



ILLIANA INSTRUMENTATION

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CERTIFICATE OF CALIBRATION

<p>CUSTOMER:</p> <p>Illiana Instrumentation Service 1831 Govert Drive Schererville, IN 46375</p>	<p>MISCELLANEOUS DETAILS:</p> <p>Date Received 1/12/19 Certification Date: 1/12/19 Recalibration Date: 4/12/19 Cal. Number: 1468-011219 P.O. Number: Location of Calibration: Lab Detailed Results Attached: YES Procedure Used: Fluke Procedure</p>
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EQUIPMENT CALIBRATED	
MANUFACTURER:	Fluke
MODEL:	725
SERIAL NUMBER:	1100083
ITEM NUMBER:	1468
DESCRIPTION:	Calibrator
CONDITION AS FOUND:	In tolerance

STANDARDS USED
Item 1546, Fluke 525B; Item 1205 HP34401A

TEST CONDITIONS
TEMPERATURE 75 Deg F.
HUMIDITY 37% rH

CERTIFIED BY: Paul Henth TITLE: FSA COST III DATE: 1-12-19

APPROVED BY: Jana Horka TITLE: Dep Mgr. DATE: 1-12-19

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.

Item	1468 Fluke 725						
Accuracy:	Varies By Range						
Date:	1/12/2019						
Intentional Offset as Found	None						
Intentional Offset as Left	None						
Limitations	None						
Input range	Eng. Units	Cal Pt	Upper	lower	Initial	Final	Sensitivity
							Check
Meas VDC Upper Display	VDC	0	0.002	-0.002	0	0	0 OK
		15	15.005	14.995	15	15	15 OK
		30	30.008	29.992	30	30	30 OK
Meas mVDC on lower display	mDVC	0	0.02	-0.02	0	0	0 OK
		45	45.03	44.97	44.99	44.99	44.99 OK
		90	90.04	89.96	89.99	89.99	89.99 OK
Lower display voltage measure	VDC	0	0.002	-0.002	0	0	0 OK
		10	10.004	9.996	9.998	9.998	9.998 OK
		20	20.006	19.994	19.996	19.996	19.996 OK
Meas mADC 30 mADC upper display	mADC	4	4.003	3.997	3.999	3.999	3.999 OK
		12	12.005	11.995	11.999	11.999	11.999 OK
		24	24.007	23.993	24	24	24 OK
Meas mADC 30 mADC lower display	mADC	4	4.003	3.997	3.999	3.999	3.999 OK
		12	12.005	11.995	11.998	11.998	11.998 OK
		24	24.007	23.993	23.998	23.998	23.998 OK
Frequency source lower display	kHz	10	10.025	9.975	9.9998	9.9998	9.9998 OK
Lower display 4 wire resistance measure	Ohms	15	15.1	14.9	15	15	15 OK
		350	350.1	349.9	350.03	350.03	350.03 OK
		500	500.5	499.5	500	500	500 OK
Lower display 3 wire RTD measure	Ohms	350	350.2	349.8	349.95	349.95	349.95 OK
Measure K	C	-180	-179.4	-180.6	-180.3	-180.3	-180.3 OK
Measure K	C	0	0.6	-0.6	-0.1	-0.1	-0.1 OK
Measure K	C	400	400.6	399.4	399.8	399.8	399.8 OK
Measure K	C	800	800.8	799.2	799.8	799.8	799.8 OK
Measure K	C	1000	1001	999	999.8	999.8	999.8 OK
Measure K	C	1300	1301.3	1298.7	1299.8	1299.8	1299.8 OK
Simulate K	C	-180	-179.4	-180.6	-179.6	-179.6	-179.6 OK
Simulate K	C	0	0.6	-0.6	0.1	0.1	0.1 OK
Simulate K	C	400	400.6	399.4	400.2	400.2	400.2 OK
Simulate K	C	800	800.8	799.2	800.1	800.1	800.1 OK
Simulate K	C	1000	1001	999	1000.1	1000.1	1000.1 OK
Simulate K	C	1300	1301.3	1298.7	1300.2	1300.2	1300.2 OK
Measure J	C	-200	-199.4	-200.6	-200.3	-200.3	-200.3 OK
Measure J	C	0	0.6	-0.6	-0.1	-0.1	-0.1 OK
Measure J	C	300	300.6	299.4	299.8	299.8	299.8 OK
Measure J	C	600	600.6	599.4	599.8	599.8	599.8 OK
Measure J	C	900	900.9	899.1	899.8	899.8	899.8 OK
Measure J	C	1200	1201.2	1198.8	1199.7	1199.7	1199.7 OK
Simulate J	C	-200	-199.4	-200.6	-199.6	-199.6	-199.6 OK
Simulate J	C	0	0.6	-0.6	0.1	0.1	0.1 OK
Simulate J	C	300	300.6	299.4	300.1	300.1	300.1 OK
Simulate J	C	600	600.6	599.4	600.1	600.1	600.1 OK
Simulate J	C	900	900.9	899.1	900.1	900.1	900.1 OK
Simulate J	C	1200	1201.2	1198.8	1200.1	1200.1	1200.1 OK

