LUDLUM MEASUREMENTS, INC.

Model 3001-2RK
Emergency Response & NORM Kit

Part Number: 48-4178

Features

- Ready-to-Go Response Kit in Rugged Case
- Ergonomic Survey Meter with 4 Selectable and Configurable Detector Settings
- Measures Alpha, Beta, and Gamma Contamination
- Convenient In-Field Detector Switching
- For Emergency Response or NORM Applications

Introduction

The Model 3001-3RK Emergency Response Kit consists of the basic radiation measurement tools needed to rapidly respond to a radiological emergency. The standard kit includes:

- Model 3001 Multi-Detector Survey Meter
- Model 44-9 Alpha-Beta-Gamma GM Detector
- Model 44-2 High Energy Gamma Scintillation Detector

The Model 3001 is a digital survey meter with three modes of operation – RATE, MAX, and COUNT – and adjustable alarms. It can store detector settings for up to four detectors allowing personnel to easily change detectors in the field. Users can connect either the Model 44-9 alpha-beta-gamma detector for general survey measurements or the Model 44-2 high-sensitivity gamma scintillator for locating the source of high readings.

Each kit comes in a rugged, air- and watertight transport and storage case, which holds the meter, the two detectors, and a 1 m (39 in.) detector cable.

Meter Buttons

Handle Button

Model 3001

Ludlum Measurements, Inc. P.O. Box 810, Sweetwater, Texas 79556
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Note: specifications subject to change without notification. We are not responsible for errors or omissions.

Model 3001 Multi-Detector Survey Meter

- Four selectable and configurable detector settings
- Three operational modes: RATE (displays rate in selected units), MAX (captures peak rate), and COUNT (preset count time from 0 to 10 minutes)

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

NOTE: Operational display ranges are dependent on the detector and dead time configuration. The minimum and maximum display can be set to limit the display to the 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: instrument On/Off, acknowledge alarms, adjust audio level, reset mode
- UNITS: switch between primary and secondary units, count time in COUNT mode
- DETECTOR: press to change between detectors
- MODE: press to select mode - RATE, MAX, COUNT
- LOG: log current display (requires Lumic Data Logger Kit), or initiate count in COUNT mode

DATA LOGGING: Can store up to 1000 data points internally. Requires Lumic Data Logger Kit (see Options).

RESPONSE TIME: selectable from 1 to 60 seconds, or auto-response rate FAST or SLOW

ALARMS: two 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 trigger alarm audio

OVERRANGE: if reading exceeds predefined detector range, unit will flash maximum reading and trigger audio warning.

AUDIO: approximately 4.5 kHz, click audio greater than 65 dB at 0.6 m (2 ft), alarm audio greater than 72 dB

POWER: four alkaline "AA" batteries

BATTERY LIFE: approximately 500 hours (as low as 60 hours with backlight configured for continuous-on), 16-hour low battery warning

CONNECTOR: series "C" (others available)

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 5 or IP 53

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

WEIGHT: 0.7 kg (1.6 lb) (excluding clips and detectors)

Model 44-9 Alpha-Beta-Gamma GM Detector

DETECTOR: pancake-type, halogen-quenched GM

EFFICIENCY (4π): ^{14}C - 5%; ^{90}Sr/^{90}Y - 22%; ^{99}Tc - 15%; ^{32}P - 32%; ^{239}Pu - 15%; ^{99m}Tc - < 1%; ^{125}I - 0.2%

SENSITIVITY (^{137}Cs gamma): 3300 cpm per mR/hr

ENERGY RESPONSE: energy dependent

BACKGROUND: 30-60 cpm (in 10 μR/hr field)

DEAD TIME: 80 μs

CONSTRUCTION: aluminum housing with beige powder coat, stainless steel screen (79% open)

SIZE (H x W x L): 4.6 x 6.9 x 27.2 cm (1.8 x 2.7 x 10.7 in.)

WEIGHT: 0.5 kg (1 lb)

Model 44-2 High Energy Gamma Scintillation Detector

DETECTOR: NaI(Tl) scintillator, 2.5 x 2.5 cm (1 x 1 in.)

EFFICIENCY (4π): ^{125}I - 7%; ^{57}Co - 10%; ^{137}Cs - 3%; ^{60}Co - 3%

SENSITIVITY (^{137}Cs gamma): typ. 175 cpm per μR/hr

ENERGY RESPONSE: energy dependent

BACKGROUND: 1800 cpm (in 10 μR/hr field)

CONSTRUCTION: aluminum with beige powder coat

SIZE (D x L): 5.1 x 21 cm (2 x 8.25 in.)

WEIGHT: 0.5 kg (1 lb)

Options

- **1 μCi ^{137}Cs Check Source** (PN: 01-5196)
- **M 3000 Gen 1 Series Bluetooth® LE Option** (PN: 4498-1024)
- **Lumic LInker App** (available for free in Google Play and Apple App stores, requires meter with Bluetooth® LE Option)
- **Lumic Calibration Kit** (PN: 4519-865)
- **Lumic Configuration Kit** (PN: 4519-747)
- **Lumic Data Logging Kit** (PN: 4498-1019)

(See our website for the full list of available options.)

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