



Certificate of Calibration

Illiana Instrumentation Service LLC

1831 Govert Drive
Schererville, IN 46375



Cert #: 18411 Rev. 1

Item # 1336

Certificate Date: 7/28/2024

CUSTOMER

ILLIANA INSTRUMENTATION SERVICE LLC
1831 GOVERT DRIVE
SCHERERVILLE, IN 46375

EQUIPMENT INFORMATION

Item # 1336	Calibration Result: PASS
Manufacturer	FLUKE
Model Number	725
Serial Number	9531036
Equip. Location	MOBILE
Description	PROCESS CALIBRATOR

CALIBRATION INFORMATION

Date received: 7/28/2024
Technician: PAUL GROLLA

Cal Date: 7/28/2024
Temperature: 73 F

Cal. Interval 3 MONTHS	Cal. Due Date: 10/28/2024
Humidity 44	Cal location LAB
Tag	

Department:

Notes:

Problems: None

Adjustments None

Equipment Notes

Sensitivity OKAY

Initial modification offset 0

Final modification offset 0

Note: If the modification offset is not zero, readings reflect zero

Limitations NONE

Accuracy VARIES BY POINT



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Quality and traceability statements

This certifies that the above equipment was calibrated using appropriate Illiana Instrumentation technical procedures. At planned intervals, Illiana Instrumentation standards are calibrated by comparison to or measurement against standards which are traceable to the SI units through the NIST or other recognized national measurement institutes or international standard bodies. The results in this report relate only to the item(s) calibrated. If so indicated above, detailed calibration results are attached to this certificate. These results are part of this certificate and this certificate shall not be reproduced except in full, without the written approval of Illiana Instrumentation. Any number of factors not under the control of the calibration laboratory may cause the calibration of the above item(s) to drift before the recommended recalibration date. Supporting documentation relative to traceability and technical procedures used is on file and is available for examination upon request and approval of our quality assurance manager. The above uncertainties represent an expanded uncertainty expressed at approximately 95% confidence level using a coverage factor of k=2. The certificate date on this report constitutes the issue date. Pass/Fail criteria does not take into account measurement uncertainty. Add correction factor to as left to get corrected reading. Values are uncorrected for test instrument error.

Calibrated By:

Paul Hrolla

Approved By:

Laura Grolla

Customer Approval

Calibration Data

Values found OOT and adjusted are indicated by "A" and items left OOT are indicated by "F"

Group	Description	Nominal	Lower Tol.	Upper Tol.	As Found	As Left	Units	Uncert.	OOT	Corr. Factor
MEASURE	VDC UPPER	0.0000	-0.0020	0.0020	0.000	0.000	VDC	0.000005		0.000
MEASURE	VDC UPPER	15.0000	14.9950	15.0050	14.999	14.999	VDC	0.0051		0.001
MEASURE	VDC UPPER	30.0000	29.9920	30.0080	29.999	29.999	VDC	0.0051		0.001
										0
MEASURE	mVDC LOWER	0.0000	-0.0200	0.0200	0.000	0.000	mVDC	0.0033		0.000
MEASURE	mVDC LOWER	45.0000	44.9700	45.0300	45.000	45.000	mVDC	0.0033		0.000
MEASURE	mVDC LOWER	90.0000	89.9600	90.0400	90.000	90.000	mVDC	0.0033		0.000
										0
MEASURE	VDC LOWER	0.0000	-0.0020	0.0020	0.000	0.000	VDC	0.000005		0.000
MEASURE	VDC LOWER	10.0000	9.9960	10.0040	9.998	9.998	VDC	0.0051		0.002
MEASURE	VDC LOWER	20.0000	19.9940	20.0060	19.996	19.996	VDC	0.0051		0.004
										0
MEASURE	mADC UPPER	4.0000	3.9970	4.0030	4.000	4.000	maDC	0.0016		0.000



