

Model 44-38 Beta & Low Energy Gamma Detector

Part Number: 47-1588



(window closed)

Specifications

INDICATED USE: beta gamma survey

SUGGESTED INSTRUMENTS: general purpose survey meters, ratemeters, and scalers

CONNECTOR: series "C" (others available)

DETECTOR: 50 mg/cm² stainless steel wall halogen quenched GM

DETECTION RANGE:

- Without DTC*: 0.5 to 500 $\mu\text{Sv/h}$ (0.05 to 50 mR/hr)
- With DTC*: 0.5 $\mu\text{Sv/h}$ to 5 mSv/h (0.05 to 500 mR/hr)
- With SCC**: 0.5 $\mu\text{Sv/h}$ to 20 mSv/h (0.05 mR/hr to 2 R/hr)

SENSITIVITY: 120 cpm per $\mu\text{Sv/h}$ (1200 cpm per mR/hr) [¹³⁷Cs gamma] with window closed

BACKGROUND: 20 cpm closed; 25 cpm open

GAMMA ENERGY RESPONSE (window closed): within 20% of ¹³⁷Cs (662 keV) from 60 keV to 1.3 MeV

DEAD TIME: typically 95 microseconds

OPERATING VOLTAGE: typically 900 volts

CONSTRUCTION: anodized aluminum housing with rotary beta window

WINDOW CONSTRUCTION: tin shields mounted on aluminum with a solid aluminum gap in the middle

- Low-Energy Blocking Window: outside of slots, total density thickness is 1368 mg/cm², including tube wall
- Low-Energy Pass-Through Window: through slots, total density thickness is 667 mg/cm², including tube wall

TEMPERATURE RANGE: -20 to 50 °C (-4 to 122 °F); may be certified to operate at -40 to 65 °C (-40 to 150 °F)

SIZE: 3.3 x 16.5 cm (1.3 x 6.5 in.) (Dia x L)

WEIGHT: 0.5 kg (1.0 lb)

*DTC: Dead Time Correction, available on some instruments

**SCC: Series Correction Constant, available on some instruments