

# Model 2241-2i

## General Purpose Ratemeter/Scaler



Ludlum Measurements, Inc.

### Features

- Digital Ratemeter with Built-In Scaler
- Auto Ranging
- Internal GM Range Up to 10 R/hr
- Accommodates Second External Detector
- Adjustable Alarms
- Wide Range HV
- Overrange & Overload Protection



### Introduction

This instrument is a general purpose, digital ratemeter with a built-in scaler that provides timed counts over a user specified period. This instrument includes an internally-housed energy compensated GM tube with a range up to 10 R/hr. A front-panel switch allows the user to select between the internal GM detector and an external detector of choice connected via the cable. The LCD presents readings in a four-digit, moving decimal format together with one of a wide range of available units of measure and is accompanied by several operational and alert icons. The LCD backlight can be activated and remains lit for a user-adjustable interval. This instrument features adjustable alert and alarm setpoints for both the Ratemeter and Scaler modes. Front-panel controls include a rotary switch for selecting between Off, Ratemeter Mode, and Scaler Mode, switches for audio on/off and fast/slow response time, toggle switch for internal/external detector selection, plus pushbuttons for activating the LCD backlight. Calibration, user configured alarms, scaler count intervals, and detector setups can be configured via an internally housed switchboard or through an RS-232 serial interface to a PC.

### Specifications

Part Number: 48-2960

**SUGGESTED DETECTORS:** GM, proportional, scintillation

**ALERT/ALARM:** indicated by annunciation on display and audible tone

**DISPLAY:** 4-digit (6-digit in scaler mode) LCD display with 1.3 cm (0.5 in.) high digits, separate annunciators for display units, alert, alarm, low battery, detector overload, counting overflow, and scaler counting

**BACKLIGHT:** pushbutton to activate

**RATEMETER:** can display in R/hr, Sv/h, cpm, or cps (with multipliers)

**DISPLAY RANGE:** auto-ranging from 0.0  $\mu$ R/hr–9999 R/hr; 0.000  $\mu$ Sv/h–9999 Sv/h; 0 cpm–999 kcpm; or 0 cps–100 kcps

**SCALER:** activated by pushbutton in handle when the 3-position switch is in the Scaler position

**LINEARITY:** readings are within 10% of true value

**HIGH VOLTAGE:** two independent controls, each adjustable from 400–2400 volts

**RS-232 PORT:** allows for programming and non-volatile storage of operating parameters, including display units, display range, alarm setpoints, dead time correction, click-per-event divide-by, LCD backlight On time, Fixed or Variable response time, and count overflow visual alarm. The switch board can be removed after entering or changing parameter to prevent tampering with setup values.

**DISCRIMINATOR:** adjustable from 2–100 mV; negative pulse response

**POWER:** 2 "D" cell batteries housed in an externally accessible sealed compartment

**BATTERY LIFE:** typically 200 hours with alkaline batteries (low-battery warning on LCD)

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

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

**WEIGHT:** 1.6 kg (3.5 lb) including batteries

**ALSO AVAILABLE:** Model 2241-2i/2 is identical to Model 2241-2i, but the internal GM detector is capable of measuring up to 1 R/hr (0.01 Sv/h) (Part Number 48-3100).

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

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