



Calibration Cert# 2166.01

Certificate of Calibration

Everett Service Center

Certificate Number: EVL903673

Data Type: Found-Left
Result Summary: Measurement Results < Limits

Calibration Date: 03-Aug-2023

Calibration Due: 03-Aug-2024

Manufacturer: Fluke

Certificate Date: 04-Aug-2023

Model: 525B

Temperature: 22.6 °C

Serial Number: 2041092

Humidity: 45.6 %

Description: Temperature / Pressure Calibrator

Procedure: Fluke 525A_B (1Year_90 Day) Calibration Verification

Revision: 1.0

Customer: ILLIANA INSTRUMENTATION INCORPORATED

City: SCHERERVILLE

Country: US

State: IN

Purchase Order: 4425

RMA: 32692852

Asset ID: 1546

This calibration is traceable to the International System of Units (SI), through National Metrology Institutes (NIST, PTB, NRC, NPL, etc.), radiometric techniques, or natural physical constants. This certificate applies only to the item identified and shall not be reproduced other than in full, without the specific written approval by Fluke Corporation. Calibration certificates without signature are not valid. The calibration has been completed in accordance with Fluke Electronics Corporation Quality System Document 111.0 Revision 125 and/or Fluke 17025 Quality Manual QSD 111.41 Revision 008.

The Data Type found in this certificate must be interpreted as:

- As - Found Calibration data collected before the unit is adjusted and / or repaired.
- As - Left Calibration data collected after the unit has been adjusted and / or repaired.
- Found-Left Calibration data collected without any adjustment and / or repair performed.

This calibration conforms to the requirements of ISO/IEC 17025:2017 and ANSI/NCSL Z540-1-1994 (R2002).

In the attached measurement results, deviation may be expressed with units, Measured Value (MV) - Nominal Value (NV) or as a proportion of the nominal value ((MV-NV)/NV), expressed without units with a scalar multiplier such as % (0.01), or as a ratio of the units (mA/A, μ V/V, etc.) Descriptions such as μ A/A, μ V/V, and others, where used to annotate results or column headings are the preferred replacements for what was historically labeled as "ppm" or parts-per-million and described the results in that column, unless otherwise noted by units symbols.

Where applicable, the expanded uncertainty of measurement at the time of test is given in the following pages. They are calculated in accordance with the method described in the ISO Guide to the Expression of Uncertainty in Measurement (GUM). The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k, such that the confidence level approximates 95%.

This calibration certificate may contain data that is not covered by the A2LA Scope of Accreditation. Unaccredited material, where applicable is indicated by an asterisk (*), or confined to clearly marked sections. Functional (Pass / Fail) tests are not accredited.

No statement of compliance with specifications is made or implied on this certificate. However, measurement results are reviewed, where applicable, to establish where any measurement result exceeded the manufacturer's specifications.

Measurement results greater than limits of error are indicated by '!'.



Accredited



Cert #: EVL903673
Cal Date: 03-Aug-2023
Due Date: 03-Aug-2024
S/N : 2041092
www.fluke.com

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Due: 03-Aug-2024
www.fluke.com

Casey Smith
Calibration Technician

Certificate Number: EVL903673

Date of Calibration: 03-Aug-2023

Standards Used

Asset	Description	Cal-Date	Cal-Due
13861	ESI SR1030 Resistance Transfer Standard	19-Jun-2023	19-Feb-2024
13862	ESI SR1030 Resistance Transfer Standard	13-Feb-2023	13-Feb-2024
J1668	FLUKE 5520A Calibrator	25-Apr-2023	25-Apr-2024
18065	Fluke 5640 Thermistor Probe	28-Mar-2023	28-Mar-2024
7668	Fluke 742A-1 Resistance Standard	13-Dec-2022	13-Dec-2023
12179	Fluke 8508A Reference Multimeter	08-May-2023	08-May-2024
J1287	Hart Scientific 1504 Thermometer Readout	10-Apr-2023	10-Apr-2024
14368	Omega TJ36-ICIN-18U-12-SB-SMPW-M "J" Type Rugged Transition Joint Probe	15-Nov-2022	15-Nov-2023

