

LUDLUM MEASUREMENTS, INC.

Model 375P-336 Series Monitoring System

Features

- Excellent Surface Contamination Screening Tool for Small Articles, Baggage, Packages, and Medical Waste
- Affordable Digital Controller
- 2 Large Plastic Scintillation Detectors
- Programmable Alarms
- Networkable (Requires Ethernet or Webpage Option)
- Includes Check Source for Calibration
- 24-Hour Battery Backup



Introduction

The Model 375P-336 Series are monitoring systems that consist of a Model 375P digital controller coupled with two lead shielded 2753 cm³ (168 in³) plastic scintillation detectors. The Model 375P-336 is designed for indoor applications, while the Model 375P-336-1L has detectors housed in waterproof enclosures that can be mounted outdoors. The Model 375P controller is not weatherproof and must be mounted either indoors or within an environmental enclosure (available separately).

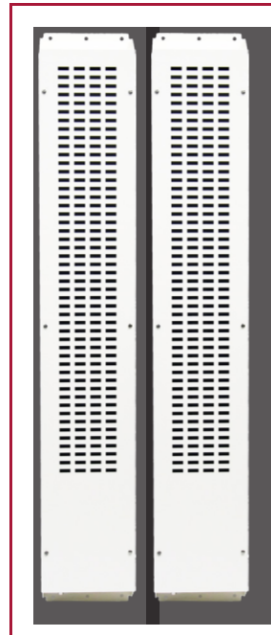
These simple and cost-effective solutions offer a system that is easy to operate and maintain. The controller supplies local alarms but can also be connected to external alarms or put onto an Ethernet network if desired. Each system has a 24-hour batter backup to keep it operational in the event power is lost.

Applications

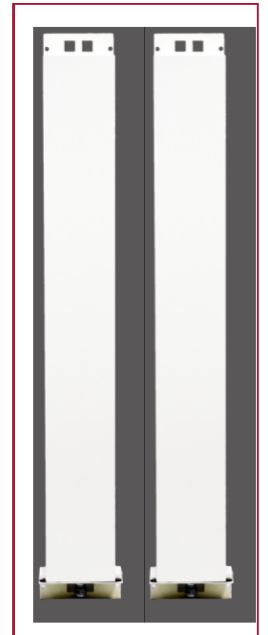
Medical: The Model 375P-336 Series are ideal for monitoring personnel or laundry for possible contamination in a nuclear medicine department. The monitor may also be used as a radiation contamination triage device to alert emergency department personnel of potentially contaminated patients or equipment coming into the emergency room. In environments where equipment, carts, or other traffic may strike and damage the detectors, Ludlum Measurements encourages the use of an optional protective rail (PN 2311167).

Surface Contamination Inspection: Inspecting items using handheld instruments can be too time consuming in many cases. The Model 375P-336 Series facilitate more rapid and uniform inspections by placing two relatively large scintillation detectors in close proximity to incoming or outgoing articles undergoing inspection. Both detectors are continuously monitored by the digital controller so any contaminated item can immediately trigger an alarm. Alarm conditions can be set up to automatically halt production conveyance devices, notify the central office, and even alert key personnel to initiate an immediate response.

Model 375-336 Detectors



Model 375-336 -1L Detectors



Specifications

Model 375P-336 Part Number: 48-3285

Model 375P-336-1L Part Number: 48-4427

DETECTORS: 2 ea. 2753 cm³ (168 in³) plastic scintillation detectors. Each detector has 3 mm (0.125 in.) thick lead shielding on the back and sides and is supplied with a 15.2 m (50 ft) coaxial cable.

TYPICAL SENSITIVITY (¹³⁷Cs): 200 cps per μ R/hr per detector

DISPLAY: 4-digit LED display with 2 cm (0.8 in.) digits

RANGE: 0.1 to 9999 kcps

LINEARITY: reading within 10% of true value

STATUS INDICATORS:

- **Status:** green light indicates instrument is functioning properly
- **Sigma Alarm:** indicated by red ALARM light and audible tone (can be set at any point from 0.1 to 999 sigma)
- **Sum Alarm:** indicated by red ALARM light and audible tone (can be set at any point from 0.1 to 9999 kcps)
- **Detector Fail:** red light (DET FAIL) and audible tone greater than 68 dB at 61 cm (2 ft), indicates no counts from detector or instrument failure
- **Low Battery:** yellow light (LOW BAT), indicates less than 2 hours of battery power remaining
- **Overload:** display reading of “-OL-” and audible FAIL alarm indicate detector saturation
- **Overrange:** display reading of “---”, indicates measured radiation field has exceeded counting range of instrument

ALARM RESPONSE TIME: 2 seconds or less, based on internal dip switch setting

RELAY OUTPUT: mains (120 or 240 Vac) output on alarm, 9-pin connector providing RS-232 output, signal ground connection, FAIL and ALARM signals (current sink), and direct connection to battery and ground

CALIBRATION CONTROLS: accessible from front of instrument (protective cover provided)

POWER: 95–135 Vac (178–240 Vac available), 50–60 Hz, 6 volt sealed lead-acid rechargeable battery (built-in)

BATTERY LIFE: typically 24 hours in non-alarm condition, 6 hours in alarm condition

BATTERY CHARGER: battery is continuously trickle-charged when instrument is connected to line power and turned on

CONSTRUCTION:

Electronics: aluminum housing with ivory powder-coat

Model 375P-336 Detectors: aluminum housing with ivory powder-coat

Model 375P-336-1L Detectors: weatherproof aluminum housing with ivory powder-coat

ENVIRONMENTAL RATING:

Model 375P-336 Detectors: IP50

Model 375P-336-1L Detectors: IP66

Electronics: IP51 (IP66 with Model 375P environmental closure)

TEMPERATURE RANGE: -15 to 50 °C (5 to 122 °F)

SIZE (H x W x D):

Electronics: 26.2 x 24.6 x 8.4 cm (10.3 x 9.7 x 3.3 in.)

Model 375P-336 Detectors (ea.): 104.1 x 17.1 x 5.3 cm (41 x 6.8 x 2.1 in.)

Model 375P-336-1L Detectors (ea.): 104.1 x 17 x 7.6 cm (41 x 6.7 x 3 in.)

WEIGHT:

Electronics: 4.2 kg (9.3 lb)

Model 375P-336 Detectors (ea.): 11.3 kg (25 lb)

Model 375P-336-1L Detectors (ea.): 14.1 kg (31 lb)

OPTIONS

Various options are available for Model 375 Series systems, including enclosures, remote displays, alarm annunciators, signal output, and networking options. Visit our website to view the current list of available options.

ALSO AVAILABLE

Model 375P-336V & Model 375P-336-1LV

These versions include IR sensors that prevent the unit from alarming unless something is passing between the detectors and the alarm threshold has been exceeded.