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MEASURE	mADC UPPER	12.0000	11.9950	12.0050	12.000	12.000	maDC	0.0016		0.000
MEASURE	mADC UPPER	24.0000	23.9930	24.0070	24.000	24.000	maDC	0.0057		0.000
										0.0
MEASURE	mADC LOWER	4.0000	3.9970	4.0030	4.000	4.000	maDC	0.0016		0.000
MEASURE	mADC LOWER	12.0000	11.9950	12.0050	12.000	12.000	maDC	0.0016		0.000
MEASURE	mADC LOWER	24.0000	23.9930	24.0070	24.000	24.000	maDC	0.0057		0.000
										0.0
MEASURE	FREQ. LOWER	10.0000	9.9800	10.0200	10.00	10.00	kHz	0.0025		0.00
										0.0
SOURCE	FREQ. LOWER	10.00000	9.97500	10.02500	9.99980	9.99980	kHz	0.0033		0.00020
										0.0
MEASURE	OHMS LOWER	15.00	14.90	15.10	15.03	15.03	Ohm	0.025		-0.03
MEASURE	OHMS LOWER	350.00	349.90	350.10	350.10	350.10	Ohm	0.025		-0.10
MEASURE	OHMS LOWER	500.00	499.50	500.50	500.1	500.1	Ohm	0.3		-0.1
MEASURE	OHMS LOWER	1500.00	1499.50	1500.50	1500.2	1500.2	Ohm	0.3		-0.2
MEASURE	OHMS LOWER	3200.00	3199.00	3201.00	3200.4	3200.4	Ohm	0.3		-0.4
										0
MEASURE	OHMS RTD LOWER	350.00	349.80	350.20	350.02	350.02	Ohm	0.3		-0.02
										0
MEASURE	TYPE K	-180.00	-180.60	-179.40	-180.30	-180.30	°C	0.19		0.30
MEASURE	TYPE K	0.0	-0.6	0.6	-0.10	-0.10	°C	0.19		0.10
MEASURE	TYPE K	400.0	399.4	400.6	399.80	399.80	°C	0.19		0.20
MEASURE	TYPE K	800.0	799.2	800.8	799.80	799.80	°C	0.19		0.20
MEASURE	TYPE K	1000.0	999.0	1001.0	999.80	999.80	°C	0.19		0.20



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MEASURE	TYPE K	1300.0	1298.7	1301.3	1300.00	1300.00	°C	0.19		0.00
										0.0
SOURCE	TYPE K	-180.00	-180.60	-179.40	-179.80	-179.80	°C	0.16		-0.20
SOURCE	TYPE K	0.00	-0.60	0.60	0.10	0.10	°C	0.16		-0.10
SOURCE	TYPE K	400.00	399.40	400.60	400.00	400.00	°C	0.16		0.00
SOURCE	TYPE K	800.00	799.20	800.80	799.90	799.90	°C	0.16		0.10
SOURCE	TYPE K	1000.00	999.00	1001.00	999.90	999.90	°C	0.16		0.10
SOURCE	TYPE K	1300.00	1298.70	1301.30	1299.80	1299.80	°C	0.16		0.20
										0.0
MEASURE	TYPE J	-200.0	-200.6	-199.4	-200.4	-200.4	°C	0.17		0.4
MEASURE	TYPE J	0.0	-0.6	0.6	-0.1	-0.1	°C	0.17		0.1
MEASURE	TYPE J	300.0	299.4	300.6	299.8	299.8	°C	0.17		0.2
MEASURE	TYPE J	600.0	599.4	600.6	599.8	599.8	°C	0.17		0.2
MEASURE	TYPE J	900.0	899.1	900.9	899.8	899.8	°C	0.17		0.2
MEASURE	TYPE J	1200.0	1198.8	1201.2	1199.8	1199.8	°C	0.17		0.2
										0.0
SOURCE	TYPE J	-200.00	-200.60	-199.40	-199.50	-199.50	°C	0.13		-0.50
SOURCE	TYPE J	0.00	-0.60	0.60	0.20	0.20	°C	0.13		-0.20
SOURCE	TYPE J	300.00	299.40	300.60	300.40	300.40	°C	0.13		-0.40
SOURCE	TYPE J	600.00	599.40	600.60	600.10	600.10	°C	0.13		-0.10
SOURCE	TYPE J	900.00	899.10	900.90	900.00	900.00	°C	0.13		0.00
SOURCE	TYPE J	1200.00	1198.80	1201.10	1200.00	1200.00	°C	0.13		0.00
										0
MEASURE	TYPE S	0.0	-1.0	1.0	0.0	0.0	°C	0.6		0.0



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MEASURE	TYPE S	400.0	399.0	401.0	399.0	399.0	°C	0.6		1.0
MEASURE	TYPE S	800.0	799.0	801.0	799.0	799.0	°C	0.6		1.0
MEASURE	TYPE S	1200.0	1199.0	1201.0	1199.0	1199.0	°C	0.6		1.0
MEASURE	TYPE S	1600.0	1599.0	1601.0	1599.0	1599.0	°C	0.6		1.0
MEASURE	TYPE S	1750.0	1749.0	1751.0	1749.0	1749.0	°C	0.6		1.0
										0.0
SOURCE	TYPE S	0.00	-1.00	1.00	0.20	0.20	°C	0.6		-0.20
SOURCE	TYPE S	400.00	399.00	401.00	400.00	400.00	°C	0.6		0.00
SOURCE	TYPE S	800.00	799.00	801.00	799.90	799.90	°C	0.6		0.10
SOURCE	TYPE S	1200.00	1198.70	1201.30	1199.80	1199.80	°C	0.6		0.20
SOURCE	TYPE S	1600.00	1598.40	1601.60	1599.70	1599.70	°C	0.6		0.30
SOURCE	TYPE S	1750.00	1748.30	1751.70	1749.70	1749.70	°C	0.6		0.30
										0.0
MEASURE	TYPE N	0.0	-0.6	0.6	-0.3	-0.3	°C	0.2		0.3
MEASURE	TYPE N	200.0	199.4	200.6	199.7	199.7	°C	0.2		0.3
MEASURE	TYPE N	500.0	499.4	500.6	499.7	499.7	°C	0.2		0.3
MEASURE	TYPE N	800.0	799.2	800.8	799.7	799.7	°C	0.2		0.3
MEASURE	TYPE N	1100.0	1098.9	1101.1	1099.7	1099.7	°C	0.2		0.3
MEASURE	TYPE N	1300.0	1298.7	1301.3	1299.6	1299.6	°C	0.2		0.4
										0.0
SOURCE	TYPE N	0.00	-0.60	0.60	0.40	0.40	°C	0.2		-0.40
SOURCE	TYPE N	200.00	199.40	200.60	200.30	200.30	°C	0.2		-0.30
SOURCE	TYPE N	500.00	499.40	500.60	500.30	500.30	°C	0.2		-0.30
SOURCE	TYPE N	800.00	799.20	800.80	800.20	800.20	°C	0.2		-0.20



