

Model 3001

Multi-Detector Survey Meter



Ludlum Measurements, Inc.

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



front panel controls

Part Number: 48-4036

Introduction

Ludlum Model 3001 is a versatile, lightweight, ergonomically-designed instrument with up to four external detectors used for alpha, beta, or gamma radiation survey. Three modes of operation – RATE, MAX, and COUNT – are available. Measurements can be collected in two sets of units (primary and secondary) for RATE and MAX modes in cps, cpm, Bq, dpm, mR/hr, or $\mu\text{Sv/h}$ units. Users can switch between two sets of chosen units by simply pressing the Units button. The DETECTOR button selects the color-coded detector and activates the corresponding color LED.

An internal switch is used to enable or disable the front-panel setup feature to protect desired settings from inadvertent modification. Setup is also available via software available from Ludlum Measurements. This instrument features a large, easily-readable LCD (liquid crystal display), a piercing audio warning tone, and easy, intuitive, user-friendly design. Splash-resistant construction allows the Model 3001 to be used outdoors. The unit body is made of lightweight, durable, high-impact plastic. The Model 3001 is shipped ready to use with batteries and calibration certificate.

Specifications

DETECTOR: may be Geiger-Mueller (GM), scintillator, or proportional

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

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

LOSS OF COUNT ALARM PROTECTION: after preselected time interval (default 60 seconds) of no pulses from detector, audible and visual alarms will be activated

LCD DISPLAY: 3 digit LCD with large 20 mm (0.8 in.) digits, (k)cps, (k)cpm, (k)Bq, (k)dpm, (μ)(m)R/(h), (μ)(m)Sv/(h), low-battery indicator, MAX, ALARM, AUDIO

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 $\mu\text{R/h}$ to 999 R/h; 0.00 $\mu\text{Sv/h}$ to 999 Sv/h. Max Display can be set to limit display to calibrated range

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 NORMAL (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 ($\mu\text{Sv/h}$, mR/h), or disintegration (dpm, Bq)

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

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

POWER: four alkaline "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 (National Electrical Manufacturers Association) rating of 4x or IP (Ingress Protection) rating of 65

PHYSICAL: SIZE: 16.5 x 11.4 x 21.6 cm (6.5 x 4.5 x 8.5 in.) (H x W x L); WEIGHT: 0.9 kg (2.0 lb)