

# 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

The Ludlum Model 3001 is a versatile, lightweight, ergonomically-designed instrument used for alpha, beta, or gamma radiation survey that can support up to four external detectors, each with its own set of calibration and user parameters. Features include a large, easily-readable LCD, an audio warning tone, and easy, intuitive, user-friendly design. 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. The DETECTOR button selects the color-coded detector and activates the corresponding

color LED. The standard handle includes a LOG pushbutton that allows the instrument to log up to 1000 data points when activated with the optional Lumatic Datalogging Kit.

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 Lumatic Calibration Software. 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,  $(\mu)(m)\text{R}/\text{h}$ ,  $(\mu)(m)\text{Sv}/\text{h}$ , 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  $\mu\text{R}/\text{h}$  to 999 R/h; 0.00  $\mu\text{Sv}/\text{h}$  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 ( $\mu\text{Sv}/\text{h}$ , 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 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 (National Electrical Manufacturers Association) rating of 4x or IP (Ingress Protection) rating of 53

**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)