

Resistive Voltage Dividers

...for the measurement of high voltages using a standard digital voltmeter*

Spellman's HVD Series of high voltage dividers provide laboratory or production facilities with a convenient method of measuring up to 100kVdc, 200kVdc or 400kVdc with accuracy better than 0.5%. These dividers are designed for use with high impedance digital voltmeters. All HVD dividers are housed in a polycarbonate cylinder containing a matched set of precision metal film resistors which have a temperature coefficient of less than 25ppm. A ladder-type construction technique is used in conjunction with polished high voltage bushings specifically designed to minimize corona. BNC connectors are used to provide the low voltage proportional output signal.

The HVD Series of high voltage dividers have no inferred bandwidth measurement capability what so ever. They are intended for DC steady state measurement only.

Custom Encapsulated OEM High Voltage Dividers

Spellman designs and manufactures a wide array of custom encapsulated high voltage dividers for OEM applications like ion beam implantation for semiconductor manufacturing. Unique HV divider sizes, shapes, mounting arrangements and terminations can be provided addressing specific custom requirements. Contact Spellman to discuss your needs with our knowledgeable sales staff.

Calibration

Spellman provides an NIST traceable calibration certificate with each HVD. A yearly recalibration cycle is recommended. Contact Spellman for calibration services.

- **High Input Impedance**
- **25ppm Temperature Coefficient**
- **100kV, 200kV and 400kV Models**
- **Corona Free Operation**
- **0.5% Accuracy (higher accuracies available)**



HVD

	HVD100	HVD200	HVD400
Input Voltage	0-100kVdc	0-200kVdc	0-400kVdc
Input Impedance	1000Mohms	2000Mohms	4000Mohms
Output Impedance	1M; 100kohms	20kohms	40kohms
Output Taps	100V, 10V	2V	4V
Accuracy	0.5%: (0.1% opt) ¹	0.5%: (0.25% opt) ²	0.5%
Stability	0.01%/8hrs	0.025%/8hrs	0.025%/8hrs
Temp. Coefficient	25ppm/°C	25ppm/°C	25ppm/°C
Height	17.5" (44.5cm)	33.5" (84.5cm)	61" (154.94cm)
Max. Diameter	10" (25.4cm)	12" (30.5cm)	20" (50.8cm)
Weight	6.75 lbs (3.1kg)	12 lbs (5.5kg)	24.45 lbs (11.8kg)
Output Connector	BNC type	BNC type	BNC type

(1) For accuracy of 0.1% specify HVD100-1
 (2) For accuracy of 0.25% specify HVD200-1

*for use with digital voltmeter 10Gohms or higher.

Note: Due to the high input impedance requirement connecting the HVD to an oscilloscope input (1Mohms input impedance) will cause erroneous, inaccurate measurements.

WARNING

DANGEROUS LIFE THREATENING VOLTAGES MAY BE PRESENT ON THIS EQUIPMENT. OBSERVE EXTREME CAUTION WHEN OPERATING OR WORKING NEAR HIGH VOLTAGE DEVICES. NEVER TOUCH ANY HIGH VOLTAGE ASSEMBLY THAT IS SUSPECTED TO BE ENERGIZED OR CHARGED. DO NOT HANDLE OR COME WITHIN THE PROXIMITY OF HIGH VOLTAGE CONNECTIONS UNTIL ALL EQUIPMENT IS TURNED OFF AND THE SETUPS CAPACITANCE IS DISCHARGED. FAILURE TO FOLLOW SAFETY PROCEDURES MAY BE FATAL.