

# Model 9-3 Ion Chamber



Ludlum Measurements, Inc.

## FEATURES

- 5 Ranges from Background to 50 R/hr
- 1000 mg/cm<sup>2</sup> Retractable Beta Shield
- Temperature Compensated
- Low Battery Warning
- High Background Zero Capability
- Proportional Audio Output



Part No. 48-3633

## SPECIFICATIONS

### DETECTOR

Range: Typically 0.2 - 50,000 mR/hr

Linearity: Reading within 10% of true value

Energy Response: Within plus or minus 20% of true value from 10 keV - 2 MeV

Response Time : Approximately 5 seconds for 90% of final meter deflection on the x1 and x10 scales, and 3 seconds on the x100, x1k and x10k scales

Chamber Volume: 220 cm<sup>3</sup>

Window: 7 mg/cm<sup>2</sup> aluminized mylar

Window Area: 40 cm<sup>2</sup> (31.5 cm<sup>2</sup> open with optional 79% open screen)

Chamber Construction: Carbon coated acrylic

Beta Shield: Retractable 1000 mg/cm<sup>2</sup> phenolic slide

Side Wall: 1000 mg/cm<sup>2</sup> aluminum and acrylic

### INSTRUMENT CONTROLS:

Range Selection: x1, x10, x100, x1k, x10k, plus instrument off

Reset: Causes the chamber to discharge in order to re-establish a current reading

Battery: Pushbutton used to check battery capacity

Zero Adjust: 1 turn potentiometer to compensate for electrometer drift and limited background subtraction

Audio: On/Off

Calibration Controls: Individual potentiometers for each range; accessible from the front cover while in operational status

**METER:** 2.5" (6.4 cm) arc, 1 mA, pivot-and jewel suspension

**METER DIAL:** 0 - 5 mR/hr, BAT TEST

**AUDIO:** Built in unimorph speaker with ON/OFF switch

**POWER:** 2 each "AA" cell batteries housed in a sealed externally-accessible compartment

**BATTERY LIFE:** x1, x10 scales - 500 hours, x100 thru x10K scales - 100 hours. Wall voltage on with instrument shut off is approximately 6 months

**CONSTRUCTION:** Cast and drawn aluminum with beige powder-coating

**TEMPERATURE RANGE:** -4° to 122°F (-20° to 50°C). Temperature compensation maintains calibration within 15% of 25°C reading

**SIZE:** 9.2" H x 3.5" W x 8.5" L (23.4 cm x 8.9 cm x 21.6 cm)

**WEIGHT:** 3.6 lbs (1.6 kg) including batteries