

Model 19A MicroR Ratemeter

Radiation Detection for a Safer World



Ludlum Measurements, Inc.

Features

- High Sensitivity to Gamma
- Analog Meter with Audible & Visual Alarms
- Range: 0–5 $\mu\text{Sv/h}$ (0–500 $\mu\text{R/hr}$)
- Rugged
- Splashproof Protection for Outdoor Use
- CE Certified



Part Number: 48-2117

Introduction

The Model 19A is a highly sensitive portable survey meter with audio and visual alarm indicators. It employs an internally housed, 2.5 cm diameter by 2.5 cm thick (1.0 x 1.0 in.) NaI detector. The cast aluminum instrument housing with its sealed battery compartment and accompanying metal handle offer an industrial robustness and quality that promote long-lasting protection and instrument life.

The front-panel controls include a rotary switch for selecting instrument On, Off, or BAT check, an Audio On/Off switch, and a pushbutton Alarm Reset. The alarm circuit is adjustable over the entire scale range. The Model 19A is a complete turn-key system, and includes two “D” cell batteries.



Specifications

INDICATED USE: low-level (μR) gamma survey

DETECTOR: 2.5 x 2.5 cm (1 x 1 in.) (Dia x L) Sodium Iodide (NaI[Tl]) scintillator

SENSITIVITY: approximately 17,500 cpm/ $\mu\text{Sv/h}$ (175 cpm/ $\mu\text{R/hr}$) (^{137}Cs gamma)

ENERGY RESPONSE: energy dependent

LINEARITY: reading $\pm 10\%$ of true value

METER: 6.4 cm (2.5 in.) arc, 1 mA analog type

METER DIAL: 0–5 $\mu\text{Sv/h}$ (0–500 $\mu\text{R/hr}$) dual colored logarithmic scale, BAT TEST

CONTROLS

ROTARY KNOB SELECTOR: Instrument Off, Battery Check, Instrument On

AUDIO: built-in unimorph speaker (greater than 60 dB at 0.6 meters [2 ft]) with ON/OFF switch

ALARM RESET: pushbutton to reset alarm

ALARM: 0 to off-scale (audio and visual indication when above alarm threshold)

CALIBRATION CONTROLS: accessible from front of instrument (protective cover provided)

WORKING ENVIRONMENT: splashproof shields for outdoor use

TEMPERATURE RANGE: -20 to 50 $^{\circ}\text{C}$ (-4 to 122 $^{\circ}\text{F}$), may be certified for operation from -40 to 65 $^{\circ}\text{C}$ (-40 to 150 $^{\circ}\text{F}$)

POWER: 2 each “D” cell batteries (housed in sealed compartment that is externally accessible)

BATTERY LIFE: typically 600 hours with alkaline batteries (battery condition can be checked on meter)

CONSTRUCTION: cast and drawn aluminum with beige powder coat paint

SIZE: 19.8 x 8.9 x 21.6 cm (7.8 x 3.5 x 8.5 in.) (H x W x L), with handle

WEIGHT: 2.1 kg (4.5 lb), including batteries

Options:

Shoulder Strap: Model L-4363-413

Lighted Handle: Model L-4464-154

Check Source (^{137}Cs , 1 μCi): Model L-01-5196