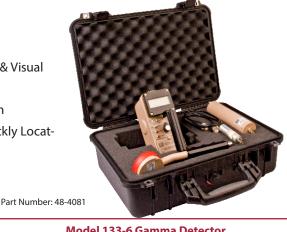
# Model 2241-3RK2

## **Emergency Response Kit**



### **Features**

- · Ready-to-Go Kit Packaged in Rugged Case
- Digital Ratemeter/Scaler with Adjustable Audible & Visual Alarms
- Measures Alpha, Beta, and Gamma Contamination
- · Includes a High-Sensitivity Gamma Probe for Quickly Locating Sources of Radiation
- · Convenient In-Field Detector Switching



## Introduction

The 2241-3RK Emergency Response Kit promotes a rapid response to a radiological emergency by packaging all of the basic radiation measurement tools you're likely to need into a rugged storage and transport case. This kit will easily meet the radiation requirements of an emergency response plan. It includes a digital, auto-ranging ratemeter/scaler that stores 4 parameter setups for quick changes of detectors in the field. The 1  $\mu Ci$   $^{137}Cs$  check source with mountable holder ensures instruments are functioning properly. Response Kit components are securely stored and easily transported in the padlockable, air- and watertight corrosion-proof case. Foam padding with custom cutouts for the instruments is included.

## **Model 2241-3 Survey Meter**

**SUGGESTED DETECTORS:** GM, proportional, scintillation **METER:** microprocessor-based digital ratemeter and scaler DISPLAY: 4-digit (6 in scaler mode) LCD with 1.3 cm (0.5 in.) high digits, moving decimal point, separate annunciators for display units, alert, alarm, low battery, counting overflow, and scaler counting

**DISPLAY RANGE:** autoranging from 0.0 μR/hr-9999 R/hr; 0.000 μSv/h-9999 Sv/h; 0 cpm-999 kcpm; or 0 cps-100 kcps

FRONT PANEL: Audio On/Off, Fast/Slow, Sca/Rate, Backlight, Reset, HV, Detector Selector (Det1, Det2, Det3, Det4), On/Off

OFF/DET1/DET2/DET3/DET4: 5-position swith rotary switch selects one of four sets of detector parameters and applies power

SCA/RATE MODE: locking switch toggles between ratemeter and scaler counting modes.

AUD ON/OFF: silences or enables click-per-event audio (audible alarm is independent function and will override the switch)

F/S (FAST/SLOW) RESPONSE: selects desired response time VARIABLE/FIXED RESPONSE: selects desired time constant **CALIBRATION CONTROLS:** under protective cover on front

LINEARITY: reading within 10% of true value

RS-232 PORT: allows user to set up to four different detector parameters using computer, and enables data dump

**POWER:** 2 ea. "D" cell batteries housed in sealed compartment that is externally accessible

BATTERY LIFE: typically 200 hours with alkaline batteries (low battery warning on LCD)

TEMPERATURE RANGE: -20 to 50 °C (-4 to 122 °F) **SIZE:** 16.5 x 8.9 x 21.6 cm (6.5 x 3.5 x 8.5 in.) (H x W x L)

WEIGHT: 1.6 kg (3.5 lb) with batteries

### **Model 133-6 Gamma Detector**

**DETECTOR:** energy-compensated GM, 30 mg/cm<sup>2</sup> stainless steel (halogen quench)

**LINEAR RANGE with SCC:** 40  $\mu$ Sv/h to 10 Sv/h (4 mR/hr to 1000

SENSITIVITY: 1.8 cpm/µSv/h (18 cpm/mR/hr) (137Cs gamma)

BACKGROUND: 1 cpm or less

**ENERGY RESPONSE:** within 15% of true value (60 keV to 3 MeV)

**DEAD TIME:** typically 50 microseconds

**PHYSICAL:** 2.3 x 10.2 cm (0.9 x 4.0 in.); 0.090 kg (0.20 lb)

## Model 44-9 Alpha/Beta/Gamma Detector

**INDICATED USE**: alpha, beta, gamma survey; sample counting **DETECTOR**: pancake-type, halogen-guenched GM

**WINDOW**:  $1.7 + 0.3 \text{ mg/cm}^2 \text{ mica}$ ,  $15 \text{ cm}^2 (2.3 \text{ in}^2) \text{ active}$ ,  $12 \text{ cm}^2 (1.9 \text{ ms}^2)$ 

in2) open

**EFFICIENCY** (4 $\pi$ ): 5% for <sup>14</sup>C; 22% for <sup>90</sup>Sr/<sup>90</sup>Y; 19% for <sup>99</sup>Tc;

< 1% for <sup>99m</sup>Tc, 32%-<sup>32</sup>P; 1% for <sup>239</sup>Pu

SENSITIVITY (137Cs gamma): 3300 cpm/mR/hr **ENERGY RESPONSE**: energy dependent

BACKGROUND: 60 cpm

**DEAD TIME**: 80 microseconds **OPERATING VOLTAGE: 900 Vdc** 

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

## **Model 44-2 Gamma Detector**

**DETECTOR:** scintillator, 2.5 x 2.5 cm (1 x 1 in.) (Dia x L) Nal(Tl)

SENSITIVITY: typically 175 cpm/µR/hr (137Cs gamma)

BACKGROUND: 1900 cpm

**RECOMMENDED ENERGY RANGE:** 50 KeV to 1.5 MeV

**ENERGY RESPONSE:** energy dependent

PHOTOMULTIPLIER TUBE: 2.86 cm (1.12 in.) diameter

**OPERATING VOLTAGE: 500 to 1200 volts** 

**CONNECTOR:** series "C"

TEMPERATURE RANGE: -15 to 50 °C (5 to 122 °F)

**SIZE:** 5.1 x 18.5 cm (2 x 7.3 in.) (Dia x L)

#### **Included Items**

Check Source Holder, 1 µCi (137Cs) Check Source, Carrying Case, Cable, Batteries, Foam Padding

\_udlum Measurements, inc