Reuter-Stokes ^{3}He proportional counter RS-P4-0406-212

Time-of-flight spectroscopy

^{3}He advantages of this filled proportional counter include:

- Small Size
- High Neutron Sensitivity
- Excellent Spectral Resolution
- Low Operating Voltage
- Short Jitter Time

Precision performance

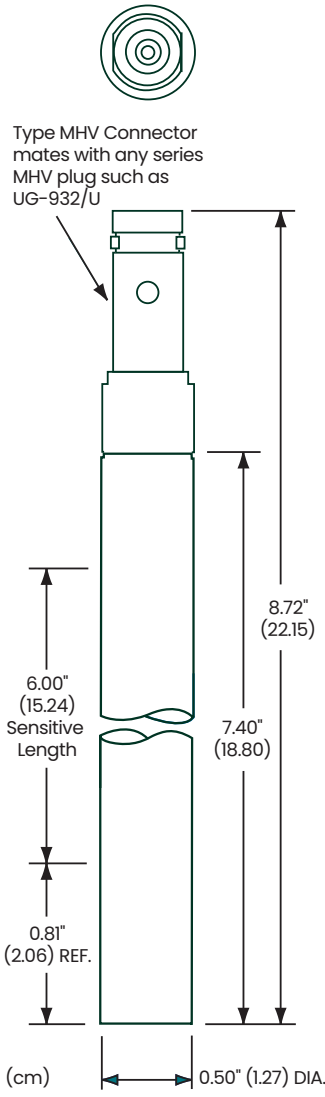
^{3}He purification techniques and manufacturing process control were developed to ensure precise matching of operating characteristics among large batches of counters. This permits parallel operation of large numbers of detectors without need for separate power supplies or gain matching.

Customizable solutions

This detector has a 1.27 cm diameter and a sensitive length of 15.24 cm. Detectors are available in lengths from 7.00 cm to 60.00 cm.

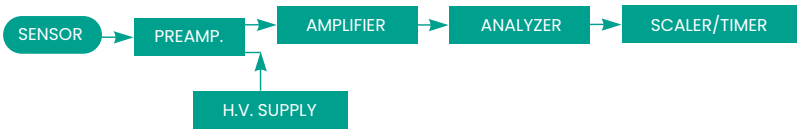
Sample specifications

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.



Reuter-Stokes
a Baker Hughes business

Typical counting arrangement



Specifications

Mechanical

- Maximum diameter: 1.32 cm
- Maximum overall length: 22.45 cm
- Connectors (2) type: MHV
- Net weight: 0.1 kg

Material

- Outer shell: 304 Stainless Steel
- Insulation: Alumina ceramic
- Neutron sensitive material: ^{3}He
- Fill pressure: 10 Atmospheres ^{3}He (see note)

Capacitance

- 7 pf

Resistance @ 25°C

- 1012 ohms (minimum)

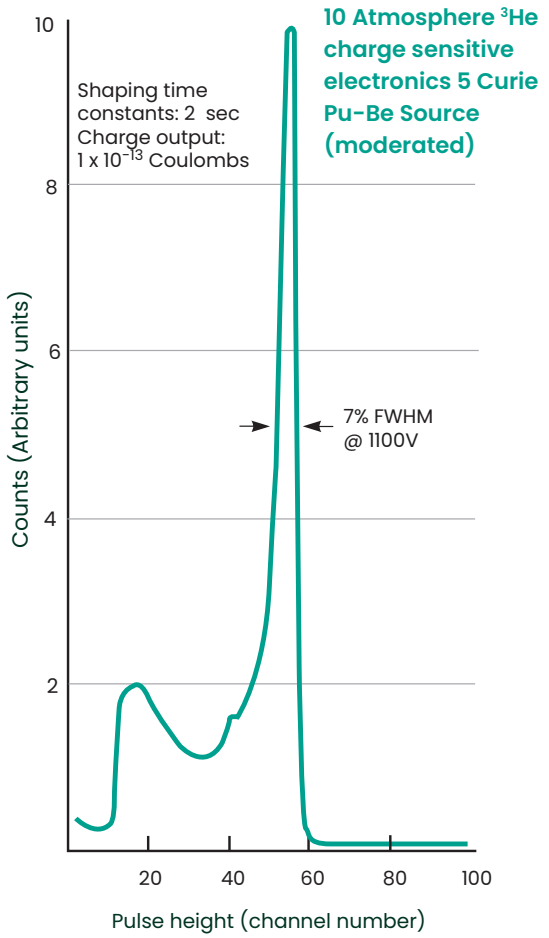
Maximum ratings

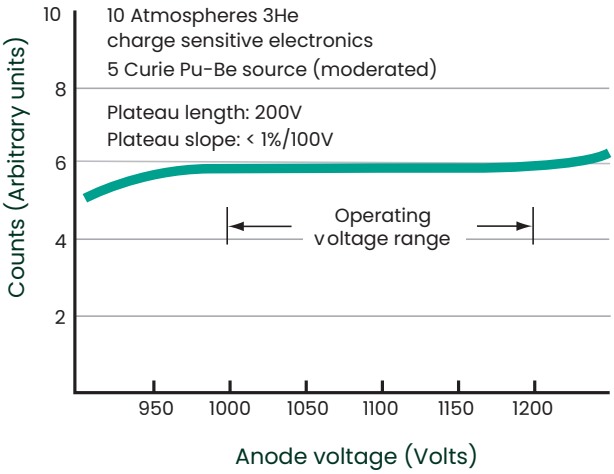
- Voltage: 2000V
- Temperature: 150°C
- Operating gamma flux: 1 R/hr

Operating characteristics

- Thermal neutron sensitivity (unperturbed): 8 cps/nv
- Thermal neutron flux range: to 104 nv
- Voltage range: See plateau curve
- Resolution (FWHM): See spectrum
- Output pulse characteristics (average)
  - — Charge output: 1 x 10-13 coulombs @ 1100 V
  - — Jitter time: 1 µ sec

Note: Other sensitive lengths available from 7 to 60 cm, other pressures available to 15 atmospheres.





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