

**MODEL 44-92**  
**XENON GAS PROPORTIONAL DETECTOR**

**May 2014**

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**LUDLUM MEASUREMENTS, INC**  
501 OAK STREET, P.O. BOX 810  
SWEETWATER, TEXAS 79556  
325-235-5494, FAX: 325-235-4672

## **STATEMENT OF WARRANTY**

Ludlum Measurements, Inc. warrants the products covered in this manual to be free of defects due to workmanship, material, and design for a period of twelve months from the date of delivery. The calibration of a product is warranted to be within its specified accuracy limits at the time of shipment. In the event of instrument failure, notify Ludlum Measurements to determine if repair, recalibration, or replacement is required.

This warranty excludes the replacement of photomultiplier tubes, G-M and proportional tubes, and scintillation crystals which are broken due to excessive physical abuse or used for purposes other than intended.

There are no warranties, express or implied, including without limitation any implied warranty of merchantability or fitness, which extend beyond the description of the face there of. If the product does not perform as warranted herein, purchaser's sole remedy shall be repair or replacement, at the option of Ludlum Measurements. In no event will Ludlum Measurements be liable for damages, lost revenue, lost wages, or any other incidental or consequential damages, arising from the purchase, use, or inability to use product.

## **RETURN OF GOODS TO MANUFACTURER**

If equipment needs to be returned to Ludlum Measurements, Inc. for repair or calibration, please send to the address below. All shipments should include documentation containing return shipping address, customer name, telephone number, description of service requested, and all other necessary information. Your cooperation will expedite the return of your equipment.

**LUDLUM MEASUREMENTS, INC.  
ATTN: REPAIR DEPARTMENT  
501 OAK STREET  
SWEETWATER, TX 79556**

**800-622-0828 325-235-5494  
FAX 325-235-4672**

# Model 44-92 Xenon Gas Proportional Detector

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# Model 44-92 Xenon Gas Proportional Detector

## 1. GENERAL

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The Model 44-92 is a large area xenon-filled proportional type detector that is typically used for Beta/Gamma surveying and personnel contamination checks.

The Model 44-92 xenon gas is contained in a sealed chamber. The tube is similar to a GM tube since it does not have to be recharged.

The Model 44-92 has a 140 cm<sup>2</sup> open area

that provides faster surveying and contamination checks with a relatively high sensitivity for the lower gamma energies, such as from <sup>125</sup>I (40 keV).

The electronic counting instrument has to be capable of supplying up to 2000 volts with a input sensitivity of approximately 1.5 mV. Many of the Ludlum instruments are capable of providing these specifications.

## 2. SPECIFICATIONS

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**WINDOW:** 6.0 mg/cm<sup>2</sup> aluminized mylar

**WINDOW AREA:** Active- 169 cm<sup>2</sup>

Open- 140 cm<sup>2</sup>

**SENSITIVITY:** Typically 36,000 cpm/mR/hr (<sup>60</sup>Co gamma)

**OPERATING VOLTAGE:** Typically 1600-1900 Vdc

**CONNECTOR:** Series C

**EFFICIENCIES (4 pi geometry):** 10% for <sup>14</sup>C; 13% for <sup>99</sup>Tc; 24% for <sup>36</sup>Cl; 26% for <sup>90</sup>Sr/<sup>90</sup>Y; 3% for <sup>129</sup>I; 1.6% for <sup>57</sup>Co; 1.2% for <sup>55</sup>Fe; 10% for <sup>239</sup>Pu