


REVISIONS			
REV	DESCRIPTION	DATE	APPROVAL
B	RELEASE	2/16/2018	

CPS 0333 HIGH VOLTAGE PROBE
INSTRUCTION MANUAL

CUSTOMER	CONTRACT NO.					7313 SW TECH CENTER DRIVE PORTLAND, OR 97223 PH: (503) 598-9595 FAX: (503) 682-8164 WWW.CPSHV.COM		
	PREPARED	DATE	TITLE INSTRUCTION MANUAL - 0333					
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	APPROVED	DATE	A	31640	0333-00-0201	B		
		SCALE	1:1			SHEET 1 OF 8		



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INSTRUCTION MANUAL - 0333

SERIAL NUMBER

PART NO.

0333-00-0005

SHEET

2

1. SAFETY	3
WARNING	3
2. DEFINITIONS OF SYMBOLS	4
4. BLOCK DIAGRAM	4
5. ELECTRICAL SPECIFICATIONS.....	5
5.1 AC Channel	5
5.2 DC Channel	5
6. ENVIRONMENTAL CONDITIONS.....	6
7. MECHANICAL SPECIFICATIONS	6
WARNING	7
8. OPERATION	7
WARNING	7
CAUTION.....	7
9. WARRANTY	8



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SHEET

3

1. Safety

OPERATIONAL SAFETY

THIS DEVICE IS USED FOR MEASUREMENT THE VOLTAGES THAT ARE DANGEROUS AND MAY BE FATAL. OBSERVE EXTREME CAUTION WHEN WORKING WITH THIS EQUIPMENT.

All equipment must be properly grounded and all cables must be properly connected before applying power.

Note that high voltage may remain at internal capacitors during long period of time even without power.

Do not disconnect any cables from working equipment, because it may break some return ground and cause appearance of high voltage on unprotected conductors.

Do not ground yourself or work under wet or damp conditions.

SERVICING SAFETY

Maintenance does not require removing the instrument cover with the power on. Servicing should only be done by qualified personnel aware of the electrical hazards.

“WARNING” notes in the text call attention to hazards in the operation of these units that could lead to possible injury or death.

“CAUTION” notes in the text indicate procedures to be followed to avoid possible damage to equipment.

Technical and safety assistance can be obtained from:

CPS Technical Support
7313 SW Tech Center Dr
Portland, OR 97223, USA

Phone: 503-598 9595
Fax: 503-684-8164
E-mail: info@cpsvh.com

WARNING

IF THE EQUIPMENT IS USED IN ANY MANNER NOT SPECIFIED BY THE CPS, INC. (MANUFACTURER), THE PROTECTION PROVIDED IN THE EQUIPMENT MAY BE IMPAIRED CAUSING EQUIPMENT DAMAGE.

TITLE

INSTRUCTION MANUAL - 0333

SERIAL NUMBER

PART NO.

0333-00-0005

SHEET

4

2. Definitions of Symbols



Direct Current



Protective Conductor Terminal



Caution (refer to accompanying documents)



Caution, risk of electric shock

3. Introduction

The CPS 0333 is an AC/DC voltage meter with analog interface.

4. Block Diagram

The CPS 0333 includes separate AC and DC channels, combined to the single output. Connection diagram at Figure 1 explains how these units work together.

