Model CRM-2,
Continuous Passive Radon Monitor

The CRM-2 is a stand-alone Radon Measurement System ideally suited for unattended continuous passive monitoring and measurement of radon gas concentrations. The unit is housed in a lockable stainless steel enclosure allowing it to be situated in severe environments where a portable instrument would be unsuitable. The micro-processor controlled system is a highly sensitive and reliable laboratory grade instrument which allows for fast, accurate measurements of radon levels. The Instrument features a detachable control module and detector that allows for ease of maintenance and calibration. The detector assembly may be located within the enclosure or externally up to 50 feet away from the monitor. An external siren gives audible indication that alarm levels have been exceeded. An external strobe gives a visible indication even in high ambient light conditions.

Applications:

- Waste Site Monitoring
- Radioactive Site Clean-up
- Autonomous Continuous Monitoring
- Mining/Ore Processing
- Industrial Sites
- Perimeter Monitoring
- Custom Applications

Features:

- Lockable weather resistant enclosure
- High sensitivity
- Additional Lithium battery supports memory during a power interruption
- Back-lit alphanumeric display
- Displays activities in PlCi/l or Bq/m³
- User programmable measurement interval and alarm

Theory of Operation:

The radon detector is comprised of a Lucas type cell. The gas to be sampled naturally diffuses through a radon permeable membrane into the cell. As the radon decays it emits an alpha particle that strikes the silver activated zinc sulfide coating of the cell. The energy of the alpha particle is converted to a light pulse by the phosphor. The light pulse is amplified by the PMT and counted by the CRM-2 over the measurement interval.
**Specifications:**

**GENERAL**
- Mode of Operation: Continuous.
- Sample & Count Periods: User Programmable.
- Maximum Counting Rate: 15,000 cps
- Electronic Background: < 0.4 cpm

**DETECTOR**
- Detector: Pylon Model 200P Lucas Type Passive Cell.
- Detection Specifications: Please refer to the Passive Cell brochure.

**POWER**
- Power Supply Requirements: 120 / 240 VAC, 50 / 60 Hz, 1 A.
- Battery Type(s):
  1) Integrated 6V gel cell.
  2) Integrated Lithium battery for RTC circuit.
- Battery Operating Time: 72 Hrs
- Battery Charge Time: 16 Hrs

**FEATURES**
- Display: 20 Character by 4 Line Backlit Graphic Liquid Crystal Display.
- Memory: 2048 data points (85 days at 60 min intervals).
- Data Port:
  1) RS-232 via 9 pin D-Sub Connector.
  2) 5V TTL Negative Going Pulse via BNC Connector.
- 4) 4 - 20 mA via Mil Style Connector (Optional).
- Low Battery Indicator: Displays "Low Battery".
- ALARMS
  - Alarm Level: Programmable.
  - External Alarm Output: Isolated contact, 1A nominal @ 24V.

**ENVIRONMENTAL**
- Operating Temperature Range: 0 to +50 (-32 to +122) °C (°F)
- Storage Temperature Range: -20 to +60 (-4 to +140) °C (°F)
- Relative Humidity Range: 0 to 90 % - Non-Condensing.

**DIMENSIONS**
- Length: 17.1 (6.75) cm (in.)
- Width: 40.6 (16) cm (in.)
- Height: 57.2 (22.5) cm (in.)
- Weight: 14 (30) kg (lb.)

* Values are nominal.

**Ordering Information:**

Model CRM-2 Order part number 6243400.

Options (Other options are available. Please contact Pylon):

- Heater (Factory Installed): Order part number 6243650.
- External Alarm System: Order part number 6243640.
- Current Loop (Factory Installed): Order part number 6243360.

Specifications subject to change without notice.
Trademarks are the properties of their respective holders. All Rights Reserved.
Datasheet: 125 Rev 3

---

**PYLON ELECTRONICS INC.**
147 Colonnade Road, Ottawa, ON K2E 7L9 CANADA
https://pylonelectronics-radon.com
TEL: 613-226 7920
FAX: 613-226 8195
instrument@pylonelectronics.com