

LUDLUM MEASUREMENTS, INC.

Model 3001 Multi-Detector Survey Meter

Features

- 4 Selectable & Configurable Detector Settings
- Large Backlit LCD for Ease of Reading
- Autoranging
- Rate, Max, and Count Modes of Operation
- Splash-Resistant Construction for Outdoor Use
- 4-Button Intuitive Interface for Easy Operation
- All-Digital Calibration
- USB Port
- Lighter Weight and Ruggedly Built
- Datalogging and Headphone Options



Introduction

The Model 3001 is a durable, lightweight instrument designed for alpha, beta, or gamma radiation survey. It can support up to four external detectors, each with its own set of calibration and user parameters. The instrument features a large, easy-to-read LCD screen and audible alarms and is controlled using a simple five-button interface. The unit body is made of high-impact plastic and splash resistant construction allows the instrument to be used outdoors.

Three modes of operation are available – RATE, MAX, and COUNT – which can be selected by pressing the MODE button. Measurements can be collected in two sets of units (primary and secondary) for RATE and MAX modes in cps, cpm, Bq, dpm, mR/h, or $\mu\text{Sv/h}$ units. The user can switch between the two sets of units by pressing the UNITS button. The DETECTOR button is used to switch between the active detector settings, indicated by the colored LEDs above the control buttons. When enabled with the optional Lumatic Data Logger Kit (PN: 4498-1019), data can be logged in any of the operational modes using the LOG button on the handle. Up to 1000 data points can be stored internally.

Instrument setup can be done either through the front-panel controls or via the Lumatic Calibration Kit (PN: 4498-1018). The Model 3001 is shipped ready to use with batteries and a calibration certificate.

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Note: specifications subject to change without notification. We are not responsible for errors or omissions.

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Specifications

Part Number: 48-4036

COMPATIBLE DETECTORS: GM, Scintillation, or Proportional

DISPLAY: 3-digit auto-ranging LCD with large 20 mm (0.8 in.) digits. Units: (k)cps, (k)cpm, (k)Bq, (k)dpm, (μ)(m)R/(h), (μ)(m)Sv/(h).

Indicators: bar graph, MAX, ALARM, USB, audio, low battery.

DISPLAY RANGE:

- 0.0 cps to 99.9 kcps
- 0.00 cpm to 999 kcpm
- 0.00 Bq to 99.9 kBq
- 0.00 dpm to 999 kdpm
- 0.00 μR/h to 999 R/h
- 0.00 μSv/h to 999 Sv/h

Max display can be set to limit display to calibrated range

LINEARITY: within 10%

BACKLIGHT: Built-in ambient light sensor automatically activates LED backlight, unless internal dipswitch is set to continuous-on (will reduce battery life)

USER CONTROLS:

- ON/ACK: Press to turn ON; Tap to acknowledge alarms and silence alarm tone; Press to reset sigma audio alarm; Hold for OFF
- MODE: Alternates between RATE (count rate), MAX (captures peak rate), and COUNT (user-selectable preset count time from 0 to 10 minutes). Number of modes can be reduced in setup.
- DETECTOR: Selects active detector
- UNITS: Changes the units between count rate (cpm, cps), dose/exposure (μSv/h, mR/h), or disintegration (dpm, Bq)
- LOG: Press to store meter reading (requires Lumic Data Logger Kit)

DATA LOGGING: Can store up to 1000 data points internally. Requires Lumic Data Logger Kit (PN: 4498-1019)

RESPONSE TIME: User-selectable from 1 to 60 seconds, or Auto-Response Rate FAST or SLOW

ALARMS: Count rate, exposure/dose, and scaler alarm setpoints adjustable over the display range

OVERLOAD PROTECTION: High count rate saturation protection prevents false display of lower count rates

LOSS OF COUNT PROTECTION: After a user-settable time interval (default 60 seconds) of no pulses from detector, unit will flash a zero reading and the alarm audio will be triggered

DEAD TIME CORRECTION: Employs first and second order corrections for extended performance

HIGH VOLTAGE: 400 to 1500 Vdc

THRESHOLD: -2 to -100 mVdc

AUDIO: Greater than 75 dB at 0.6 m (2 ft), approximately 4.5 kHz

POWER: Four alkaline or four rechargeable "AA" batteries (instrument does not support in-device charging)

BATTERY LIFE: Approximately 500 hours (as low as 100 hours with backlight configured for continuous-on), 16-hour low battery warning

CONSTRUCTION: High-impact plastic with water-resistant rubber seals and separate battery compartment

TEMPERATURE RANGE: -20 to 50 °C (-5 to 122 °F), may be certified for operation from -40 to 65 °C (-40 to 150 °F)

ENVIRONMENTAL RATING: NEMA rating of 5 or IP rating of 53

SIZE (H x W x L): 16.5 x 11.4 x 21.6 cm (6.5 x 4.5 x 8.5 in.)

WEIGHT: 0.9 kg (2.0 lb)

Options:

Lumic Calibration Kit (PN 4498-1018): Includes software and required cable. Lumic Calibration Software allows reading and writing of important instrument parameters via a USB port.

Lumic Data Logger Kit (PN 4498-1019): Includes software and required cable. Lumic Data Logger Software is required to use instrument data logging features.

Bluetooth® Option (4498-1024): Wirelessly connects the instrument with an Android or iOS mobile device.

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