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SOURCE	TYPE N	1100.00	1098.90	1101.10	1100.10	1100.10	°C	0.2		-0.10
SOURCE	TYPE N	1300.00	1298.70	1301.30	1300.10	1300.10	°C	0.2		-0.10
										0.0
MEASURE	TYPE T	-200.0	-200.6	-199.4	-200.1	-200.1	°C	0.4		0.1
MEASURE	TYPE T	0.0	-0.6	0.6	0.0	0.0	°C	0.4		0.0
MEASURE	TYPE T	100.0	99.4	100.6	99.9	99.9	°C	0.4		0.1
MEASURE	TYPE T	200.0	199.4	200.6	199.9	199.9	°C	0.4		0.1
MEASURE	TYPE T	300.0	299.4	300.6	299.9	299.9	°C	0.4		0.1
MEASURE	TYPE T	400.0	399.4	400.6	399.9	399.9	°C	0.4		0.1
										0.0
SOURCE	TYPE T	-200.00	-200.60	-199.40	-199.90	-199.90	°C	0.4		-0.10
SOURCE	TYPE T	0.00	-0.60	0.60	0.00	0.00	°C	0.4		0.00
SOURCE	TYPE T	100.00	99.40	100.60	100.00	100.00	°C	0.4		0.00
SOURCE	TYPE T	200.00	199.40	200.60	200.00	200.00	°C	0.4		0.00
SOURCE	TYPE T	300.00	299.40	300.60	300.00	300.00	°C	0.4		0.00
SOURCE	TYPE T	400.00	399.40	400.60	400.00	400.00	°C	0.4		0.00
										0
SOURCE	mADC LOWER	4.0000	3.9972	4.0028	4.0000	4.0000	maDC	0.01		0.0000
SOURCE	mADC LOWER	12.0000	11.9956	12.0044	11.9990	11.9990	maDC	0.018		0.0010
SOURCE	mADC LOWER	24.0000	23.9932	24.0068	24.0010	24.0010	maDC	0.018		-0.0010
										0
SOURCE	mVDC LOWER	0.00000	-0.02000	0.02000	-0.00200	-0.00200	mVDC	0.0045		0.00200
SOURCE	mVDC LOWER	45.00000	44.97000	45.03000	44.98800	44.98800	mVDC	0.01		0.01200
SOURCE	mVDC LOWER	100.00000	99.96000	100.04000	99.98000	99.98000	mVDC	0.01		0.02000



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										0
SOURCE	VDC LOWER	0.000	-0.002	0.002	0.0000	0.0000	VDC	0.0000045		0.0000
SOURCE	VDC LOWER	5.000	4.997	5.003	4.9980	4.9980	VDC	0.00053		0.0020
SOURCE	VDC LOWER	10.000	9.996	10.004	9.9969	9.9969	VDC	0.0058		0.0031
										0
SOURCE	OHMS LOWER	15.00	14.90	15.10	15.010	15.010	Ohm	0.0018		-0.010
SOURCE	OHMS LOWER	360.00	359.90	360.10	360.000	360.000	Ohm	0.016		0.000
SOURCE	OHMS LOWER	500.00	499.50	500.50	500.030	500.030	Ohm	0.09		-0.030
SOURCE	OHMS LOWER	1500.00	1499.50	1500.50	1500.300	1500.300	Ohm	1.2		-0.300
SOURCE	OHMS LOWER	3200.00	3199.00	3201.00	3200.200	3200.200	Ohm	1.2		-0.200

Standards Used

I.D.	Model	Description	Manufacturer	Serial No.
1546	525B	TEMP/PRESSURE CALIBRATOR	FLUKE	2041092
1731	34401A	DIGITAL MULTIMETER	HEWLETT PACKARD/AGILENT	3146A27542

Procedures Used

Name	Description
WI-523	CALIBRATION OF TEST CALIBRATORS