

Model 19 MicroR Ratemeter

Radiation Detection for a Safer World



Ludlum Measurements, Inc.

Features

- High Sensitivity to Gamma
- 0-5000 $\mu\text{R/hr}$ Range (others available)
- Rugged
- Splashproof Protection for Outdoor Use
- 2000 Hour Battery life
- CE Certified



Part Number: 48-1615

Introduction

The Model 19 is a highly sensitive gamma $\mu\text{R}/\text{meter}$ employing an internally housed, 2.5 cm diameter by 2.5 cm thick (1.0 x 1.0 in.) NaI detector. The measuring range is 0-5000 $\mu\text{R}/\text{hr}$. The cast aluminum 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.

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, high-voltage display, battery test, and count reset. The Model 19 is a complete turn-key system and includes two "D" cell batteries.



Specifications

INDICATED USE: low-level (μR) gamma survey

MEASUREMENT RANGE: 0-5000 $\mu\text{R}/\text{hr}$

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

SENSITIVITY: ≈ 175 cpm/ $\mu\text{R}/\text{hr}$ (^{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: 0-25 $\mu\text{R}/\text{hr}$, 0-50 $\mu\text{R}/\text{hr}$, BAT TEST, High Voltage Test

CONTROLS

ROTARY KNOB SELECTOR: 0-25, 0-50, 0-250, 0-500, 0-5000 $\mu\text{R}/\text{hr}$, Instrument Off

RESPONSE: toggle switch for FAST (4 seconds) or SLOW (22 seconds) from 10% to 90% of final reading

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

HIGH VOLTAGE: pushbutton to display HV setting on meter

BATTERY: pushbutton checks battery voltage

RESET: pushbutton to zero meter

LAMP: pushbutton to activate meter light

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 2000 hours with alkaline batteries (battery condition can be checked on meter)

CONSTRUCTION: cast and drawn aluminum with beige polyurethane enamel paint

SIZE: 15.2 x 8.9 x 21.6 cm (6.0 x 3.5 x 8.5 in.) (H x W x L), without handle

WEIGHT: 2.04 kg (4.5 lb), including batteries