

Model 2401-P DOSE Pocket Size Multi-Purpose Ratemeter

Part Number: 48-3884

Features

- Self-contained Survey Instrument
- Integrated GM Pancake Probe
- Sliding Dose Equivalent Filter
- Simple to Use, Low Cost & Rugged
- Storage Case Included

Introduction

The Model 2401-P DOSE is a general purpose, self-contained, pocket-sized radiation detection meter designed around the venerable GM pancake detector. A simple switch allows the user to choose among the three range multipliers. Another switch selects between QUIET, NORMAL, BAT CHECK, or OFF. The detector is conveniently packaged inside the instrument, and has a protective screen window. The included dose equivalent filter allows users to take more accurate dose measurements (see reverse for more information).

An L-shaped stainless steel handle provides a secure and comfortable grip when using the Model 2401-P DOSE as a survey meter. Loosening the knob permits the handle to pivot, allowing the instrument to be easily housed in the included carrying and storage case. This instrument is available with several meter face options for measuring contamination and dose rate.



Front view, and back views, with filter open and closed, of a Model 2401-P DOSE

Specifications

INDICATED USE: alpha, beta, gamma survey

DETECTOR: 15.5 cm² (2.4 in²) pancake GM

SENSITIVITY (¹³⁷Cs gamma): typically 3300 cpm per mR/hr

EFFICIENCY: ¹⁴C - 5%; ⁹⁰Sr/⁹⁰Y - 22%; ⁹⁹Tc - 19%; ^{99m}Tc - < 1%;
³²P - 32%; ²³⁹Pu - 15%

ENERGY RESPONSE:

With Dose Filter: energy compensated for gamma and x-ray

Without Dose Filter: energy dependent

RESPONSE TIME: typically 11 seconds from 10% to 90% of final reading

METER DIAL: see Meter Faces table for available options

MULTIPLIERS: x1, x10, and x100

AUDIO: click-per-event, may be turned off by moving selector to QUIET position

POWER: 9-volt battery

BATTERY LIFE: typically 250 hours with alkaline battery at normal background levels

CONSTRUCTION: cast and drawn aluminum with membrane panel

SIZE (H x W x L): 4.6 x 8.4 x 13.5 cm (1.8 x 3.3 x 5.3 in.)

WEIGHT: 0.4 kg (0.9 lb), including battery

ALARM: no

Meter Faces

Specify desired meter face at time of order.

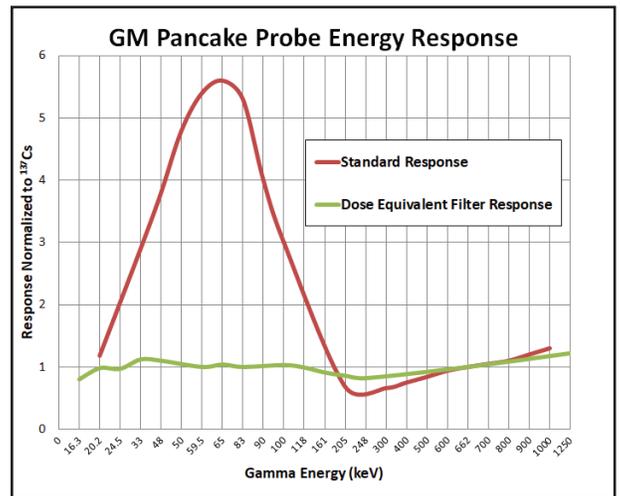
FUNCTION & RANGE	PART NUMBER
DOSE RATE	
0 - 0.15 mR/hr	202-994
0 - 1.5 μSv/h	202-999
COUNTRATE / DOSE RATE	
0 - 6.6 kcpm / 0 - 2 mR/hr	202-850
0 - 500 cpm / 0 - 0.15 mR/hr	202-857
0 - 6.6 kcpm / 0 - 20 μSv/h	202-1038
0 - 500 cpm / 0 - 1.5 μSv/h	202-1106
0 - 10 cps / 0 - 1.9 μSv/h	202-872

Sliding Dose Equivalent Filter

The GM pancake detector has a significant over-response to gamma energies between 20 - 150 keV, which produces dose measurement errors. To counteract this, Ludlum Measurements developed a sliding filter for the Model 2401-P GM pancake detector that flattens the response to within 20% referenced to ^{137}Cs (662 keV) over an energy range of 20 keV to 1.2 MeV. The Model 2401-P DOSE includes this filter.



Sliding Dose Equivalent Filter shown closed (*left*) and open.



Hard Case for Model 2401 Series (PN: 2311119)

**** Included with Model 2401-P DOSE instruments ****

This rugged, foam-padded, water resistant, crush- and dust-proof case provides lightweight and secure storage for Model 2401 Series instruments. Features include an automatic pressure equalization valve, stainless steel hardware, and easy-open latch.

Size: 20.3 x 12.9 x 7.9 cm (7.99 x 5.06 x 3.12 in.)

Weight: 0.4 kg (0.83 lb)