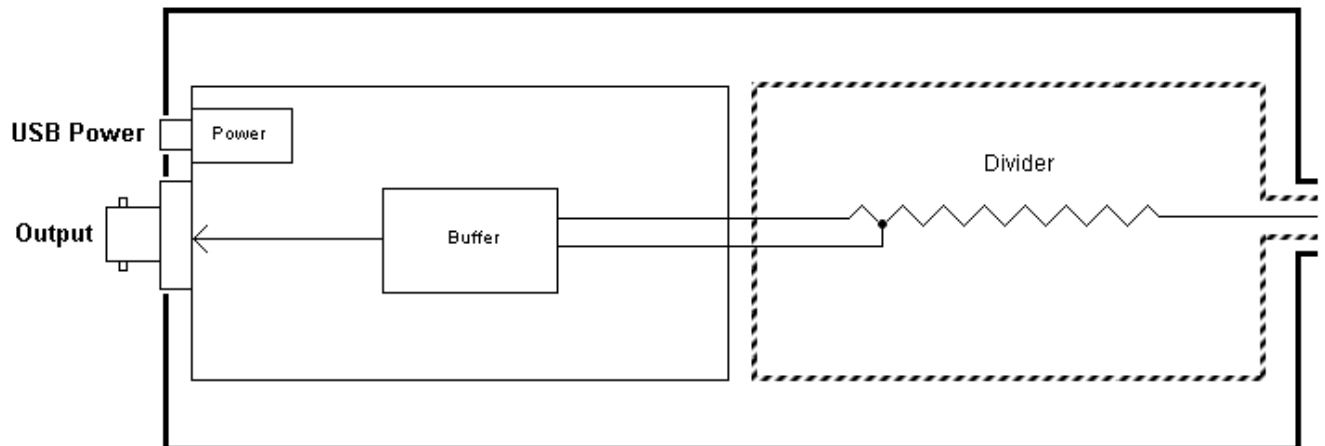


Figure 1. Block Diagram of 0333.

TITLE

INSTRUCTION MANUAL - 0333

SERIAL NUMBER

PART NO.

0333-00-0005

SHEET

5

5. Electrical Specifications

Input to output voltage ratio	10000:1
Maximum input peak voltage	$\pm 50\text{kV}$
Input impedance	1000M Ω /10pF
Power voltage	+5V \pm 10%
Power current	up to 10mA

5.1 AC Channel

Input scale	50kV RMS
Frequency range	10Hz...1MHz
Initial accuracy	0.1%
Temperature coefficient	50 ppm per $^{\circ}\text{C}$ in range (15...25) $^{\circ}\text{C}$

5.2 DC Channel

Input scale	$\pm 50\text{kV}$
Initial accuracy	0.01%
Temperature coefficient	12 ppm per $^{\circ}\text{C}$; average, in range (15...25) $^{\circ}\text{C}$

TITLE

INSTRUCTION MANUAL - 0333

SERIAL NUMBER

PART NO.

