TRANSCAT® CERTIFICATE OF CALIBRATION

Trust in every measure

Customer: ILLIANA INSTRUMENT
1831 Govert Drive
Schererville, IN 46375

NVLAP LAB CODE
200866-0

PO Number: 3611

Certificate/SO Number: M5-A7H3V-20-1 Revision 0

Manufacturer: Fluke Corporation
Model Number: 700P09
Description: Pressure Module, Isolated
Serial Number: 88750903
ID: 1317

As-Found: In Tolerance
As-Left: In Tolerance

Calibration Date: May 26, 2016

Calibrated To: Manufacturer Specification
Calibration Procedure: 1-AC25088-2

Transcat Calibration Laboratories have been audited and found in compliance with ISO/IEC 17025:2005. Accredited calibrations performed within the Lab's Scope of Accreditation are indicated by the presence of the Accrediting Body's Logo and Certificate Number on this Certificate of Calibration. Any measurements on an accredited calibration not covered by that Lab's Scope of Accreditation are listed in the notes section of the certificate. This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, SCC, NRC, CLAS, ANAB or any agency of the Federal Government. NVLAP, NIST, SCC, NRC, CLAS or ANAB do not guarantee the accuracy of an individual calibration by accredited laboratories.

Transcat calibrations, as applicable, are performed in compliance with the requirements of the Transcat Quality Manual Revision I, ISO 9001:2008, ANSI/NCSL Z540.1-1994 (R2002), and ISO 10012:2003. When specified contractually, the requirements of ISO TS16949:2009, 10CFR21, 10CFR50 App. B and ASME NQA-1:2012 are also covered. Complete records of work performed are maintained by Transcat and are available for inspection. Laboratory standards used in the performance of this calibration are shown on the Supplemental Report.

Transcat documents the traceability of measurements to the SI units through the National Institute of Standards and Technology (NIST), or the National Research Council of Canada (NRC), or other recognized national measurement institutes (NMI) that are signatories to the CIPM Mutual Recognition Arrangement, or accepted fundamental and/or natural physical constants, or by the use of specified methods, consensus standards or ratio type measurements. Documentation supporting traceability information is available for review at a Transcat facility. The measured quantity and the measurement uncertainty are required for further dissemination of traceability.

Uncertainties are reported with a coverage factor k=2, providing a level of confidence of approximately 95%. All calibrations have been performed using processes having a TUR of 4:1 or better (3:1 for mass calibrations), unless otherwise noted on the Supplemental Report. The Test Uncertainty Ratio (TUR) is calculated in accordance with NCSL International RP-18. For mass calibrations: Conventional mass referenced to 8.0 g/cm³.

The results in this report relate only to the item calibrated or tested, and the determination of in or out of tolerance is specific to the model/serial no. referenced above based on the tolerances shown on the supplemental report; these tolerances are either the original equipment manufacturer's (OEM's) warranted specifications or the client's requested specifications. Any number of factors can cause a unit to drift out of tolerance at any time following its calibration. Limitations on the uses of this instrument are detailed in the OEM's operating instructions. This certificate may not be reproduced except in full, without the written approval of Transcat. Additional information, if applicable may be included on separate report(s).

Notes:

Calibrated At:
527 Mae Court
Fenton, MO 63026

Facility Responsible:
527 Mae Court
Fenton, MO 63026
800-828-1470

Calibrated By:
Digitally Signed By
Rodger Mansker
Date: May 26, 2016

Rodger Mansker
Calibration Technician

Reviewed By:
Digitally Signed By
Dennis Evans
Date: May 26, 2016

Dennis Evans
Lab Manager

Unit Barcode: 015A0016749

Date Received: May 26, 2016

Customer Number: 1-520763-000

F0013R29 1/4/16

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SUPPLEMENTAL REPORT

CALIBRATION LAB DATA AS FOUND / AS LEFT

Customer: ILLIANA INSTRUMENT
PO Number: 3611

Certificate/SO Number: M5-A7H3V-20-1 Revision 0

Manufacturer: Fluke Corporation
Model Number: 700P09
Description: Pressure Module, Isolated
Serial Number: 88750903
ID: 1317

