



Certificate of Calibration

Illiana Instrumentation Service LLC

1831 Govert Drive
Schererville, IN 46375



Cert #: 15625 Rev. 1

Item # 1468

Certificate Date: 3/1/2024

CUSTOMER

ILLIANA INSTRUMENTATION SERVICE LLC
1831 GOVERT DRIVE
SCHERERVILLE, IN 46375

EQUIPMENT INFORMATION

Item # 1468	Calibration Result: PASS
Manufacturer	FLUKE
Model Number	725
Serial Number	1100083
Equip. Location	MOBILE
Description	PROCESS CALIBRATOR

CALIBRATION INFORMATION

Date received: 3/1/2024	Cal Date: 3/1/2024	Cal. Interval 3 MONTHS	Cal. Due Date: 6/1/2024
Technician: PAUL GROLLA	Temperature: 68 F	Humidity 30	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



Illiana Instrumentation Service LLC

1831 Govert Drive
Scherverville, IN 46375



Cert #: 15625 Rev. 1

Item # 1468

Certificate Date: 3/1/2024

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	15.000	15.000	VDC	0.0051		0.000
MEASURE	VDC UPPER	30.0000	29.9920	30.0080	30.000	30.000	VDC	0.0051		0.000
										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	44.990	44.990	mVDC	0.0033		0.010
MEASURE	mVDC LOWER	90.0000	89.9600	90.0400	89.990	89.990	mVDC	0.0033		0.010
										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	19.995	19.995	VDC	0.0051		0.005
										0
MEASURE	mADC UPPER	4.0000	3.9970	4.0030	3.999	3.999	maDC	0.0016		0.001



Illiana Instrumentation Service LLC

1831 Govert Drive
 Schererville, IN 46375



Cert #: 15625 Rev. 1

Item # 1468

Certificate Date: 3/1/2024

Group	Description	Nominal	Lower Tol.	Upper Tol.	As Found	As Left	Units	Uncert.	OOT	Corr. Factor
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	3.999	3.999	maDC	0.0016		0.001
MEASURE	mADC LOWER	12.0000	11.9950	12.0050	11.999	11.999	maDC	0.0016		0.001
MEASURE	mADC LOWER	24.0000	23.9930	24.0070	23.999	23.999	maDC	0.0057		0.001
										0.0
MEASURE	FREQ. LOWER	10.0000	9.9800	10.0200	10.000	10.000	kHz	0.0025		0.000
										0.0
SOURCE	FREQ. LOWER	10.00000	9.97500	10.02500	9.99990	9.99990	kHz	0.0033		0.00010
										0.0
MEASURE	OHMS LOWER	15.00	14.90	15.10	14.98	14.98	Ohm	0.025		0.02
MEASURE	OHMS LOWER	350.00	349.90	350.10	350.00	350.00	Ohm	0.025		0.00
MEASURE	OHMS LOWER	500.00	499.50	500.50	500.0	500.0	Ohm	0.3		0.0
MEASURE	OHMS LOWER	1500.00	1499.50	1500.50	1500.0	1500.0	Ohm	0.3		0.0
MEASURE	OHMS LOWER	3200.00	3199.00	3201.00	3200.0	3200.0	Ohm	0.3		0.0
										0
MEASURE	OHMS RTD LOWER	350.00	349.80	350.20	350.00	350.00	Ohm	0.3		0.00
										0
MEASURE	TYPE K	-180.00	-180.60	-179.40	-180.10	-180.10	°C	0.19		0.10
MEASURE	TYPE K	0.0	-0.6	0.6	0.00	0.00	°C	0.19		0.00
MEASURE	TYPE K	400.0	399.4	400.6	399.90	399.90	°C	0.19		0.10
MEASURE	TYPE K	800.0	799.2	800.8	799.90	799.90	°C	0.19		0.10
MEASURE	TYPE K	1000.0	999.0	1001.0	999.90	999.90	°C	0.19		0.10



Illiana Instrumentation Service LLC

1831 Govert Drive
 Schererville, IN 46375



Cert #: 15625 Rev. 1

Item # 1468

Certificate Date: 3/1/2024

Group	Description	Nominal	Lower Tol.	Upper Tol.	As Found	As Left	Units	Uncert.	OOT	Corr. Factor
MEASURE	TYPE K	1300.0	1298.7	1301.3	1299.90	1299.90	°C	0.19		0.10
										0.0
SOURCE	TYPE K	-180.00	-180.60	-179.40	-180.00	-180.00	°C	0.16		0.00
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	399.90	399.90	°C	0.16		0.10
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	999.80	999.80	°C	0.16		0.20
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	599.7	599.7	°C	0.17		0.3
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	-199.60	-199.60	°C	0.13		-0.40
SOURCE	TYPE J	0.00	-0.60	0.60	0.10	0.10	°C	0.13		-0.10
SOURCE	TYPE J	300.00	299.40	300.60	300.10	300.10	°C	0.13		-0.10
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



