

# Model 375/4

## Digital Wall-Mount Gamma Area Monitor

*Radiation Detection for a Safer World*



Ludlum Measurements, Inc.

### Features

- Easy Setup and Use
- Internally Mounted Energy Compensated GM Detector
- Range: 10  $\mu\text{Sv/h}$  to 100 mSv/h  
(1.0 mR/hr to 10 R/hr)
- User-Programmable Alarms
- User-Programmable Units of Measurement
- Audio and Visual Alarms
- Networkable
- 48-Hour Battery Backup



Part Number: 48-2410



Views of left side panel and bottom panel of instrument.

### Introduction

The Model 375/4 Digital Wall-Mount Area Monitor is designed for visibility and ease of use. This monitor incorporates an internally housed energy compensated GM detector with a range from 10  $\mu\text{Sv/h}$  to 100 mSv/h (1.0 mR/hr to 10 R/hr). It features a wall-mount chassis and a four-digit LED display that is readable from 9 meters (30 feet) away. Backlit indicators warn of low radiation (yellow), high radiation (red), instrument failure (red), and low battery (yellow), along with an alarm. A green status light is a positive indication of instrument operation.

Parameters are protected under a calibration cover. Calibration is easily accomplished by moving the CAL dipswitch to the right, and using the pushbuttons to increment or decrement the calibration constant, dead time correction, and alarm point parameters. Parameters are stored in non-volatile memory (retained even with power disconnected). A five-decade logarithmic analog output is provided. The battery backup provides 48 hours of additional use after the primary power is removed.

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

#### Model Operating Range

<b>375/2</b>	1 $\mu\text{Sv/h}$ to 9999 $\mu\text{Sv/h}$ (0.1 mR/hr to 1 R/hr)
<b>375/4</b>	10 $\mu\text{Sv/h}$ to 100 mSv/h (1.0 mR/hr to 10 R/hr)
<b>375-9</b>	any 5 consecutive decades from 1.0 $\mu\text{Sv/h}$ to 20 mSv/h (0.1 mR/hr to 1000 R/hr)
<b>375-10</b>	1.0 $\mu\text{Sv/h}$ to 20 mSv/hr (1 $\mu\text{R/hr}$ to 2000 $\mu\text{R/hr}$ )



Optional Environmental Enclosure for Model 375 Digital Controller : NEMA 4 Weatherproof Enclosure with see-through front window (Part Number 4396-068)

# Model 375/4

## Digital Wall-Mount Area Monitor



Ludlum Measurements, Inc.

### Specifications

COMPATIBLE DETECTORS: GM, proportional, and scintillation

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

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

OPERATING RANGE: 1  $\mu$ Sv/h to 10 mSv/h (0.1 mR/hr to 1 R/hr)

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

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

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

INDICATORS:

- STATUS: (green light) instrument functioning properly
- LOW ALARM: (yellow light and slow beep) can be set at any point from 0.0–9999 (00.00 to 9999 for Series One)
- HIGH ALARM: (red light and fast beep) can be set at any point from 0.0–9999 (00.00 to 9999 for Series One)
- 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
- OVERRANGE: 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

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 off the display)

AUDIO: can vary from approximately 68 dB to 100 dB through operation of the external rotary baffle and the internal voltage connection

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

POWER: 9 Vdc wall-mount adapter with four sets of prongs for almost any style wall receptacle, 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 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) *(pictured)*

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

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

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

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

Model 375 Ethernet Software for up to 50 Ethernet-enabled Model 375 Monitors (Part Number 370-055)

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

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

Litestak Assembly Signal Enclosure (Part Number 4396-1001)

Model 375 Ethernet Option for 2010 and later (Part Number 4558-035)

4-20 mA 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) *(pictured)*

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

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

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

