

Model 3-98 with 44-3 Alpha Beta Gamma Survey Meter



Ludlum Measurements, Inc.

Features

- Dual Purpose Detection
- ^{125}I & Alpha Beta & Gamma Contamination
- 4-Range Analog Ratemeter
- 0–500 kcpm
- CE Certified
- Rugged
- Complete Turn-Key System



Specifications

Part Number: 48-1135

INDICATED USE: alpha, beta, low-energy gamma survey

DETECTORS: controlled by selector switch

INTERNAL DETECTOR:

Type: pancake-style GM detector with $1.7 \pm 0.3 \text{ mg/cm}^2$ window, stainless steel protective screen (79% open)

Area:

Active: 15 cm^2

Open: 12 cm^2

Efficiency (4π geometry): 5%– ^{14}C ; 23%– $^{90}\text{Sr}/^{90}\text{Y}$; 19%– ^{99}Tc ; 33%– ^{32}P ; 15%– ^{239}Pu

Sensitivity: typically 3300 cpm/mR/hr (^{137}Cs gamma)

Alpha-beta Shield: retractable 211 mg/cm^2 phenolic slide

EXTERNAL DETECTOR: Model 44-3

Type: low-energy gamma scintillator

Efficiency (4π geometry): 33.5%– ^{125}I (based on ^{129}I efficiency of 18%)

Background ($10 \mu\text{R/hr}$): < 350 cpm

Sensitivity: 675 cpm/ $\mu\text{R/hr}$ (^{125}I)

Energy Range: recommended 5 keV–60 keV

CONNECTOR: series "C" (others available)

METER DIAL: 0–5 kcpm, BAT TEST (others available)

MULTIPLIERS: x0.1, x1, x10, x100

LINEARITY: reading within $\pm 10\%$ of true value with detector connected

AUDIO: built-in unimorph speaker with ON/OFF switch (greater than 60 dB at 0.61 m [2 ft])

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

HIGH VOLTAGE: adjustable from 400–1500 volts

THRESHOLD: $-30 \text{ mV} \pm 10 \text{ mV}$

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

RESET: pushbutton to zero meter

POWER: 2 "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

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

CONSTRUCTION: cast and drawn aluminum with beige powder coat

TEMPERATURE RANGE: -20 to $50 \text{ }^\circ\text{C}$ (-4 to $122 \text{ }^\circ\text{F}$)

SIZE: 22.9 x 8.9 x 21.6 cm (9 x 3.5 x 8.5 in.) (H x W x L), with handle

WEIGHT: 2.5 kg (5.6 lb) including batteries and detector



View of bottom of instrument showing retractable slide.

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Note: specifications subject to change without notification. We are not responsible for errors or omissions.

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