

Model 2241-3RK2 Emergency Response Kit



Ludlum Measurements, Inc.

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



Part Number: 48-4081

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 μCi ^{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 $\mu\text{R/hr}$ -9999 R/hr; 0.000 $\mu\text{Sv/h}$ -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 switch with 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/cm² stainless steel (halogen quench)
LINEAR RANGE with SCC: 40 $\mu\text{Sv/h}$ to 10 Sv/h (4 mR/hr to 1000 R/hr)
SENSITIVITY: 1.8 cpm/ $\mu\text{Sv/h}$ (18 cpm/mR/hr) (^{137}Cs 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-quenched GM
WINDOW: 1.7 + 0.3 mg/cm² mica, 15 cm² (2.3 in²) active, 12 cm² (1.9 in²) open
EFFICIENCY (4 π): 5% for ^{14}C ; 22% for $^{90}\text{Sr}/^{90}\text{Y}$; 19% for ^{99}Tc ; < 1% for $^{99\text{m}}\text{Tc}$, 32% ^{32}P ; 1% for ^{239}Pu
SENSITIVITY (^{137}Cs 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) NaI(Tl)
SENSITIVITY: typically 175 cpm/ $\mu\text{R/hr}$ (^{137}Cs 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 (^{137}Cs) Check Source, Carrying Case, Cable, Batteries, Foam Padding

OUR KIT COMES WITH : Model 2241-3 + 44-2 + 44-7 + 44-9 + 133-7 (instead of 133-6) + Carrying case and cables. No radioactive source and no batteries are included