

Certificate No: [REDACTED]

Contract/PO No: CC-Foster

INSTRUMENT CONDITION:

Received: In tolerance
Unit found within tolerance however, repairs were made then adjustments were performed.

Returned: In tolerance

Calibration Procedure: MANIFEST:Product_Dmm_2019-Keithley-DMM751x_Full VERSION:4
MANIFEST:Product_Dmm_2019-KeithleyDMMs_Full VERSION:69

CALIBRATION EQUIPMENT USED:

Model:	Serial No.:	Manufacturer:	Due Date:
5720A	8960208	FLUKE	09-Mar-2026
5725A	8310019	FLUKE	09-Mar-2026
8508A	380072014	FLUKE	05-Feb-2026
1423-A	E1-14531013	IET LABS	24-Apr-2026
HACS-Z-A-2E-1uF	H1-1453390	IET LABS	16-Apr-2026
3390	1221800	KEITHLEY	14-Apr-2026

Issued By:

Allen Gayheart

Calibrated By: Hunter Via

Date Issued: 29-Dec-2025

Service Manager: ALLEN GAYHEART

CALIBRATION DATA REPORT

Certificate Number

Instrument Type	Serial Number	Calibration Date	Data	Date Issued
DMM7510		29-DEC-2025	Incoming	29-DEC-2025

SPECIFICATION TESTED: DC Voltage

Step/Operation	Nominal	Low Limit	Measured Value	High Limit	Units	Result	% Spec
100 mV Range (+) Full Scale	100.0000	99.9973	100.0006	100.0027	mV	Pass	21
100 mV Range (+) Half Scale	50.0000	49.9982	50.0004	50.0018	mV	Pass	22
100 mV Range (-) Half Scale	-50.0000	-50.0018	-50.0001	-49.9982	mV	Pass	-4
100 mV Range (-) Full Scale	-100.0000	-100.0027	-100.0001	-99.9973	mV	Pass	-5
100 mV Range Digitizer (+) Full Scale	100.0000	99.9680	100.0003	100.0320	mV	Pass	1
100 mV Range Digitizer (+) Half Scale	50.0000	49.9790	50.0013	50.0210	mV	Pass	6
100 mV Range Digitizer (-) Half Scale	-50.0000	-50.0210	-50.0010	-49.9790	mV	Pass	-5
100 mV Range Digitizer (-) Full Scale	-100.0000	-100.0320	-99.9996	-99.9680	mV	Pass	1
1 V Range (+) Full Scale	1.000000	0.9999830	1.000023	1.000170	V	Pass	13
1 V Range (+) Half Scale	0.500000	0.4999905	0.500014	0.500095	V	Pass	14
1 V Range (-) Half Scale	-0.500000	-0.5000095	-0.500013	-0.4999905	V	Pass	-14
1 V Range (-) Full Scale	-1.000000	-1.000170	-1.000014	-0.9999830	V	Pass	-8
1 V Range Digitizer (+) Full Scale	1.000000	0.999805	1.000004	1.000195	V	Pass	2
1 V Range Digitizer (+) Half Scale	0.500000	0.499865	0.500008	0.500135	V	Pass	6
1 V Range Digitizer (-) Half Scale	-0.500000	-0.500135	-0.500020	-0.499865	V	Pass	-15
1 V Range Digitizer (-) Full Scale	-1.000000	-1.000195	-1.000017	-0.999805	V	Pass	-9
10 V Range (+) Full Scale	10.000000	9.999848	10.000010	10.000152	V	Pass	7
10 V Range (+) Half Scale	5.000000	4.999918	5.000020	5.000082	V	Pass	24
10 V Range (-) Half Scale	-5.000000	-5.000082	-5.000010	-4.999918	V	Pass	-12
10 V Range (-) Full Scale	-10.000000	-10.000152	-10.000002	-9.999848	V	Pass	-2
10 V Range Digitizer (+) Full Scale	10.00000	9.99805	9.99997	10.00195	V	Pass	-1
10 V Range Digitizer (+) Half Scale	5.00000	4.99865	5.00007	5.00135	V	Pass	5
10 V Range Digitizer (-) Half Scale	-5.00000	-5.00135	-5.00007	-4.99865	V	Pass	-6
10 V Range Digitizer (-) Full Scale	-10.00000	-10.00195	-10.00004	-9.99805	V	Pass	-2
100 V Range (+) Full Scale	100.00000	99.99730	100.00031	100.00270	V	Pass	11
100 V Range (+) Half Scale	50.00000	49.99840	50.00019	50.00160	V	Pass	12
100 V Range (-) Half Scale	-50.00000	-50.00160	-50.00018	-49.99840	V	Pass	-11
100 V Range (-) Full Scale	-100.00000	-100.00270	-100.00028	-99.99730	V	Pass	-10
100 V Range Digitizer (+) Full Scale	100.0000	99.9805	100.0007	100.0195	V	Pass	3
100 V Range Digitizer (+) Half Scale	50.0000	49.9865	50.0007	50.0135	V	Pass	6
100 V Range Digitizer (-) Half Scale	-50.0000	-50.0135	-50.0004	-49.9865	V	Pass	-3
100 V Range Digitizer (-) Full Scale	-100.0000	-100.0195	-100.0002	-99.9805	V	Pass	-1
1000 V Range (+) Full Scale	1000.0000	999.9720	999.9982	1000.0280	V	Pass	-7
1000 V Range (+) Half Scale	500.0000	499.9835	500.0000	500.0165	V	Pass	0
1000 V Range (-) Half Scale	-500.0000	-500.0165	-499.9989	-499.9835	V	Pass	7
1000 V Range (-) Full Scale	-1000.0000	-1000.0280	-999.9962	-999.9720	V	Pass	14
1000 V Range Digitizer (+) Full Scale	1000.000	999.805	1000.000	1000.195	V	Pass	0
1000 V Range Digitizer (+) Half Scale	500.000	499.865	500.012	500.135	V	Pass	9
1000 V Range Digitizer (-) Half Scale	-500.000	-500.135	-500.000	-499.865	V	Pass	0
1000 V Range Digitizer (-) Full Scale	-1000.000	-1000.195	-1000.002	-999.805	V	Pass	-1