Illiana Instrumentation Service LLC

1831 Govert Drive
 Schererville, IN 46375



Cert #: 15625 Rev. 1

Item # 1468

Certificate Date: 3/1/2024

Group	Description	Nominal	Lower Tol.	Upper Tol.	As Found	As Left	Units	Uncert.	OOT	Corr. Factor
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	399.60	399.60	°C	0.6		0.40
SOURCE	TYPE S	800.00	799.00	801.00	799.70	799.70	°C	0.6		0.30
SOURCE	TYPE S	1200.00	1198.70	1201.30	1199.70	1199.70	°C	0.6		0.30
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	1749.60	1749.60	°C	0.6		0.40
										0.0
MEASURE	TYPE N	0.0	-0.6	0.6	-0.2	-0.2	°C	0.2		0.2
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	499.8	499.8	°C	0.2		0.2
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	1099.8	1099.8	°C	0.2		0.2
MEASURE	TYPE N	1300.0	1298.7	1301.3	1299.7	1299.7	°C	0.2		0.3
										0.0
SOURCE	TYPE N	0.00	-0.60	0.60	0.30	0.30	°C	0.2		-0.30
SOURCE	TYPE N	200.00	199.40	200.60	200.20	200.20	°C	0.2		-0.20
SOURCE	TYPE N	500.00	499.40	500.60	500.20	500.20	°C	0.2		-0.20
SOURCE	TYPE N	800.00	799.20	800.80	800.20	800.20	°C	0.2		-0.20



Illiana Instrumentation Service LLC

1831 Govert Drive
 Schererville, IN 46375



Cert #: 15625 Rev. 1

Item # 1468

Certificate Date: 3/1/2024

Group	Description	Nominal	Lower Tol.	Upper Tol.	As Found	As Left	Units	Uncert.	OOT	Corr. Factor
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	100.10	100.10	°C	0.4		-0.10
SOURCE	TYPE T	200.00	199.40	200.60	200.10	200.10	°C	0.4		-0.10
SOURCE	TYPE T	300.00	299.40	300.60	300.10	300.10	°C	0.4		-0.10
SOURCE	TYPE T	400.00	399.40	400.60	400.10	400.10	°C	0.4		-0.10
										0
SOURCE	mADC LOWER	4.0000	3.9972	4.0028	4.0020	4.0020	maDC	0.01		-0.0020
SOURCE	mADC LOWER	12.0000	11.9956	12.0044	12.0010	12.0010	maDC	0.018		-0.0010
SOURCE	mADC LOWER	24.0000	23.9932	24.0068	24.0020	24.0020	maDC	0.018		-0.0020
										0
SOURCE	mVDC LOWER	0.00000	-0.02000	0.02000	0.00000	0.00000	mVDC	0.0045		0.00000
SOURCE	mVDC LOWER	45.00000	44.97000	45.03000	44.99200	44.99200	mVDC	0.01		0.00800
SOURCE	mVDC LOWER	100.00000	99.96000	100.04000	99.98600	99.98600	mVDC	0.01		0.01400



Illiana Instrumentation Service LLC

1831 Govert Drive
 Schererville, IN 46375



Cert #: 15625 Rev. 1

Item # 1468

Certificate Date: 3/1/2024

Group	Description	Nominal	Lower Tol.	Upper Tol.	As Found	As Left	Units	Uncert.	OOT	Corr. Factor
										0
SOURCE	VDC LOWER	0.000	-0.002	0.002	0.000000	0.000000	VDC	0.0000045		0.000000
SOURCE	VDC LOWER	5.000	4.997	5.003	4.999900	4.999900	VDC	0.00053		0.000100
SOURCE	VDC LOWER	10.000	9.996	10.004	10.000000	10.000000	VDC	0.0058		0.000000
										0
SOURCE	OHMS LOWER	15.00	14.90	15.10	15.009	15.009	Ohm	0.0018		-0.009
SOURCE	OHMS LOWER	360.00	359.90	360.10	359.970	359.970	Ohm	0.016		0.030
SOURCE	OHMS LOWER	500.00	499.50	500.50	500.000	500.000	Ohm	0.09		0.000
SOURCE	OHMS LOWER	1500.00	1499.50	1500.50	1500.400	1500.400	Ohm	1.2		-0.400
SOURCE	OHMS LOWER	3200.00	3199.00	3201.00	3200.100	3200.100	Ohm	1.2		-0.100

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