0333-00-0005

SHEET

6

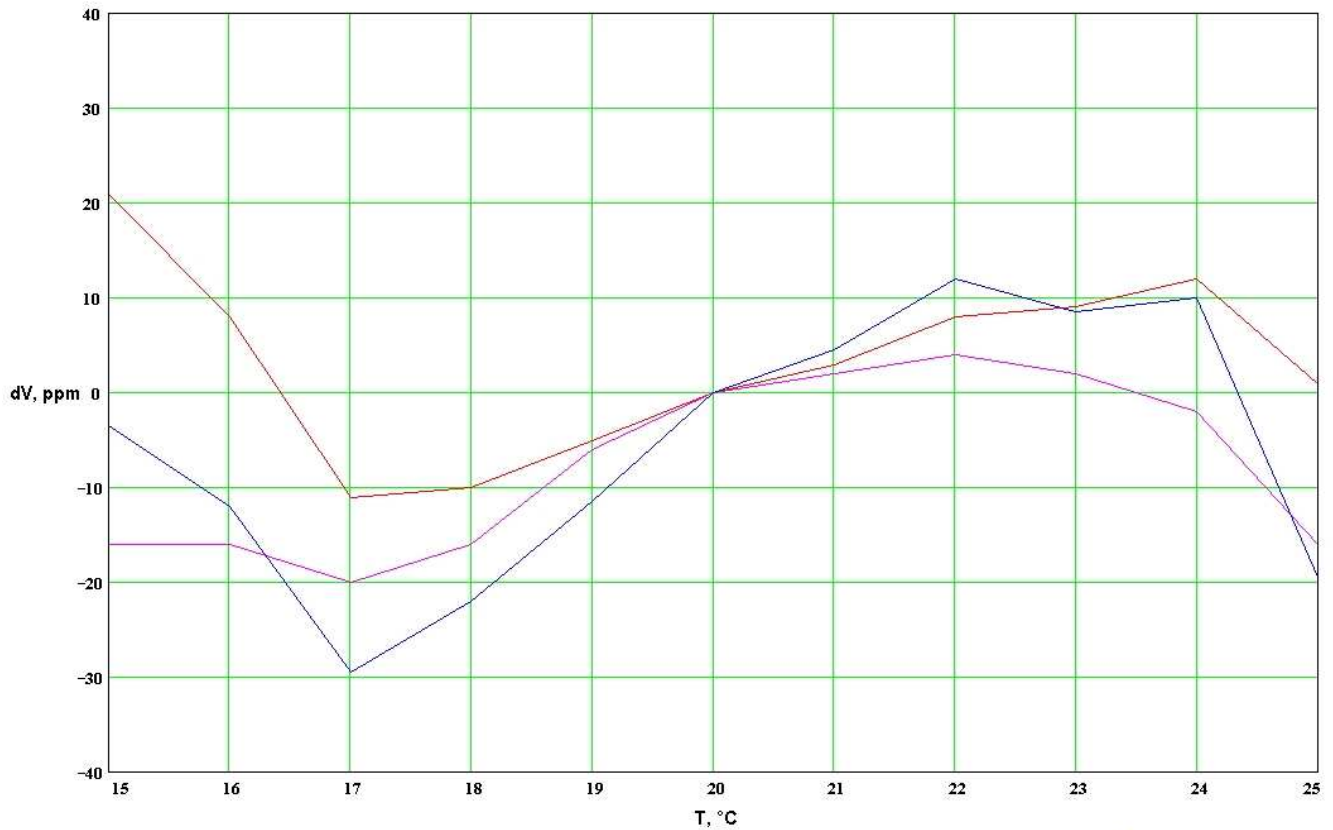


Figure 2. DC temperature coefficient (3 samples of 0333).

6. Environmental Conditions

Model 0333 must operate under following conditions:

- The equipment is intended for indoor use only
- Operating temperature 0 to 40°C
- Altitude up to 2000 m
- Maximum relative humidity 80% at 31°C and 50% at 40°C
- Installation category - Intended for use in installation category (over voltage category) II (IEC 1010-1 standard)
- Pollution degree - Category 2 (IEC 1010-1 standard)

7. Mechanical Specifications

Weight	0.8 kg
Length	315 mm.
Output connector	mini-B USB
Optional tip	Hook shape

TITLE

INSTRUCTION MANUAL - 0333

SERIAL NUMBER

PART NO.

0333-00-0005

SHEET

7

Standard probe tips supplied

Unit package

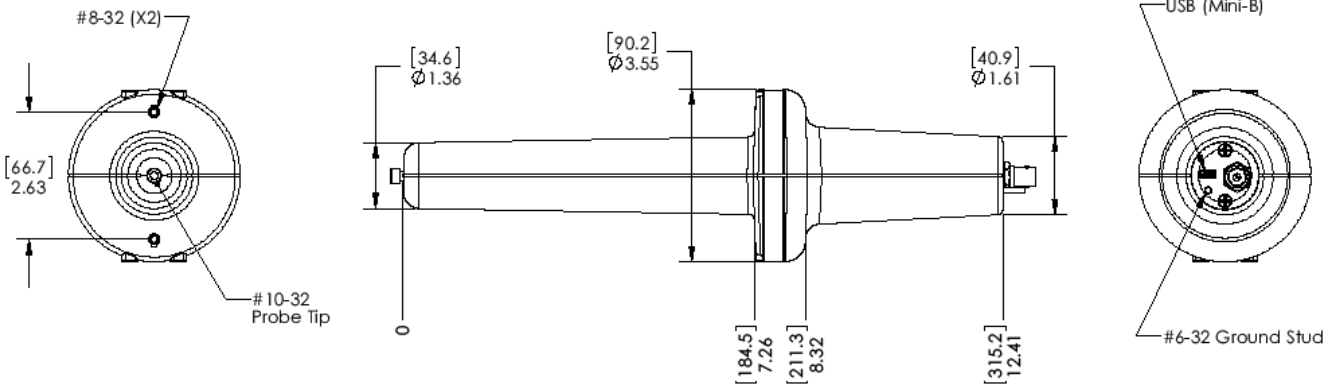
One removable corona ball with banana jack receptacle;
one removable pointed tip
see Figure 3.

Figure 3. Physical layout and placement of connectors.

WARNING

THE GROUND STUD MUST BE GROUNDED. FAILURE TO FOLLOW THIS WARNING MAY RESULT IN SEVERE HEALTH HAZARD.

8. Operation**WARNING**

THIS EQUIPMENT IS USED FOR MEASUREMENT THE VOLTAGES THAT ARE DANGEROUS AND MAY BE FATAL. PROPER GROUNDING OF ALL HIGH VOLTAGE EQUIPMENT IS ESSENTIAL.

