

Model 193-6 Survey Meter with Pole Extender

Radiation Detection for a Safer World



Ludlum Measurements, Inc.

Features

- Range: 0–10 $\mu\text{Sv/h}$ (0–1000 $\mu\text{R/hr}$)
- Very Sensitive Pole-Mounted Detector
- Dual Alarm Types
- Rugged
- 4-Decade Analog Ratemeter



Part Number: 48-3063



Introduction

The Model 193-6 is a portable, highly sensitive gamma survey instrument with extended reach. A 15.2 cm x 2.5 cm thick (6 x 1 in.) plastic scintillator detector is mounted at the end of a 1.2 meter (4 ft) long pole for ease of use when surveying trucks, scrap metal, or areas of concern in elevated areas.

Attached to the user-end of the pole is a four-decade analog ratemeter employing an aluminum cast instrument housing with a separate battery compartment and accompanying metal handle. The overall design delivers industrial robustness and quality that promote long-lasting protection and instrument life.

Ratemeter front-panel controls include a rotary switch for selecting the 4-decade range, instrument shut-off, battery test; audio On/Off switch, a Fast/Slow response switch, and a pushbutton for count reset. Two types of alarms are employed: a user-adjustable fixed point alarm and a deviation alarm that activates at levels above a floating background. Alarms are manifested by a front-panel mounted light accompanied by an audible alert. The padded handle attached along the pole assists the operator with manipulation, control, and comfortable use. The included headphone jack allows the user to plug in 1/8 inch connector headphones (optional) for use in noisy environments.

Specifications

DETECTOR: 15.2 cm diameter x 2.5 cm thick (6 x 1 in.) EJ212 plastic scintillator

SENSITIVITY: typically 2500 cps/ $\mu\text{Sv/h}$ (1500 cpm/ $\mu\text{R/hr}$) (^{137}Cs gamma)

ENERGY RESPONSE: energy dependent

LINEARITY: reading $\pm 10\%$ of true value

METER DIAL: 0–1 $\mu\text{R/hr}$, BAT TEST (others available)

ALARM: dual action alarm

- FIXED: alarm point that can be set at any point from 10% of full scale to full scale, and is indicated by a constant audible tone, and the lamp turning on
- DEVIATION: a quick alarm that is based on background radiation levels. When the instrument is turned on, it takes an eight-second measurement of background radiation levels and determines a deviation alarm setting. If the radiation level exceeds this setting, the alarm audio will beep every 1/8 second, and the lamp will flash.

CONTROLS:

- Rotary Selector: switches between instrument off, battery check, ranges: 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, and also re-accumulate background data and recalculate the alarm point
- Audio Switch: for audio on/off, built-in unimorph speaker, greater than 60 dB at 0.6 meters (2 ft)
- Calibration Controls: accessible from front of instrument (protective cover provided)

POWER: two "D" cell batteries

BATTERY LIFE: typically 600 hours with alkaline batteries (battery condition can be checked on meter)

CONSTRUCTION: cast and drawn aluminum with beige powder coat

WEIGHT: 3.9 kg (8.5 lb), including batteries

OVERALL LENGTH: 1.3 m (51 in.)