

Model 375-20 Monitoring System



Ludlum Measurements, Inc.

Features

- Affordable Digital Controller
- 2 Weatherproof, Shielded Sodium Iodide [NaI(Tl)] Detectors with 61 m (200 ft) Cables
- Programmable Alarms
- Networkable, Requires Ethernet or Webpage Option
- 48-Hour Battery Backup
- Includes Cesium (¹³⁷Cs) Check Source



Introduction

This simple and cost-effective vehicle gateway monitor consists of 2 Model 44-137 lead-shielded scintillation detectors, supplied with or without environmental enclosures, linked to the Ludlum Model 375 Controller. The adaptable, compact, networkable controller's digital design enhances setup and operation of the system. It is typically wall-mounted indoors near the operator to take advantage of its ability to supply local alarms, but the controller may also be connected to external alarms or networked into the Ethernet, if desired (with optional accessories). The 48-hour battery backup keeps the system operational in the event line power is lost.

Specifications

Part Number: 48-3245

INDICATED USE: radiation monitoring

SYSTEM OPERATION: typically located at the scale/entrance area, the system will continuously monitor materials for radiation

DETECTORS: 2 ea. 5.1 x 5.1 cm (2 x 2 in.) (Dia x L) sodium iodide [NaI(Tl)] lead shielded scintillation detectors in weathertight housings

TYPICAL SENSITIVITY (¹³⁷Cs): 900 cpm per μ R/hr per detector

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

RESPONSE: typically 3 seconds from 10% to 90% of final reading

DISPLAY UNITS: kcpm

LINEARITY: readings within 10% of true value with detectors connected

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

STATUS: (green light) instrument functioning properly

LOW ALARM: (yellow LOW ALARM light and slow beep) can be set at any point from 0.0 to 9999

HIGH ALARM: (red HIGH ALARM light and fast beep) can be set at any point from 0.0 to 9999

DET FAIL: (red light and audible tone) indicates no count from detectors or instrument failure

LOW BAT: (yellow light) indicates less than 2 hours of battery power remaining

OVERLOAD: "-OL-" display and audible FAIL alarm indicates detector saturation

OVERRANGE: "- - -" display and activated low and high alarms indicates measured radiation field has exceeded the counting range

ALARM AUDIO OUTPUT: 85 dB at 0.6 m (2 ft) (3 kHz)

REMOTE (optional): Ludlum Model 271 or Model 272 allows for connection of red strobe for remote indication of an alarm

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

BATTERY LIFE: typically 48 hours in non-alarm condition; 12 hours in alarm condition

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

CONSTRUCTION: (controller) aluminum housing with ivory powder coat

TEMPERATURE RANGE: -20 to 50 °C (-4 to 122 °F), may be certified for operation from -40 to 65 °C (-40 to 150 °F)

SIZE: electronics: 18.7 x 24.6 x 6.4 cm (7.5 x 9.7 x 2.5 in.) (H x W x L); detectors: 8.9 x 22.4 cm (3.5 x 8.8 in.) (Dia x L)

WEIGHT: electronics 2.9 kg (6.5 lb); detectors: 5.8 kg (12.7 lb) each

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.