

Model 193 with 44-10 MicroR Ratemeter with NaI Detector

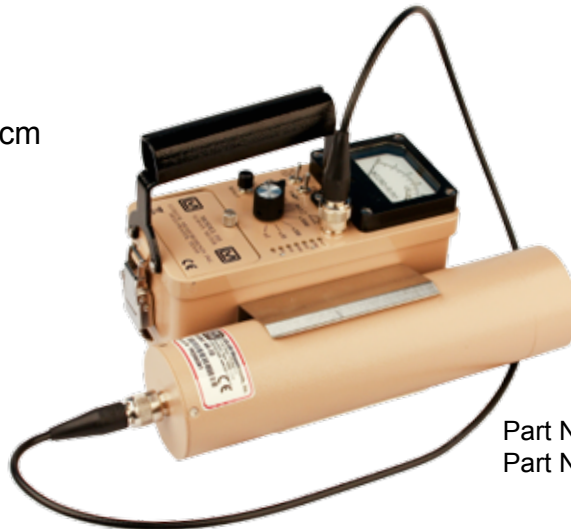
Radiation Detection for a Safer World



Ludlum Measurements, Inc.

Features

- Highly Sensitive 5.1 x 5.1 cm (2 x 2 in.) NaI Detector
- 0–5000 $\mu\text{R/hr}$ Range
- Rugged
- Dual Alarm Capability
- Rugged Construction



Part No. 48-2959 &
Part No. 47-1540

Introduction

This instrument combines the Ludlum Model 193 Ratemeter with the Model 44-10, 5.1 x 5.1 cm (2 x 2 in.) NaI scintillator to produce an exceptionally sensitive $\mu\text{R}/\text{meter}$ for gamma measurements. The detector sensitivity is 900 cpm/ $\mu\text{R}/\text{hr}$, approximately 5 times greater than the 2.5 x 2.5 cm (1 x 1 in.) NaI used in other designs. The greater sensitivity and separated probe design delivers better counting statistics and enables reaching hard-to-get to places. The front-panel controls include a rotary switch for selecting the five-decade range and instrument shut-off, an

audio on/off switch, a fast/slow response switch, and pushbuttons for activating the meter lamp, count reset, high voltage display, and battery test. An alarm light is mounted to the front panel and is accompanied by an audio signal. The aluminum cast instrument housing with its separate battery compartment and accompanying metal handle offer an industrial robustness and quality that promote long lasting protection and instrument life. This instrument is a complete turn-key system including a 1-meter (39 in.) cable and two "D" cell batteries.

Specifications

Model 193 Ratemeter

INDICATED USE: low level (microR) gamma survey
WORKING ENVIRONMENT: splashproof shields for outdoor use
METER DIAL: 0–25 $\mu\text{R/hr}$ 0–50 $\mu\text{R/hr}$ BAT TEST
RANGE SELECTIONS: 0–25, 0–50, 0–250, 0–500, 0–5000
ALARM: adjustable from 10% of full meter scale to greater than full meter scale, with audio & visual indicators
AUDIO: toggle switch On/Off, built-in unimorph speaker
AUDIO LIGHT: pushbutton to activate
RESPONSE: toggle switch for FAST (4 seconds) or SLOW (22 seconds) from 10% to 90% of final reading
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) including batteries

Model 44-10 Detector

DETECTOR: 5.1 x 5.1 cm (2 x 2 in.) (Dia X L) NaI (TI) scintillator
SENSITIVITY: typically 900 cpm/ $\mu\text{R}/\text{hr}$ (^{137}Cs gamma)
ENERGY RESPONSE: energy dependent
SIZE: 6.6 x 27.9 cm (2.6 x 11 in.) (Dia X L)
WEIGHT: 1.04 kg (2.3 lb)

Alternate Instruments

Model 19 2.5 x 2.5 cm (1 x 1 in.) NaI detector, 0–5000 $\mu\text{R/hr}$ range
Model 19A 2.5 x 2.5 cm (1 x 1 in.) NaI detector, alarm capability, logarithmic scale 0–500 $\mu\text{R/hr}$
Model 192 more sensitive 5.1 x 2.5 cm (2 x 1 in.) internally housed NaI Detector
Model 193-6 highly sensitive plastic detector on end of 1.2 m (4 ft) extension pole