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Calibration Data

Parameter	Nominal Value	Measurement Result	Limits of Error		Expanded Uncertainty
			Lower Limit	Upper Limit	
INSTRUMENT IDENTIFICATION					
Firmware Version: V1.31					
1 Year Specifications shown unless otherwise noted					
DC VOLTAGE OUTPUT:					
100mV RANGE					
0.000000 V	0.000000	0.0000011	-0.0000030	0.0000030	7.7e-007 V
0.025000 V	0.025000	0.0250010	0.0249963	0.0250038	8.3e-007 V
0.075000 V	0.075000	0.0750005	0.0749947	0.0750052	1.0e-006 V
0.100000 V	0.100000	0.1000008	0.0999940	0.1000060	1.1e-006 V
1 VOLT RANGE					
0.00000 V	0.00000	0.000002	-0.000010	0.000010	5.8e-006 V
0.25000 V	0.25000	0.250006	0.249983	0.250018	6.2e-006 V
0.75000 V	0.75000	0.750012	0.749968	0.750032	7.3e-006 V
1.00000 V	1.00000	1.000017	0.999960	1.000040	7.7e-006 V
10 VOLT RANGE					
0.0000 V	0.0000	0.00001	-0.00010	0.00010	5.8e-005 V
2.5000 V	2.5000	2.50003	2.49983	2.50018	6.2e-005 V
7.5000 V	7.5000	7.50004	7.49967	7.50033	7.2e-005 V
10.0000 V	10.0000	10.00009	9.99960	10.00040	7.8e-005 V
100 VOLT RANGE					
0.000 V	0.000	0.0002	-0.0010	0.0010	5.8e-004 V
25.000 V	25.000	25.0000	24.9982	25.0018	6.2e-004 V
75.000 V	75.000	74.9996	74.9968	75.0032	7.4e-004 V
100.000 V	100.000	99.9997	99.9960	100.0040	8.2e-004 V
DC CURRENT OUTPUT					
100mA Range					
0.00000 mA	0.00000	0.000001	-0.001000	0.001000	5.8e-009 A
25.00000 mA	25.00000	24.999855	24.997750	25.002250	6.6e-007 A
75.00000 mA	75.00000	74.999198	74.995250	75.004750	4.0e-007 A
100.00000 mA	100.00000	99.99962	99.99400	100.00600	5.2e-007 A
THERMOCOUPLE INPUT					
-5.000 mV	-5.0000	-5.000	-5.003	-4.997	1.0e-006 V
15.000 mV	15.0000	15.001	14.997	15.003	1.2e-006 V
30.000 mV	30.0000	30.000	29.996	30.004	1.4e-006 V
50.000 mV	50.0000	50.000	49.996	50.005	1.7e-006 V

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			Lower Limit	Upper Limit	
70.000 mV	70.0000	70.001	69.995	70.005	1.9e-006 V
THERMOCOUPLE OUTPUT					
-5.000 mV	-5.000	-4.9993	-5.0031	-4.9969	6.0e-007 V
15.000 mV	15.000	15.0000	14.9965	15.0035	6.1e-007 V
30.000 mV	30.000	30.0004	29.9961	30.0039	6.3e-007 V
50.000 mV	50.000	50.0004	49.9955	50.0045	6.8e-007 V
70.000 mV	70.000	69.9999	69.9949	70.0051	7.2e-007 V
RESISTANCE OUTPUT					
400 Ohm Range					
5.000 Ohm	5.000	4.9999	4.9850	5.0150	6.2e-004 Ω
100.000 Ohm	100.000	100.0003	99.9850	100.0150	1.1e-003 Ω
200.000 Ohm	200.000	200.0035	199.9850	200.0150	2.4e-003 Ω
300.000 Ohm	300.000	300.0054	299.9850	300.0150	3.0e-003 Ω
400.000 Ohm	400.000	400.0082	399.9850	400.0150	3.8e-003 Ω
4000 Ohm Range					
5.0 Ohm	5.0	5.01	4.70	5.30	5.8e-002 Ω
1000.00 Ohm	1000.00	999.988	999.700	1000.300	9.9e-003 Ω
2000.00 Ohm	2000.00	2000.005	1999.700	2000.300	2.8e-002 Ω
3000.00 Ohm	3000.00	3000.010	2999.700	3000.300	3.0e-002 Ω
4000.00 Ohm	4000.00	4000.028	3999.700	4000.300	3.7e-002 Ω
RESISTANCE MEASURE					
400 Ohm Range					
0.00 Ohm	0.00000	0.0000	-0.0040	0.0040	7.8e-004 Ω
100.00 Ohm	100.0045	100.007	99.999	100.011	1.2e-003 Ω
200.00 Ohm	200.0058	200.006	199.998	200.014	1.2e-003 Ω
300.00 Ohm	300.0081	300.008	299.998	300.018	1.2e-003 Ω
400.00 Ohm	400.0107	400.010	399.999	400.023	1.2e-003 Ω
4000 Ohm Range					
0.00 Ohm	0.0000	0.000	-0.030	0.030	9.7e-004 Ω
1000.00 Ohm	999.572	999.59	999.51	999.63	5.9e-003 Ω
2000.00 Ohm	1999.192	1999.17	1999.11	1999.27	5.9e-003 Ω
3000.00 Ohm	2998.814	2998.80	2998.71	2998.91	1.1e-002 Ω
4000.00 Ohm	3998.430	3998.41	3998.31	3998.55	1.1e-002 Ω
COLD JUNCTION COMPENSATION					
22.8492 °C	22.849	22.83	22.69	23.01	6.0e-002 °C

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PRESSURE MODULE IDENTIFICATION					
Pressure module properly identified		Pass			