Service Type: R9

Calibration Date: May 26, 2016
Date Due:

Calibration Procedure: 1-AC25088-2

Description	Setpoints	Accuracy	Low Limit	High Limit	As Found / As Left	OOT	Cal Process Uncertainty (k=2; ±)	Measurement Uncertainty (k=2; ±)	Units	TUR
Pressure Measure										
Pressure Linearity	0.0psi	±(0.05% FS)	-0.8	0.8	0.0 psi					
	145.0psi	±(0.05% FS)	144.2	145.8	145.2 psi		9.8e-003	8.7e-002	psi	81.6 : 1
	300.0psi	±(0.05% FS)	299.2	300.8	300.3 psi		2.0e-002	8.9e-002	psi	40.0 : 1
	450.0psi	±(0.05% FS)	449.2	450.8	450.3 psi		2.9e-002	9.1e-002	psi	27.6 : 1
	600.0psi	±(0.05% FS)	599.2	600.8	600.2 psi		5.4e-002	1.0e-001	psi	14.8 : 1
	750.0psi	±(0.05% FS)	749.2	750.8	750.1 psi		6.8e-002	1.1e-001	psi	11.8 : 1
	899.9psi	±(0.05% FS)	899.1	900.7	900.1 psi		8.1e-002	1.2e-001	psi	9.9 : 1
	1049.9psi	±(0.05% FS)	1049.1	1050.7	1050.1 psi		9.5e-002	1.3e-001	psi	8.4 : 1
	1199.6psi	±(0.05% FS)	1198.8	1200.4	1200.0 psi		1.1e-001	1.4e-001	psi	7.3 : 1
	1349.6psi	±(0.05% FS)	1348.8	1350.4	1350.0 psi		1.2e-001	1.5e-001	psi	6.7 : 1
	1499.5psi	±(0.05% FS)	1498.7	1500.3	1499.9 psi		1.4e-001	1.6e-001	psi	5.7 : 1
Hysteresis	899.9psi	±(0.05% FS)	899.1	900.7	900.1 psi		5.7e-002	1.0e-001	psi	14.0 : 1
	750.0psi	±(0.05% FS)	749.2	750.8	750.1 psi		4.8e-002	9.9e-002	psi	16.7 : 1
	600.0psi	±(0.05% FS)	599.2	600.8	600.2 psi		3.8e-002	9.5e-002	psi	21.1 : 1

The column labeled Cal Process Uncertainty (CPU) does not include the short term component of the UUT. The column labeled Measurement Uncertainty includes both CPU and the short term component of the UUT. TUR is calculated using CPU.
Note: Reported resolution of the UUT does not represent calibration uncertainty or accuracy of the UUT.

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SUPPLEMENTAL REPORT

CALIBRATION LAB DATA AS FOUND / AS LEFT

Customer: ILLIANA INSTRUMENT

PO Number: 3611

Certificate/SO Number: M5-A7H3V-20-1 Revision 0

As Found and As Left Data recorded on May 26, 2016

Temperature 68.2°F / 20.1°C Relative Humidity 57% Temp/RH Asset 10094

Asset	Manufacturer	Model	Description	Cal Date	Due Date	Traceability Numbers
10013	Cooper Instruments	SH66A	Digital Thermometer	Sep 01, 2015	Sep 30, 2016	M5-&10013-25-1
10091	Meriam Instruments	M200-AI0038	Smart Manometer	Aug 31, 2015	Aug 31, 2016	M5-&10091-6-1
1701	Ametek M&G Products	DM-T-150	Deadweight Tester, Hydraulic	Dec 02, 2014	Dec 31, 2016	5-&1701-83-1

The column labeled Cal Process Uncertainty (CPU) does not include the short term component of the UUT. The column labeled Measurement Uncertainty includes both CPU and the short term component of the UUT. TUR is calculated using CPU.

Note: Reported resolution of the UUT does not represent calibration uncertainty or accuracy of the UUT.