Input range	Eng. Units	Cal Pt	Upper	lower	Initial	Final	Sensitivity
							Check
Measure S	C	1000	1001	999	999	999	OK
Measure S	C	1150	1151.5	1148.5	1149	1149	OK
Measure S	C	1300	1301.3	1298.7	1299	1299	OK
Measure S	C	1450	1451.5	1448.5	1449	1449	OK
Measure S	C	1600	1601.6	1598.4	1599	1599	OK
Measure S	C	1750	1751.75	1748.25	1749	1749	OK
Simulate S	C	1000	1001	999	999.7	999.7	OK
Simulate S	C	1150	1151.5	1148.5	1149.7	1149.7	OK
Simulate S	C	1300	1301.3	1298.7	1299.8	1299.8	OK
Simulate S	C	1450	1451.5	1448.5	1449.8	1449.8	OK
Simulate S	C	1600	1601.6	1598.4	1599.8	1599.8	OK
Simulate S	C	1750	1751.75	1748.25	1749.7	1749.7	OK
Measure N	C	0	0.6	-0.6	-0.4	-0.4	OK
Measure N	C	200	200.6	199.4	199.6	199.6	OK
Measure N	C	500	500.6	499.4	499.6	499.6	OK
Measure N	C	800	800.8	799.2	799.6	799.6	OK
Measure N	C	1100	1101.1	1098.9	1099.6	1099.6	OK
Measure N	C	1300	1301.3	1298.7	1299.6	1299.6	OK
Source N	C	0	0.6	-0.6	0.3	0.3	OK
Source N	C	200	200.6	199.4	200.2	200.2	OK
Source N	C	500	500.6	499.4	500.2	500.2	OK
Source N	C	800	800.8	799.2	800.2	800.2	OK
Source N	C	1100	1101.1	1098.9	1100.2	1100.2	OK
Source N	C	1300	1301.3	1298.7	1300.2	1300.2	OK
Measure T	C	-200	-199.4	-200.6	-200	-200	OK
Measure T	C	0	0.6	-0.6	0	0	OK
Measure T	C	100	100.6	99.4	100	100	OK
Measure T	C	200	200.6	199.4	200	200	OK
Measure T	C	300	300.6	299.4	300	300	OK
Measure T	C	400	400.6	399.6	399.9	399.9	OK
Source T	C	-200	-199.4	-200.6	-200.2	-200.2	OK
Source T	C	0	0.6	-0.6	0	0	OK
Source T	C	100	100.6	99.4	99.9	99.9	OK
Source T	C	200	200.6	199.4	200	200	OK
Source T	C	300	300.6	299.4	299.9	299.9	OK
Source T	C	400	400.6	399.6	399.9	399.9	OK
Source mADC lower display	mADC	4	4.0028	3.9972	4.001	4.001	OK
		12	12.0044	11.9956	12.002	12.002	OK
		24	24.0068	23.9932	24.004	24.004	OK
Source mVDC lower display	mVDC	0	0.02	-0.02	-0.001	-0.001	OK
		45	45.03	44.97	44.996	44.996	OK
		100	100.04	99.96	99.994	99.994	OK
Source VDC lower display	VDC	0	0.002	-0.002	0	0	OK
		5	5.003	4.997	5	5	OK
		10	10.004	9.996	10.0002	10.0002	OK
Lower display ohm source	Ohms	15	15.1	14.9	15.005	15.005	OK
		360	360.1	359.9	359.96	359.96	OK
		500	500.5	499.5	499.98	499.98	OK
		1500	1500.5	1499.5	1500.4	1500.4	OK
		3200	3201	3199	3200.1	3200.1	OK