



MANUFACTURER: OHM-LABS, INC.
DESCRIPTION: HIGH VOLTAGE DIVIDER
MODEL: HVS
SERIAL:

PROCEDURE: HV CAL
LAB ENVIRONMENT: 20 °C / 31 %RH
CAL DATE: 28/JAN/2016
CAL DUE:

<u>STANDARDS USED</u>			
<u>ID</u>	<u>DESCRIPTION</u>	<u>MAKE & MODEL</u>	<u>CAL DUE</u>
AS3519	MULTIMETER	AGILENT 34401A	01/JUL/2016
AS3520	MULTIMETER	AGILENT 3458A	15/JUL/2016
AS3531	MULTIMETER	AGILENT 3458A	28/DEC/2016
AS3714	HIGH VOLTAGE DIVIDER	OHM-LABS HVS	08/JUL/2016
AS3730	INDUCTIVE DIVIDER	HI-VOLT PFT1003	26/MAY/2020

COMMENTS:

OHM-LABS, INC. CERTIFIES THAT THIS CALIBRATION IS TRACEABLE TO THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (NIST), OR ANOTHER RECOGNIZED NATIONAL MEASUREMENT INSTITUTE, OR DERIVED BY A RATIO TYPE SELF-CALIBRATION TECHNIQUE, AND IS ACCREDITED TO ISO/IEC 17025. OHM-LABS' QUALITY CONTROL SYSTEM MEETS THE REQUIREMENTS OF ANSI/NC SL Z540-1-1994. THE REPORTED UNCERTAINTIES REPRESENT EXPANDED UNCERTAINTIES EXPRESSED AT A CONFIDENCE LEVEL OF APPROXIMATELY 95 %, USING A COVERAGE FACTOR OF K=2. THIS UNCERTAINTY IS AT THE TIME OF TEST ONLY AND DOES NOT TAKE INTO ACCOUNT TRANSIT, USAGE, DRIFT OVER TIME, OR OTHER FACTORS AFFECTING STABILITY. THIS DOCUMENT CERTIFIES THAT THE ITEMS IDENTIFIED HEREIN COMPLY WITH ALL REQUIREMENTS OF THE ABOVE PURCHASE ORDER, AND THAT THE CALIBRATION PERFORMED WAS IN ACCORDANCE WITH THE CURRENT REVISION LEVEL OF OHM-LABS' QUALITY CONTROL SYSTEM. TRAINED AND QUALIFIED PERSONNEL PERFORMED THE CALIBRATIONS IN ACCORDANCE WITH THE REQUIREMENTS OF ISO/IEC 17025. THIS CERTIFICATE SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT WRITTEN PERMISSION BY OHM-LABS, INC.

PERFORMED BY:

REVIEWED BY:



CONTINUED ON NEXT PAGE...



CALIBRATION REPORT

ORDER No.

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MANUFACTURER: OHM-LABS, INC.

MODEL: HVS

SERIAL:

MEASUREMENT DATA				
APPLIED kV DC	DC RATIO	DC RATIO UNCERTAINTY	DC GUARD RATIO	DC GUARD RATIO UNCERTAINTY
10	5,002.68 : 1	0.27 : 1	49,915 : 1	15 : 1
20	5,002.79	0.27	49,931	29
30	5,002.84	0.27	49,917	18
40	5,002.87	0.26	49,910	16
50	5,002.81	0.32	49,900	22
DC GUARD VOLTAGES WERE MEASURED WITH METER SET TO >10 GΩ INPUT IMPEDANCE				
APPLIED kV AC 60 Hz	AC RATIO	AC RATIO UNCERTAINTY	AC GUARD RATIO	AC GUARD RATIO UNCERTAINTY
5	5,122.7 : 1	3.0 : 1	40,645 : 1	45 : 1
10	5,117.1	4.2	40,654	52
15	5,116.6	3.9	40,650	53
20	5,116.3	3.4	40,642	47
25	5,115.8	2.7	40,643	52
30	5,116.0	2.6	40,584	47
AC RATIOS REFLECT LOADING EFFECT OF 1 MΩ AC VOLTMETER IMPEDANCE ON HVS OUTPUTS				

NOTES:

ACTUAL APPLIED VOLTAGES WERE WITHIN 1 % OF NOMINAL VALUES LISTED

DIVIDER WAS ALLOWED TO STABILIZE A MINIMUM OF 15 MINUTES AT EACH APPLIED VOLTAGE.

FANS WERE POWERED ON DURING TESTS.

DC MEASUREMENTS WERE WITH A HIGH VOLTAGE WHEATSTONE CIRCUIT WHICH DOES NOT SIGNIFICANTLY BURDEN THE DC OUTPUT OF THE DIVIDER UNDER TEST. IF A METER IS USED, A CORRECTION MAY NEED TO BE APPLIED FOR THE METER INPUT IMPEDANCE. METER INPUT IMPEDANCE SHOULD BE >10 G TO MINIMIZE ERRORS. A DUAL BANANA PLUG WAS CONNECTED TO THE BLACK AND RED MAIN OUTPUT BINDING POSTS FOR DC MEASUREMENTS.

AC RATIOS WERE AVERAGED FROM A SERIES OF METER READINGS. THE AC VOLTMETER BURDEN ON THE AC OUTPUT OF THE DIVIDER WAS 1 MΩ, SHUNTED BY <180 pF METER AND CABLE. A COAXIAL CABLE WAS CONNECTED TO THE BNC OUTPUT FOR AC READINGS.

GUARD VOLTAGE MEASUREMENTS WERE MADE FROM THE BLACK AND WHITE GUARD POSTS.

A 4" FLEXIBLE ALUMINUM TUBE CONNECTED THE UUT TO THE STANDARD. THIS TUBE EXTENDED UPWARDS ABOVE THE UUT FOR APPROXIMATELY 12" BEFORE ANGLING ACROSS TO THE STANDARD. THE UUT WAS PLACED ON A GROUND PLANE APPROXIMATELY 4" OFF OF THE FLOOR. A MINIMUM OF 24" CLEARANCE ON ALL SIDES WAS ALLOWED TO REDUCE GROUND PLANE COUPLING.