SPECIFICATION TESTED: AC Voltage

Step/Operation	Nominal	Low Limit	Measured Value	High Limit	Units	Result	% Spec
100 mV @ 20 Hz	100.000	99.910	99.978	100.090	mV	Pass	-25

CALIBRATION DATA REPORT

Certificate Number
[REDACTED]

Instrument Type	Serial Number	Calibration Date	Data	Date Issued
DMM7510	[REDACTED]	29-DEC-2025	Incoming	29-DEC-2025

SPECIFICATION TESTED: AC Voltage

Step/Operation	Nominal	Low Limit	Measured Value	High Limit	Units	Result	% Spec
100 mV @ 1 kHz	100.000	99.910	99.998	100.090	mV	Pass	-2
100 mV @ 50 kHz	100.000	99.810	100.021	100.190	mV	Pass	11
100 mV @ 100 kHz	100.000	99.320	100.077	100.680	mV	Pass	11
1 V @ 20 Hz	1.00000	0.99910	0.99977	1.00090	V	Pass	-25
1 V @ 1 kHz	1.00000	0.99910	0.99999	1.00090	V	Pass	-1
1 V @ 50 kHz	1.00000	0.99810	0.99999	1.00190	V	Pass	0
1 V @ 100 kHz	1.0000	0.9932	1.0003	1.0068	V	Pass	5
10 V @ 20 Hz	10.0000	9.9910	9.9978	10.0090	V	Pass	-25
10 V @ 1 kHz	10.0000	9.9910	9.9999	10.0090	V	Pass	-1
10 V @ 50 kHz	10.0000	9.9810	10.0019	10.0190	V	Pass	10
10 V @ 100 kHz	10.000	9.932	9.993	10.068	V	Pass	-10
100 V @ 20 Hz	100.000	99.910	99.975	100.090	V	Pass	-27
100 V @ 1 kHz	100.000	99.910	99.998	100.090	V	Pass	-2
100 V @ 50 kHz	100.000	99.810	100.007	100.190	V	Pass	4
100 V @ 100 kHz	100.00	99.32	99.92	100.68	V	Pass	-11
700 V @ 50 Hz	700.00	699.37	699.84	700.63	V	Pass	-25
700 V @ 1 kHz	700.00	699.37	699.98	700.63	V	Pass	-4
700 V @ 50 kHz	700.00	698.67	700.81	701.33	V	Pass	61
700 V @ 100 kHz	700.0	695.2	697.7	704.8	V	Pass	-48