CAUTION

BEFORE USING THIS DEVICE, FOLLOW THIS STEP-BY-STEP PROCEDURE.

FAILURE TO FOLLOW THESE PROCEDURES MAY VOID THE WARRANTY AND WILL RESULT THE SAFETY VIOLATION.

Step A

The ground stud must be grounded. Use the ground cable, provided with the probe for this connection.

Step B

Connect the USB connector to a power supply or computer with an USB cable.

Connect the output BNC connector to a meter or oscilloscope.

TITLE

INSTRUCTION MANUAL - 0333

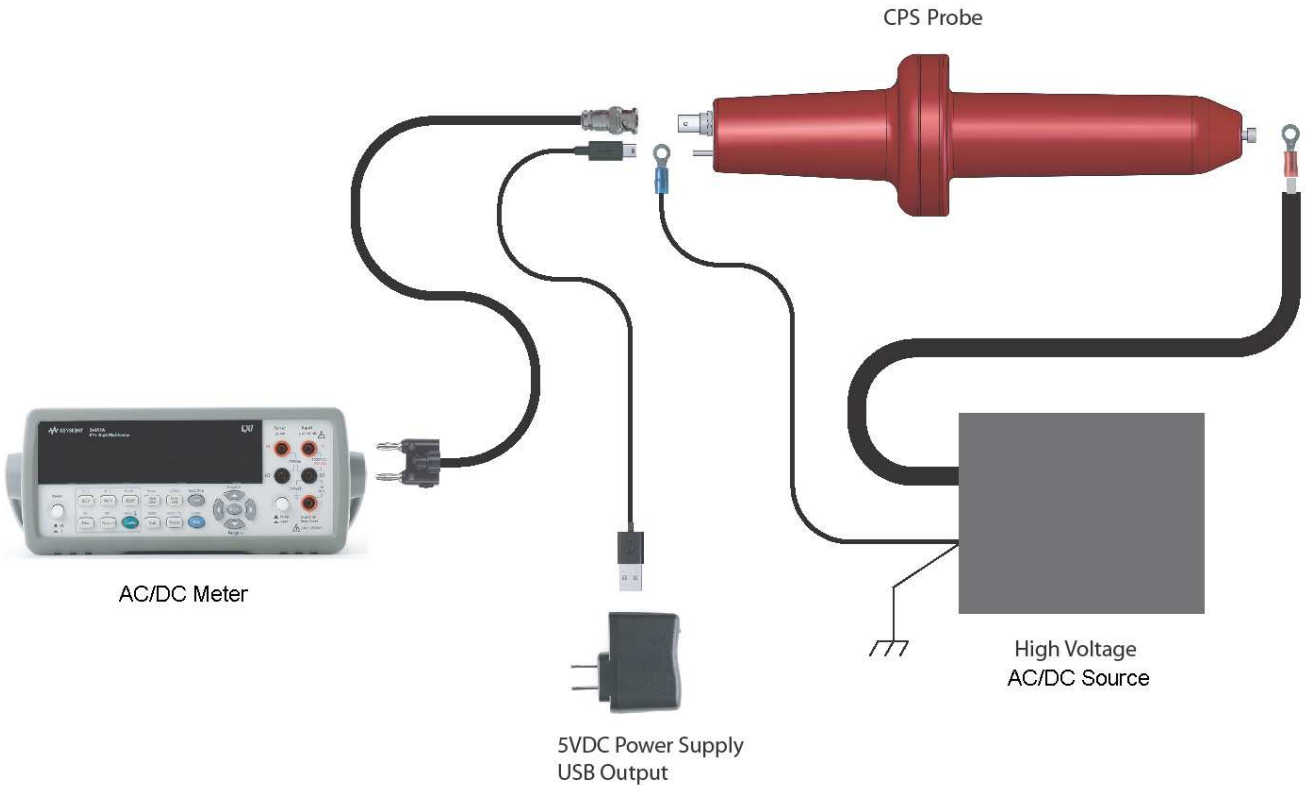
SERIAL NUMBER

PART NO.

0333-00-0005

SHEET

8



9. Warranty

COMPUTER POWER SUPPLY, Inc. (CPS) warrants equipment of its manufacture against defective materials or workmanship for a period of one year from the date of shipment.

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

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