

# INTRODUCTION & SPECIFICATIONS

## 1.1 INTRODUCTION

The CPS HVP- 250 is a compact, accurate tool for precise measurements of high voltage. The suggested complement to the divider probe is a differential voltmeter or high input impedance DVM so that virtually no current is drawn from the measurement circuit. The probe can also be calibrated (factory only) for use with a digital voltmeter with 10 M $\Omega$  input impedance.

WARNING: many digital voltmeters change input impedance when the range selection is changed.

## 1.2 ELECTRICAL SPECIFICATION

INPUT VOLTAGE:	50 kV maximum
VOLTAGE RATIO:	1000:1 / 10000:1
INPUT IMPEDANCE:	1000 M $\Omega$ (+/- 15%)
OUTPUT LOADING:	>10 G $\Omega$ for high Z calibration 10 M $\Omega$ (W/10 M $\Omega$ option )
FREQ. RESPONSE:	.25dB @ 60Hz (typical)
ACCURACY:	< 0.05% 0 to 50kV
TIPS:	CORONA BALL & POINTED
OUTPUT CONNECTOR:	BNC

# OPERATING INSTRUCTIONS

1. Before making voltage measurements, ensure that the probe's insulated ground wire is electrically connected to earth ground. Periodically inspect the lead for damage due to misuse or other damage. WARNING: The full measured voltage could be present at the probe BNC output connector if the probe is not solidly connected to earth ground.
2. With the probe properly grounded, connect the probe output to a DVM with an input  $Z > 10 \text{ G}\Omega$ . If using a 10 M $\Omega$  calibration probe, be sure to use only a 10 M $\Omega$  input  $Z$  digital voltmeter. CAUTION: When using a digital voltmeter with the HVP-250, be sure to avoid meter ranges that present loading other than the specified meter matching calibration impedance. Check the DVM manual to be sure. Most DVM's present an input  $Z$  of 10 M $\Omega$  on input ranges over 10 volts.
3. Mount the selected probe tip to the probe. Turn the tip clockwise until it seats against the probe body.
4. Set the voltmeter to the proper range. The divider ratio is 1000:1. Ten volts on the DVM represents 10kV, the divider ratio is 10000:1 One volt on the DVM represents 10kV at the test point. Proceed with the measurement.
5. If desired, the probe may be semi-permanently mounted in a measurement system by means of the two 8-32 inserts in the handle guard. These inserts are electrically isolated. Do not use these inserts as a ground connection.
6. Your divider probe is a precision instrument. Please store the probe, accessories, and manual in the instrument case. If you do not have an instrument case we suggest you order one through customer service at (503) 598-9595.

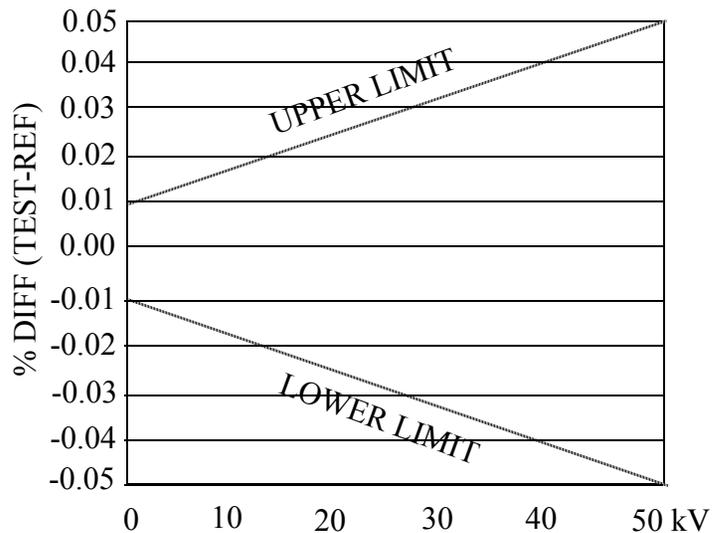
## WARRANTY

COMPUTER POWER SUPPLY, Inc. warrants equipment of its manufacture against defective materials or workmanship for a period of two years from the date of shipment.

CPS will repair or replace any defective product which was not damaged by negligence, misuse, improper installation, accident or unauthorized repair or alteration by the buyer.

This warranty is applicable to the original Buyer only and constitutes the sole and exclusive warranty of Seller. No other warranty is made, expressed or implied.

### SPECIFICATION TEST LIMITS



7313 SW Tech Center Drive  
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## INSTRUCTION MANUAL

HVP-250

HIGH VOLTAGE PROBE