed to continuously, accurately and reliably detect the gamma activity of gaseous or liquid effluent releases from a variety of operational processes throughout the plant. An extended calibration cycle is achievable because of a simple functional design with no moving parts, use of low current consuming electronics, and the advantage of CANBERRA's exclusive detector stabilization technology that automatically compensates for gain shifts caused by changes in temperature and aging.



OLM4 Shield assembly

FEATURES

- Continuous liquid and/or gas radioactivity monitoring using unique LED gain-stabilized 2" x 2" NaI scintillation detectors
- Low profile, space-saving footprint for easy access and maintenance
- Modular design
- 4π 4" shielding; Clamshell design provides easy installation
- Configurable to fit various pipe sizes up to 4" (100 mm)
- Extended dynamic range
- Flexible ratemeter supports analog and digital interface with existing control systems; intuitive touchscreen interface provides access to user-configurable virtual channels
- Real-time data acquisition and control
- Low maintenance, simple calibration
- Check sources for routine performance monitoring
- Optional HORIZON™ or RADACSTM™ integration

QUALITY

The OLM4 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

OLM4 On-Line Process Monitor

MAJOR ASSEMBLIES

- OLM4 Shield Sampler
- MDN55EV1PA Beta Gamma Scintillation Detector with Preamplifier
- iR7040 Intelligent Ratemeter
- Cs-137 check source
- Optionally integrated on a welded steel, open skid/frame

CHANNEL CHARACTERISTICS

- Sampler Specifications
 - OLM4 Sampler Weight: 767 kg (1690 lb) nominal
 - Max Designed Process Fluid Temperature: +150 °C (+302 °F)
 - Size: 622.3 x 559 x 762 mm (24.5 x 22 x 30 in.) (L x W x H) approximate
- MDN55EV1 Gamma Detector
 - Detector Type: NaI crystal, 50.8 x 50.8 mm (2 x 2 in.)
 - Typical Energy Range: 0.10 – 3 MeV (Max Energy)
 - Typical Measurement Range: 3.7×10^3 to 3.7×10^9 Bq/m³ (1×10^{-7} to 1×10^{-1} µCi/cc)
 - Temperature: –10 °C to +50 °C (+14 °F to +122 °F)
- PA300E Preamplifier
 - Ambient Temperature: –10 °C to +50 °C (+14 °F to +122 °F)
 - Humidity: 0-95%, non-condensing
 - Housing: NEMA-4X stainless steel box
 - Dimensions: 152.4 x 152.4 x 101.6 mm (6 x 6 x 4 in.) (L x W x H)
 - Weight: 1.81 kg (4 lb)
- MX9B(V19) Check Source
 - Size – 102 x 76 x 38 mm (4 x 3 x 1.5 in.)
 - Weight – 0.5 kg (1 lb)
 - Check Source – 9 µCi (nominal) ¹³⁷Cs
- iR7040 Intelligent Ratemeter
 - Ambient Temperature: –10 °C to +50 °C (+14 °F to +122 °F)
 - Humidity: 0-95%, non-condensing
 - Housing: NEMA-4X stainless steel box
 - Dimensions: 152.4 x 152.4 x 101.6 mm (6 x 6 x 4 in.) (L x W x H)
 - Weight: 1.81 kg (4 lb)

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
- Eight safety rated relays. One for faults, seven configurable for alarms, etc.

ENVIRONMENTAL

- Ambient Temperature: 0 °C to +50 °C (+32 °F to +122 °F)
- Ambient Humidity: 0 to 95% relative humidity non-condensing

POWER REQUIREMENTS

- 120 V ac or 230 V ac 50/60 Hz (other voltages available)
- 2 A (120 V) or 1 A (230 V)
- 200 W

COMMUNICATIONS

- One Ethernet
- Three RS-485 serial, two isolated
- Two RS-232 serial

OPTIONS

- HORIZON Supervisory Software package enables complete system integration. For detailed information, see the HORIZON specification sheet
- RG1 Reference calibration assembly special tools
- Reference calibration sources



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