SPECIFICATION TESTED: Frequency

Step/Operation	Nominal	Low Limit	Measured Value	High Limit	Units	Result	% Spec
10 Hz @ 5 V	10.00000	9.99920	9.99999	10.00080	Hz	Pass	-1
1 kHz @ 5 V	1.000000	0.999920	0.999999	1.000080	kHz	Pass	-1
10 kHz @ 5 V	10.00000	9.99920	9.99999	10.00080	kHz	Pass	-1
100 kHz @ 5 V	100.0000	99.9920	99.9999	100.0080	kHz	Pass	-1
250 kHz @ 5 V	250.0000	249.9800	249.9997	250.0200	kHz	Pass	-1
500 kHz @ 5 V	500.000	499.960	499.999	500.040	kHz	Pass	-1

SPECIFICATION TESTED: Simulated Thermocouple Type J Temperature

Step/Operation	Nominal	Low Limit	Measured Value	High Limit	Units	Result	% Spec
-190 Deg C	-190.000	-190.200	-189.991	-189.800	°C	Pass	4
0 Deg C	0.000	-0.200	-0.000	0.200	°C	Pass	0
750 Deg C	750.000	749.800	750.008	750.200	°C	Pass	4

SPECIFICATION TESTED: Simulated RTD Temperature

Step/Operation	Nominal	Low Limit	Measured Value	High Limit	Units	Result	% Spec
PT385 (100 ohm)	0.0000	-0.0600	-0.0015	0.0600	°C	Pass	-2

CALIBRATION DATA REPORT

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Instrument Type	Serial Number	Calibration Date	Data	Date Issued
DMM7510		29-DEC-2025	Incoming	29-DEC-2025

SPECIFICATION TESTED: Dry Circuit Resistance

Step/Operation	Nominal	Low Limit	Measured Value	High Limit	Units	Result	% Spec
10 ohm Range (4-Wire Dry Circuit)	9.99952	9.99822	9.99942	10.00082	Ω	Pass	-8
100 ohm Range (4-Wire Dry Circuit)	99.9978	99.9808	99.9965	100.0148	Ω	Pass	-8
1 kilohm Range (4-Wire Dry Circuit)	1.000039	0.9997439	1.000024	1.0002639	k Ω	Pass	-1
2 kilohm Range (4-Wire Dry Circuit)	1.900012	1.899244	1.899955	1.900780	k Ω	Pass	-7

SPECIFICATION TESTED: Resistance

Step/Operation	Nominal	Low Limit	Measured Value	High Limit	Units	Result	% Spec
1 ohm Range (4-Wire)	0.999782	0.999702	0.999771	0.999862	Ω	Pass	-14
10 ohm Range (4-Wire)	9.99950	9.99915	9.99930	9.99985	Ω	Pass	-56
100 ohm Range (4-Wire)	99.99780	99.99470	99.9973	100.00090	Ω	Pass	-16
1 kilohm Range (4-Wire)	1.000039	0.9999769	1.000005	1.000309	k Ω	Pass	-13
10 kilohm Range (4-Wire)	10.000193	9.999863	10.000104	10.000523	k Ω	Pass	-27
100 kilohm Range (4-Wire)	100.00135	99.99805	100.00099	100.00465	k Ω	Pass	-11
1 megohm Range (4-Wire)	0.999966	0.999932	0.999967	1.000000	M Ω	Pass	3
10 megohm Range (4-Wire)	9.99844	9.99634	9.99852	10.00054	M Ω	Pass	4
100 megohm Range (2-Wire)	100.024	99.820	100.024	100.227	M Ω	Pass	0
900 megohm Range (2-Wire)	913.9	905.5	912.9	922.2	M Ω	Pass	-12

