

Model 3 with Model 44-9 Alpha Beta Gamma Counter

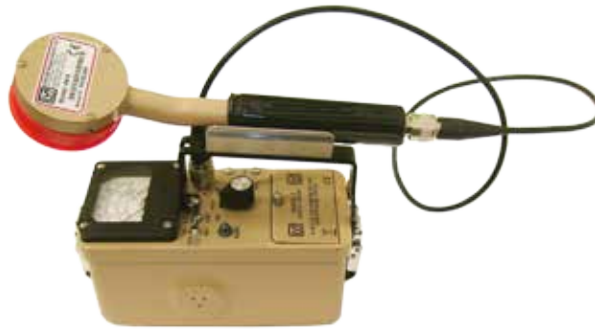
Radiation Detection for a Safer World



Ludlum Measurements, Inc.

Features

- Rugged Analog Ratemeter
- Pancake-Type, Halogen-Quenched GM Detector
- Easy to Use
- Easy Reach to Difficult Places
- 2000 Hour Battery Life



Part Numbers: 48-1605 & 47-1539

Introduction

This is Ludlum's best-selling general purpose, handheld analog ratemeter known for accuracy and long lasting dependability. When connected to the Model 44-9 GM pancake detector, this system simultaneously detects alpha, beta and gamma radiation making it an excellent choice for Medical and Health Physics applications.

The analog meter face supports an operating range of 0–200 mR/hr for measuring gamma exposure rate and 0–660 kcpm for alpha/beta/gamma. With the addition of the optional Model 180-2 sample holder, it can also be used to make a quick evaluation of wipe test surveys in the nuclear medicine department. When ordered together, the Model 3 and 44-9 Probe includes a 1 meter (39 in.) interconnecting cable, and is shipped calibrated and ready for use.

Model 3 Survey Meter

METER DIAL: 0–500 kcpm, BAT TEST

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

CONTROLS:

1. Rotary Selector: switches between instrument off, battery check, ranges: x0.1, x1, x10, x100
2. Response Switch: toggles between FAST (4 seconds) or SLOW (22 seconds) from 10% to 90% of final reading
3. Reset Pushbutton: to zero meter
4. Audio Switch: for audio on/off, built-in unimorph speaker, greater than 60 dB at 0.6 meters (2 ft)
5. Calibration Controls: accessible from front of instrument (protective cover provided)

CONSTRUCTION: cast and drawn aluminum with beige powder coat

CONNECTOR: series "C"

TEMPERATURE RANGE: -20 to 50 °C (-4 to 122 °F), may be certified for operation from -40 to 65 °C (-40 to 150 °F)

POWER: two each "D" cell batteries (housed in externally accessible sealed compartment)

BATTERY LIFE: typically greater than 2000 hours with alkaline batteries (battery condition can be checked on meter)

SIZE: 16.5 x 8.9 x 21.6 cm (6.5 x 3.5 x 8.5 in.) (H x W x L), including handle

WEIGHT: 1.6 kg (3.5 lb), including batteries

Model 44-9 Radiation Detector

DETECTOR TYPE: pancake-type, halogen-quenched Geiger-Mueller

WINDOW: 2 mg/cm² mica protected by 79% open stainless steel screen

WINDOW AREA: 15.51 cm² (2.4 in²) active, 12.26 cm² (1.9 in²) open

EFFICIENCY (4π): 5% for ¹⁴C; 22% for ⁹⁰Sr/⁹⁰Y; 19% for ⁹⁹Tc; 32% for ³²P; 15% for ²³⁹Pu, ≤ 1% for ^{99m}Tc; 0.2% for ¹²⁵I

SENSITIVITY (¹³⁷Cs): 3300 cpm/mR/hr

ENERGY RESPONSE: energy dependent

BACKGROUND: 60 cpm

DEAD TIME: 80 microseconds

OPERATING VOLTAGE: 900 Vdc

CONNECTOR: series "C" (others available)

INPUT SENSITIVITY: ≥ 30 mV

CONSTRUCTION: aluminum housing with beige powder-coat finish, stainless steel screen

TEMPERATURE RANGE: -15 to 50 °C (5 to 122 °F), may be certified for -40 to 65 °C (-40 to 150 °F)

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

WEIGHT: 0.5 kg (1 lb)