

Model 14C

General Purpose Ratemeter



Ludlum Measurements, Inc.

Features

- Low Price
- Rugged
- 5-Decade Analog Ratemeter
- Operates Two Detectors
 - Built-in Internal GM Detector
 - External GM or Scintillator Detector



Part Number: 48-1611

Introduction

The Model 14C general purpose, handheld analog ratemeter supports operating two separate radiation detectors. This instrument is set for 900-volt GM tube operation and is typically used with an external, thin-wall GM tube or pancake GM. Other external detectors are compatible with the Model 14C, however. An internal energy-compensated, high-range detector is used for the x1000 range only. This detector is active whenever the instrument is on and in a very high radiation field, and it will drive the meter needle to full scale, thus alerting the user. A switch allows the operator to select between the internally mounted GM detector with an exposure range of 0 to 20 mSv/h (0 to 2000 mR/hr) or an external GM or scintillator detector of choice

Specifications

APPLICATION: alpha, beta, gamma survey

COMPATIBLE DETECTORS: GM, scintillation

DETECTOR CHANNELS: x0.1 through x100 range settings read out the external detector channel, x1000 reads out the internal GM detector

EXTERNAL DETECTOR: any GM or scintillator operating on 900 Vdc

INTERNAL DETECTOR: energy compensated GM, 0–20 mSv/h (0–2000 mR/hr), used with x1000 scale only

ENERGY RESPONSE: within 15% of true value between 60 keV–3 MeV (internal detector only)

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

HIGH VOLTAGE: 900 volts

THRESHOLD: -40 mV \pm 10 mV

CONNECTOR: series "C"

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

METER DIAL: typically 0–2 mR/hr and cpm, BAT TEST (others available)

CONTROLS:

Rotary Selector Switch: switches instrument to Off or ranges: x0.1, x1, x10, x100 x1000

Response Switch: toggles between FAST (4 seconds) or SLOW (22 seconds) from 10% to 90% of final reading

Reset Pushbutton: to zero meter

Battery Pushbutton: checks battery status

Audio Switch: audio on/off, built-in unimorph speaker, greater than 60 dB at 0.6 meters (2 ft)

POWER: 2 each "D" cell batteries (housed in an externally accessible sealed compartment)

BATTERY LIFE: typically greater than 2000 hrs (battery condition can be checked on meter); LOW BAT warning

CONSTRUCTION: cast and drawn aluminum with beige powder coating

TEMPERATURE RANGE: -20 to 50 °C (-4 to 122 °F)

RELATIVE HUMIDITY: < 95%

SIZE: 16.5 x 8.9 x 21.6 cm (6.5 x 3.5 x 8.5 in.)

(H x W x D)

WEIGHT: 1.6 kg (3.5 lb), including batteries

Options (others available)

Check Source: Model L-01-5196

Shoulder Strap: Model L-4363-413

Carry/Store Case: Model L-2310278

Lighted Handle: Model L-4464-154

Portable Scaler Option: L-4464-114

Headphone Modification: Model L-4464-464