SPECIFICATION TESTED: DC Current

Step/Operation	Nominal	Low Limit	Measured Value	High Limit	Units	Result	% Spec
10 μ A Range (+) Full Scale	9.99916	9.99811	9.99922	10.00021	μ A	Pass	5
10 μ A Range (+) Half Scale	4.99959	4.99891	4.99961	5.00026	μ A	Pass	3
10 μ A Range (-) Half Scale	-4.99959	-5.00026	-4.99960	-4.99891	μ A	Pass	-3
10 μ A Range (-) Full Scale	-9.99917	-10.00022	-9.99923	-9.99812	μ A	Pass	-6
10 μ A Range Digitize (+) Full Scale	9.99916	9.99681	9.99939	10.00151	μ A	Pass	10
10 μ A Range Digitize (+) Half Scale	4.99958	4.99803	4.99977	5.00113	μ A	Pass	12
10 μ A Range Digitize (-) Half Scale	-4.99958	-5.00113	-4.99983	-4.99803	μ A	Pass	-16
10 μ A Range Digitize (-) Full Scale	-9.99917	-10.00152	-9.99952	-9.99682	μ A	Pass	-15
100 μ A Range (+) Full Scale	99.9989	99.9920	99.9960	100.0058	μ A	Pass	-42
100 μ A Range (+) Half Scale	49.9995	49.9956	49.9981	50.0034	μ A	Pass	-36
100 μ A Range (-) Half Scale	-49.9995	-50.0034	-49.9980	-49.9956	μ A	Pass	37
100 μ A Range (-) Full Scale	-99.9991	-100.0060	-99.9962	-99.9922	μ A	Pass	41
100 μ A Range Digitize (+) Full Scale	99.9989	99.9754	99.9978	100.0224	μ A	Pass	-5
100 μ A Range Digitize (+) Half Scale	49.9995	49.9840	49.9997	50.0150	μ A	Pass	1
100 μ A Range Digitize (-) Half Scale	-49.9995	-50.0150	-50.0001	-49.9840	μ A	Pass	-4
100 μ A Range Digitize (-) Full Scale	-99.9991	-100.0226	-99.9988	-99.9756	μ A	Pass	1
1 mA Range (+) Full Scale	1.000003	0.999934	1.000006	1.000072	mA	Pass	4
1 mA Range (+) Half Scale	0.500003	0.499964	0.500005	0.500042	mA	Pass	4
1 mA Range (-) Half Scale	-0.500002	-0.500041	-0.500003	-0.499963	mA	Pass	-2
1 mA Range (-) Full Scale	-1.000004	-1.000073	-1.000007	-0.999935	mA	Pass	-4
1 mA Range Digitize (+) Full Scale	1.000003	0.999768	1.000030	1.000238	mA	Pass	12
1 mA Range Digitize (+) Half Scale	0.500003	0.499848	0.500017	0.500158	mA	Pass	9

CALIBRATION DATA REPORT

Certificate Number

Instrument Type	Serial Number	Calibration Date	Data	Date Issued
DMM7510		29-DEC-2025	Incoming	29-DEC-2025

