

Reuter Stokes 10ft PSD  
RS-08115-202

product overview

Small Angle Neutron Scattering, Powder Diffraction, Nuclear Material Assay and Industrial Process Control

**Precision Performance**

Helium-3 purification techniques and manufacturing process control ensure the precise matching of operating characteristics among large batches of counters. This allows parallel operation of numerous detectors without the need to separate power supplies.

**Position Sensitive**

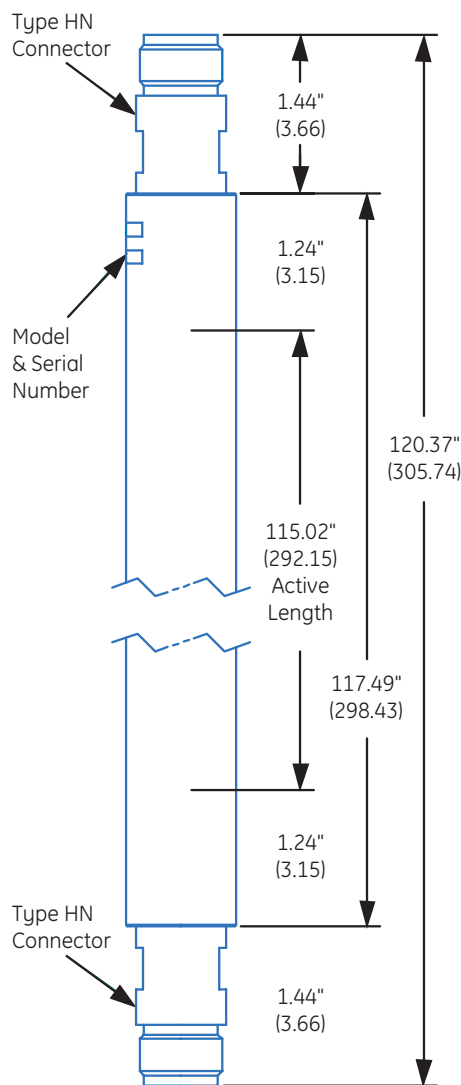
This proportional counter uses a highly resistive anode, which helps determine positioning of the neutron event along the anode. Position resolution is 5mm (depending on electronics). The charge division method of determining position resolution is recommended. It is important to properly match the detector-preamplifier-amplifier electrical characteristics to determine accurate position resolution.

**Product Configurations**

Proportional counters are available in diameters of 0.5" to 2.0" and sensitive lengths of 4.0" to 120.0". Construction can be either 304 stainless steel or 1100 aluminum.

**Sample Specifications**

This proportional counter is a sample of one of over 10,000 neutron counter designs we have manufactured. Please contact us if your application requires modification of the specifications given here.



(cm)



## Specifications

### Mechanical

- Maximum diameter: 2.62 cm
- Maximum overall length: 306.1 cm
- Connectors (2) type: HN
- Net weight: 3 kg

### Material

- Outer shell: 304 Stainless Steel
- Insulation: Alumina ceramic
- Neutron sensitive material: Helium-3
- Fill pressure: 8.2 Atmospheres

### Capacitance

- 10 pF

### Resistance @ 25°C

- Detector:  $10^{12}$  ohms
- Anode 7500 ohms

### Maximum Ratings

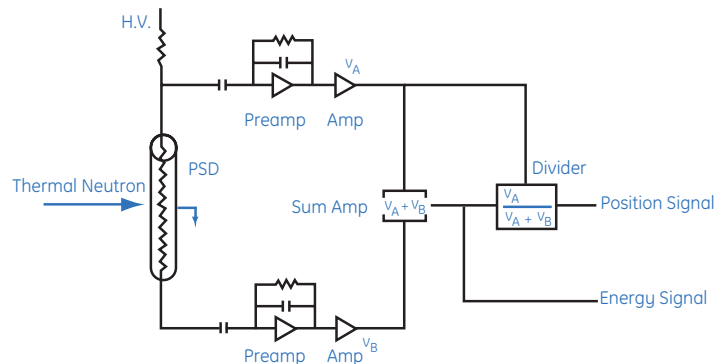
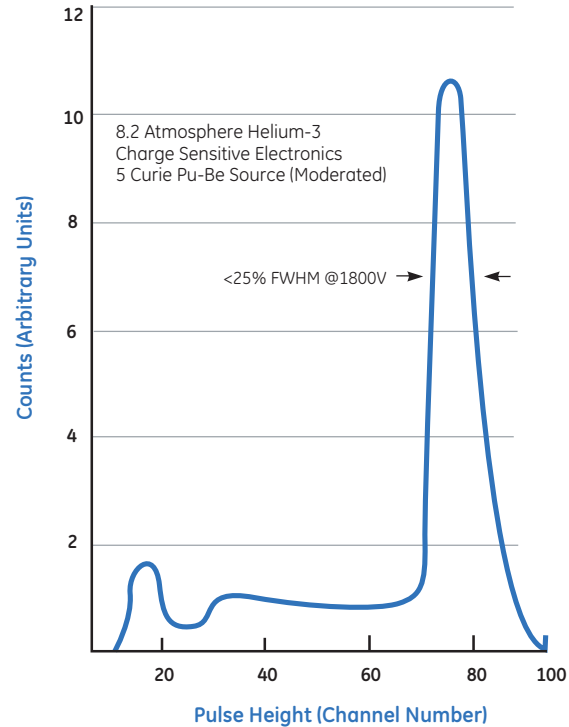
- Voltage: 2500V
- Temperature: 100°C

### Typical Operating Characteristics

- Voltage range: 1400-2200 volts
- Energy Resolution (FWHM): <25%
- Position Resolution (see note)

Note: Position Resolution is dependent on electronics used.

## Typical Difference Pulse Height Spectrum



8499 Darrow Road  
 Twinsburg, OH 44087  
 Ph: 1 (330) 425-3755  
 Ph: 1 (512) 251-4131  
 E-mail: [rsweb@ge.com](mailto:rsweb@ge.com)  
[gepower.com/reuterstokes](http://gepower.com/reuterstokes)

©2005, General Electric Company. All rights reserved. The contents of this document are the property of General Electric Company. No part of this work may be reproduced or transmitted in any form or by any means, except as permitted in written license agreement with General Electric Company. General Electric Company has made every reasonable attempt to ensure the completeness and accuracy of this document. However, the information contained in this document is subject to change without notice, and does not represent a commitment on the part of General Electric Company. The GE logo is a registered trademark of General Electric Company.

