

Model 375

Digital Wall-Mount Area Monitor

Radiation Detection for a Safer World



Ludlum Measurements, Inc.

Features

- Easy Setup and Use
- Detection Range Dependent on Detector
- User-Programmable Alarms
- User-Programmable Units of Measurement
- Adapts to a Wide Variety of Detectors
- Networkable
- 48-Hour Battery Backup
- CE Certified



Part Number: 48-2230



Views of left side panel and bottom panel of instrument.

Introduction

The Model 375 is a versatile, compact, and easy-to-use digital electronic controller designed for monitoring radiation in areas. Its simple design accommodates many different detectors to suit a wide variety of applications, and it is equipped with a local readout and alarms. These versatile units may also be connected to an optional auxiliary indicator/annunciators to alert personnel at remote locations. The user-friendly, digital design enhances setup and operation. The Model 375 units may also be networked to a central PC-based station where data are logged and alarms posted.

This affordable and very flexible system has found its way into many applications resulting in a full complement of detectors, accessories, and options that include remote indicator alarms, printers, relay outputs, weather-proof enclosures, Ethernet networking software, industrial cameras, and more.

Sites requiring centralization of their data can link multiple 375 systems together via Ethernet and view them using a common web browser with the purchase of Ludlum's Webpage & Service Software. This program collects all data in real time, logs data, and annunciates any alarms. The system can also

send intelligent e-mail alerts to responsible personnel and capture a picture of whatever triggered an alarm if optional Ethernet cameras are employed.

Preconfigured Area Monitoring Systems that incorporate the Model 375 Digital Wall-Mount Area Monitor include:

Model Operating Range

| | |
|--------|--|
| 375 | dependent on detector (Part Number 48-2230) |
| 375/1 | 0.1–9999 μ R/hr (Part Number 48-3831) |
| 375/2 | 0.1 mR/hr to 1 R/hr (Part Number 48-2410) |
| 375/4 | 1.0 mR/hr to 8 R/hr (Part Number 48-2411) |
| 375-10 | 1.0 μ R/hr to 2,000 μ R/hr (Part Number 48-3443) |



Also Available: optional NEMA 4 Weatherproof Enclosure for Model 375 (Part Number 4396-068)

Model 375

Digital Wall-Mount Area Monitor



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Specifications

INDICATED USE: radiation monitoring

COMPATIBLE DETECTORS: GM, proportional, and scintillation

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

DISPLAY RANGE: 000.0 TO 9999 (Series One: 00.00 to 9999)

DISPLAY UNITS: can be made to display in $\mu\text{R/hr}$, mR/hr , R/hr , $\mu\text{Sv/h}$, mSv/h , Sv/h , $\mu\text{rem/hr}$, mrem/hr , rem/hr , cpm , cps , and others

LINEARITY: readings within 10% of true value

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

INDICATORS:

- STATUS: (green light) instrument functioning properly
- LOW ALARM: (yellow light and slow [1 per second] beep) can be set at any point from 0.0–9999
- HIGH ALARM: (red light and fast [4 per second] beep) can be set at any point from 0.0–9999
- DET FAIL: (red light and audible tone) for conditions of detector overload, no count from detector, or instrument failure
- LOW BAT: (yellow light) indicates less than 2 hours of battery power remaining
- OVERLOAD: display reading of -OL- and audible FAIL alarm indicate detector saturation
- OVER-RANGE: display reading of "----" and activated low and high alarms indicate that the radiation field being measured has exceeded the counting range of the instrument (or when dead time correction accounts for more than 75% of the displayed reading)

REMOTE (optional): allows for connection of Ludlum Model 271 or 272 remote units

RELAYS: failsafe form C relays included

CONNECTOR: series "C" (others available)

ETHERNET (optional): 10 Base-T connection for use with Ludlum's software

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

HIGH VOLTAGE: user-adjustable from 200 to 2500 volts

DEAD TIME: user-adjustable to compensate for dead time of the detector and electronics (can be read of the display)

AUDIO: Intensity can vary from approximately 68 dB to 100 dB through operation of the external rotary baffle and the internal voltage connection. Frequency is approximately 3 kHz

RS-232 OUTPUT: a 2-second dump for computer data logging

POWER: 9 Vdc wall-mount adapter, handles any mains voltage in the world, supplied with four sets of prongs for almost any style wall receptacle

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

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

CONSTRUCTION: aluminum housing with ivory powder-coat finish

TEMPERATURE RANGE: -15 to 50 °C (5 to 122 °F); may be certified for operation from -40 to 65 °C (-40 to 150 °F)

SIZE: 18.7 x 24.6 x 6.4 cm (7.4 x 9.7 x 2.5 in.) (H x W x D)

WEIGHT: 2.1 kg (4.7 lb)

Options

Environmental Enclosure for Model 375: NEMA 4 Weatherproof Enclosure (Part Number 4396-068)

Date/Time Printer with Cable (Part Number 4396-072)

Industrial Camera Option: High Speed IP Video, 1280 x 1024 Resolution (Part Number 2311120)

Optional Indoor/Outdoor Camera Housing for Model 375 Camera (Part Number 21-9068)

Model 271: Remote Display/Annunciator for Model 375 Monitors (Part Number 48-2475)

Model 272: Remote Display/Annunciator for Model 375 Monitors (Part Number 48-2656)

Model 375 Ethernet Software for up to 50 Ethernet-enabled Model 375 Monitors (Part Number 1370-055)

Model 375 Webpage & Service Software: Model L-1370-077 (Part Number 370-077)

Model 375 Ethernet Port Option (Part Number 4396-579)

Litestak Assembly Signal Enclosure (Part Number 4396-1001)

4-20mA Modification (Part Number 4558-104)

Model 375 Horn, Strobe, Relay & Cable, 100 V (Part Number 4558-145)

Model 375 Horn, Strobe, Relay & Cable, 220 V (Part Number 4558-146)

Model 375 Strobe, 110 V (Part Number 4558-147)

Model 375 Strobe, 220 V (Part Number 4558-148)

Model 375 Horn & Relay, 110 V (Part Number 4558-149)

Model 375 Horn & Relay, 220 V (Part Number 4558-150)

(Many other options are available. Please visit our web page or catalog to learn more.)