SPECIFICATION TESTED: DC Current

Step/Operation	Nominal	Low Limit	Measured Value	High Limit	Units	Result	% Spec
1 mA Range Digitize (-) Half Scale	-0.500002	-0.500157	-0.500026	-0.499847	mA	Pass	-15
1 mA Range Digitize (-) Full Scale	-1.000004	-1.000239	-1.000033	-0.999769	mA	Pass	-12
10 mA Range (+) Full Scale	10.00008	9.99939	9.99990	10.00077	mA	Pass	-27
10 mA Range (+) Half Scale	5.00005	4.99966	4.99994	5.00044	mA	Pass	-27
10 mA Range (-) Half Scale	-5.00007	-5.00046	-4.99995	-4.99967	mA	Pass	29
10 mA Range (-) Full Scale	-10.00012	-10.00081	-9.99989	-9.99943	mA	Pass	33
10 mA Range Digitize (+) Full Scale	10.00008	9.99773	10.00012	10.00243	mA	Pass	2
10 mA Range Digitize (+) Half Scale	5.00005	4.99850	5.00003	5.00160	mA	Pass	-1
10 mA Range Digitize (-) Half Scale	-5.00007	-5.00162	-5.00008	-4.99851	mA	Pass	-1
10 mA Range Digitize (-) Full Scale	-10.00012	-10.00247	-9.99997	-9.99777	mA	Pass	6
100 mA Range (+) Full Scale	100.0000	99.9820	100.0025	100.0180	mA	Pass	14
100 mA Range (+) Half Scale	50.0000	49.9895	50.0013	50.0105	mA	Pass	12
100 mA Range (-) Half Scale	-50.0000	-50.0105	-50.0011	-49.9895	mA	Pass	-10
100 mA Range (-) Full Scale	-100.0000	-100.0180	-100.0025	-99.9820	mA	Pass	-14
100 mA Range Digitize (+) Full Scale	100.0000	99.9450	100.0046	100.0550	mA	Pass	8
100 mA Range Digitize (+) Half Scale	50.0000	49.9675	50.0026	50.0325	mA	Pass	8
100 mA Range Digitize (-) Half Scale	-50.0000	-50.0325	-50.0031	-49.9675	mA	Pass	-9
100 mA Range Digitize (-) Full Scale	-100.0000	-100.0550	-100.0050	-99.9450	mA	Pass	-9
1 A Range (+) Full Scale	1.00000	0.99955	0.99996	1.00045	A	Pass	-9
1 A Range (+) Half Scale	0.50000	0.49975	0.49998	0.50025	A	Pass	-7
1 A Range (-) Half Scale	-0.50000	-0.50025	-0.49998	-0.49975	A	Pass	7
1 A Range (-) Full Scale	-1.00000	-1.00045	-0.99996	-0.99955	A	Pass	9
1 A Range Digitize (+) Full Scale	1.000000	0.999390	0.999980	1.000610	A	Pass	-3
1 A Range Digitize (+) Half Scale	0.500000	0.499640	0.499998	0.500360	A	Pass	-1
1 A Range Digitize (-) Half Scale	-0.500000	-0.500360	-0.500003	-0.499640	A	Pass	-1
1 A Range Digitize (-) Full Scale	-1.000000	-1.000610	-0.999977	-0.999390	A	Pass	4
3 A Range (+) Full Scale	2.00000	1.99908	1.99989	2.00092	A	Pass	-12
3 A Range (+) Half Scale	1.50000	1.49928	1.49993	1.50072	A	Pass	-10
3 A Range (-) Half Scale	-1.50000	-1.50072	-1.49993	-1.49928	A	Pass	9
3 A Range (-) Full Scale	-2.00000	-2.00092	-1.99989	-1.99908	A	Pass	12
3 A Range Digitize (+) Full Scale	2.00000	1.99775	1.99986	2.00225	A	Pass	-6
3 A Range Digitize (+) Half Scale	1.50000	1.49820	1.49985	1.50180	A	Pass	-8
3 A Range Digitize (-) Half Scale	-1.50000	-1.50180	-1.49997	-1.49820	A	Pass	1
3 A Range Digitize (-) Full Scale	-2.00000	-2.00225	-1.99999	-1.99775	A	Pass	0

SPECIFICATION TESTED: AC Current

Step/Operation	Nominal	Low Limit	Measured Value	High Limit	Units	Result	% Spec
1 mA @ 20 Hz	1.00000	0.99890	0.99974	1.00110	mA	Pass	-24
1 mA @ 1 kHz	1.00000	0.99890	1.00001	1.00110	mA	Pass	0
1 mA @ 4.9 kHz	1.00000	0.99880	1.00023	1.00120	mA	Pass	19
10 mA @ 40 Hz	10.0000	9.9890	9.9977	10.0110	mA	Pass	-21
10 mA @ 1 kHz	10.0000	9.9890	9.9999	10.0110	mA	Pass	-1
10 mA @ 4.9 kHz	10.0000	9.9880	10.0002	10.0120	mA	Pass	1
100 mA @ 40 Hz	100.000	99.890	99.981	100.110	mA	Pass	-18

CALIBRATION DATA REPORT

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DMM7510		29-DEC-2025	Incoming	29-DEC-2025

