Model 3000

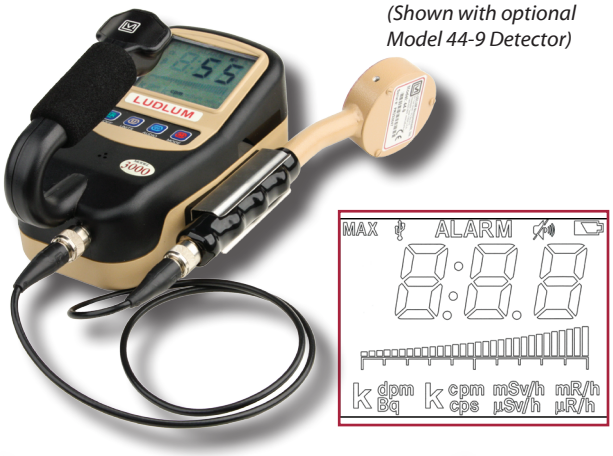
Digital Survey Meter

Ludlum Measurements, Inc.

Features

- **Large Backlit LCD for Ease of Reading**
- **Autoranging**
- **Rate, Max, and Count Modes of Operation**
- **Splash-Resistant Construction for Outdoor Use**
- **All-Digital Calibration**
- **Lighter Weight and Ruggedly Built**
- **4-Button Intuitive Interface for Easy Operation**

Part Number: 48-4035
(Shown with optional Model 44-9 Detector)



Introduction

The Ludlum Model 3000 is a versatile, lightweight, ergonomically-designed instrument with an external detector used for alpha, beta, or gamma radiation survey. Three modes of operation – RATE, MAX, and COUNT – are available for the user. 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 µSv/h units. The user can switch between two sets of chosen units by simply pressing the Units button.

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. User-adjustable settings include calibration constant, dead time correction, efficiency, high voltage, pulse threshold, response time (fast or slow), count time, operational modes, HV current overload level, operational mode (Rate, Max, or Count), and minimum and maximum display levels. The user may also set Primary and Secondary units, unit alarm levels, count units, count alarm levels, and zero pulse protection time limit.

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 3000 to be used outdoors. The unit body is made of lightweight, durable, high-impact plastic. The Model 3000 is shipped ready to use with batteries and calibration certificate.

Specifications

HV RANGE: 400 to 1500 Vdc
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 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
BACKLIGHT: built-in ambient light sensor automatically activates low-power LED backlight, unless internal dipswitch is set to continuous-On (will reduce battery life)
USER CONTROLS:
- ON/OFF/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.
- AUDIO - turn "click" audio On/Off, turn Sigma Audio beep On/Off
- UNITS - changes the units between count rate (cpm, cps), dose/exposure (µSv/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 750 hours of operation (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
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)

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