

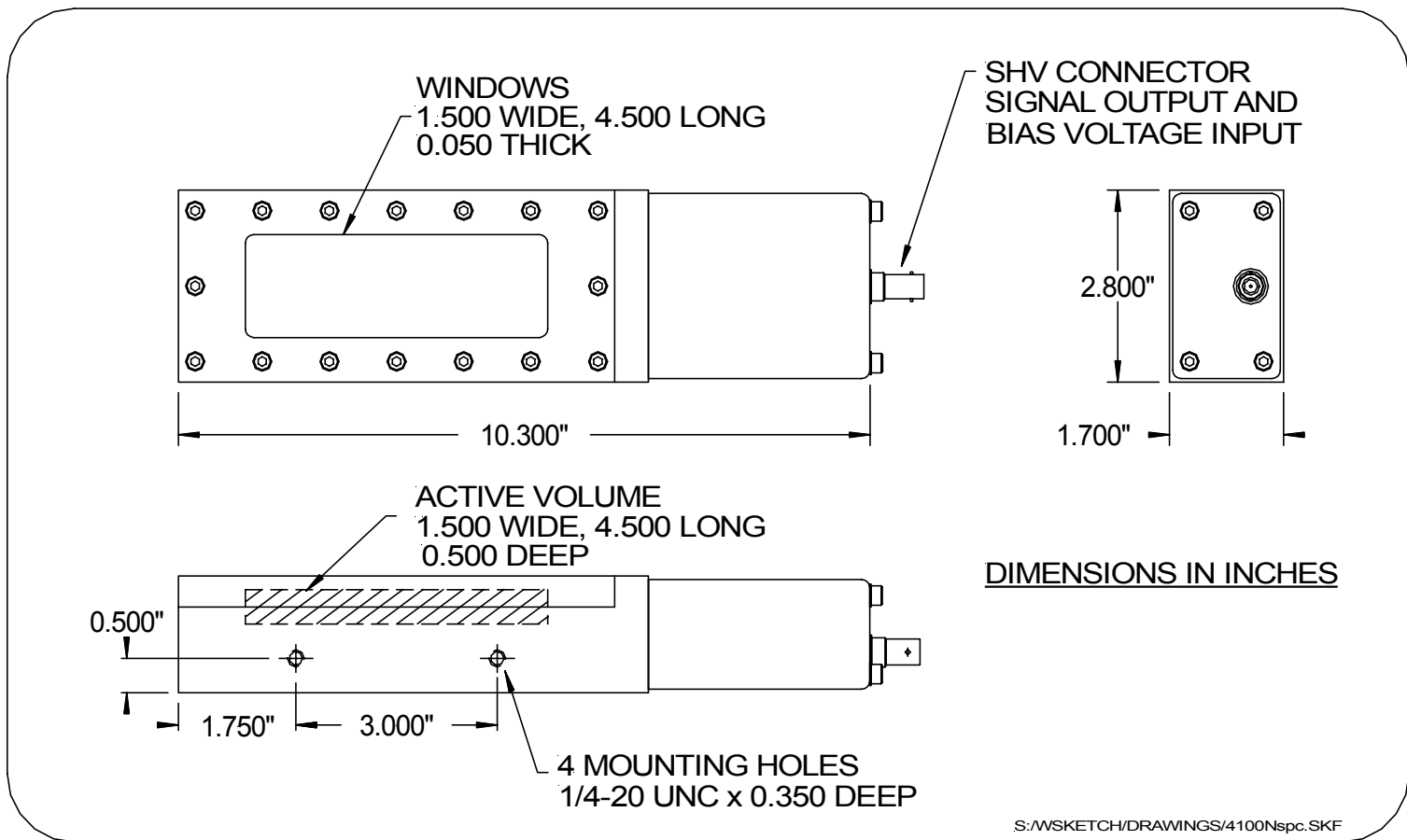
## ORDELA MODEL 4100N - SHV NEUTRON BEAM MONITOR

### DESCRIPTION

The ORDELA Model 4100N is designed and manufactured by ORDELA, Inc. for the detection and counting of thermal neutrons in intense neutron beams. It operates as a dual-anode gas proportional counter. The detection efficiency of this counter is a customer-specified variable that may range from 0.001% to 75%. The gamma background sensitivity has been minimized by using an all-aluminum counter enclosure and a quench gas of low cross-section for gamma radiation. The proportional counter operates at low gas multiplication (<20) to extend the life of the anode and allow operation in beam intensities of up to  $10^8$  neutrons per second per  $\text{cm}^2$ . The active volume of the counter has a 3.8 cm x 11.4 cm window area and is 1.3 cm deep. The complete Neutron Beam Monitor is packaged in a 7.1-cm-wide, 26.2-cm-long, and 4.3-cm-high unit. The counter includes a low-noise preamplifier and a high-voltage filtering circuit.

### SPECIFICATIONS

DETECTION EFFICIENCY:	Customer-specified, typically $5 \times 10^{-5} \pm 10\%$ for a nominal neutron energy of 0.025 eV (0.18 nm wavelength)
COUNTER GAS:	$^3\text{He}$ at 0.23 Torr partial pressure, plus $^4\text{He}/\text{CF}_4$ at 519 Torr partial pressure
SENSITIVE AREA:	3.8 cm wide x 11.4 cm long
SENSITIVE DEPTH:	1.3 cm
WINDOW THICKNESS:	0.2 cm Aluminum
HIGH-VOLTAGE BIAS:	800 V
CONNECTORS:	One SHV connector for signal output and bias.
STANDARD ACCESSORIES:	One bellows valve type Nupro in SS-4H



**ORDELA Model 4100N - SHV Neutron Beam Monitor Outline Dimensions**

**WARRANTY**

ORDELA, Inc. warrants its products to be free from defects in materials and workmanship for 12 months after shipment. No other warranty is included. Specifically, no warranty of merchantability or fitness for a particular purpose is implied. ORDELA's liability under this warranty is limited to repairing or replacing the product at ORDELA's option. This warranty is void if the product is operated improperly, disassembled, or modified other than in the ORDELA laboratory.