SPECIFICATION TESTED: AC Current

Step/Operation	Nominal	Low Limit	Measured Value	High Limit	Units	Result	% Spec
100 mA @ 1 kHz	100.000	99.890	100.003	100.110	mA	Pass	3
100 mA @ 4.9 kHz	100.000	99.880	100.028	100.120	mA	Pass	23
1 A @ 40 Hz	1.00000	0.99760	0.99967	1.00240	A	Pass	-14
1 A @ 1 kHz	1.00000	0.99760	1.00003	1.00240	A	Pass	1
1 A @ 4.9 kHz	1.00000	0.99080	1.00077	1.00920	A	Pass	8
2 A @ 40 Hz (3 A range)	2.00000	1.99450	1.99951	2.00550	A	Pass	-9
2 A @ 1 kHz (3 A range)	2.0000	1.9945	2.0002	2.0055	A	Pass	4
2 A @ 4.9 kHz (3 A range)	2.0000	1.9809	2.0017	2.0191	A	Pass	9

SPECIFICATION TESTED: DC Current 10 A Range

Step/Operation	Nominal	Low Limit	Measured Value	High Limit	Units	Result	% Spec
10 A Range (+) Full Scale	10.0000	9.9822	10.0023	10.0178	A	Pass	13
10 A Range (+) Half Scale	5.0000	4.9898	5.0009	5.0102	A	Pass	9
10 A Range (-) Half Scale	-5.0000	-5.0102	-4.9995	-4.9898	A	Pass	5
10 A Range (-) Full Scale	-10.0000	-10.0178	-10.0007	-9.9822	A	Pass	-4
10 A Range Digitize (+) Full Scale	10.0000	9.9815	10.0027	10.0185	A	Pass	14
10 A Range Digitize (+) Half Scale	5.0000	4.9890	5.0011	5.0110	A	Pass	10
10 A Range Digitize (-) Half Scale	-5.0000	-5.0110	-4.9996	-4.9890	A	Pass	4
10 A Range Digitize (-) Full Scale	-10.0000	-10.0185	-10.0009	-9.9815	A	Pass	-5

SPECIFICATION TESTED: AC Current 10 A Range

Step/Operation	Nominal	Low Limit	Measured Value	High Limit	Units	Result	% Spec
10 A @ 40 Hz	10.000	9.955	10.007	10.045	A	Pass	15
10 A @ 1 kHz	10.000	9.955	10.003	10.045	A	Pass	6
10 A @ 4.9 kHz	10.000	9.907	9.988	10.093	A	Pass	-13

SPECIFICATION TESTED: Capacitance

Step/Operation	Nominal	Low Limit	Measured Value	High Limit	Units	Result	% Spec
1 nF 10 % Scale	0.1000	0.0970	0.0994	0.1030	nF	Pass	-19
1 nF 70 % Scale	0.7000	0.6910	0.6989	0.7090	nF	Pass	-13
10 nF 10 % Scale	1.000	0.980	0.999	1.020	nF	Pass	-6
10 nF Full Scale	10.000	9.890	10.001	10.110	nF	Pass	1
100 nF 10 % Scale	10.0000	9.8600	10.0029	10.1400	nF	Pass	2
100 nF Full Scale	100.00	99.50	100.07	100.50	nF	Pass	14
1 μF 10 % Scale	0.100000	0.098600	0.100009	0.101400	μF	Pass	1
1 μF Full Scale	1.0000	0.9950	1.0006	1.0050	μF	Pass	12
10 μF 10 % Scale	1.00000	0.98600	1.00076	1.01400	μF	Pass	5
10 μF Full Scale	10.000	9.950	10.002	10.050	μF	Pass	4
100 μF 10 % Scale	10.0000	9.8600	10.0024	10.1400	μF	Pass	2
100 μF Full Scale	100.00	99.50	100.14	100.50	μF	Pass	28

CALIBRATION DATA REPORT

Certificate Number
[REDACTED]

Instrument Type	Serial Number	Calibration Date	Data	Date Issued
DMM7510	[REDACTED]	29-DEC-2025	Incoming	29-DEC-2025

SPECIFICATION TESTED: Capacitance

Step/Operation	Nominal	Low Limit	Measured Value	High Limit	Units	Result	% Spec
1 mF 10 % Scale	0.1000	0.0985	0.1001	0.1015	mF	Pass	5

SUMMARY REPORT:

179 tests were performed.

179 tests were Pass.