

Certificate of Calibration Fluke Park Laboratory

Description:	PRESSURE MEASUREMENT MODULE	Certificate Number:	1500237902
Manufacturer:	FLUKE CALIBRATION	Date of Calibration:	04 May 2018
Model:	PM200-G3.5M	Date Due:	
Serial Number:	4107328	Temperature:	20.0 to 26.0 °C
Status:	AS-LEFT	Relative Humidity:	10 to 70 %RH
		Pressure:	95 to 103 kPa
Calibration:	FULL	Issue Date:	04 May 2018
Procedure:	FLUKE PM SERIES PRESSURE MODULE CALIBRATION : 20180317		
Customer:	VIDITEC SA BUENOS AIRES, AR	RMA/SO Number:	31484656
PO Number:	IRV PO 1763		

This calibration is traceable to the SI through recognized national measurement institutes (NIST, PTB, NPL, NIM, NRC, etc.), radiometric techniques, or natural physical constants and is in compliance with ISO/IEC 17025:2005 and ANSI/NCSL Z540.1. The calibration has been completed in accordance with the Fluke Corporate Quality System document QSD 111.0. Calibration certificates without identification of the authorizing person are not valid. This certificate applies to only the item identified and shall not be reproduced other than in full, without the specific written approval by Fluke Corporation.

This calibration certificate may contain data that is not covered by the Scope of Accreditation. The unaccredited test points, where applicable, are indicated by an asterisk (*), or confined to clearly marked sections. This certificate shall not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.

Measurement uncertainties at the time of test are given where applicable. They are calculated in accordance with the method described in the ISO Guide to the Expression of Uncertainty in Measurement. The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k such that the coverage probability corresponds to approximately 95 %.

Comments:



Josh Hanger

Approved Signatory
Josh Hanger
 Authorized Signatory

Standards Used

Description	Serial Number	Due-Date
DH INSTRUMENTS PC-7100/7600-100 KPA/KG PISTON-CYLINDER	759	13-Jun-2019
FLUKE CALIBRATION MS-AMH-38 MASS SET	2170	23-Jun-2018
DH INSTRUMENTS PG7601 PISTON GAUGE BASE	197	05-Jun-2018

Quality Manuals

This calibration has been completed in accordance with:

The Fluke Corporate Quality Manual, QSD 111.00, Revision 121, Dated July, 2017 and/or

The Fluke 17025 Quality Manual, QSD 111.41, Revision 005, Dated Sept. 2014

Test Description

This **Fluke Calibration PM200-G3.5M Pressure Measurement Module** was inspected on receipt and judged to be suitable for calibration.

At least four hours were allowed for the **PM200-G3.5M** to thermally stabilize in the calibration laboratory before commencing any test. The pressure transducer was pressurized from its minimum to maximum pressure to exercise the pressure sensing element and assists in identifying leaks before data is collected.

The pressure transducer was zeroed and comparisons were performed in kPa throughout the range at specified points with Fluke Calibration working standards. Each applied and test result listed is derived from a multi-measurement data average, only after the pressure is considered to be stable and at equilibrium. Unless otherwise indicated, the horizontal plane of reference for pressure measurement is center of the test connection.

In the data pages that follow: "**Applied**" is the pressure defined by the reference at equilibrium. "**Test Result**" is the pressure indicated by the **PM200-G3.5M**. "**Error**" is the absolute error in reported pressure units calculated as (Test Result – Applied). "**Measurement Uncertainty**" is the expanded uncertainty of measurement that corresponds to an approximate coverage probability of 95% and "**Specification**" is the applicable tolerance applied to the data type.

Specifications:

The PM200-G3.5M Pressure Measurement Module has an uncertainty no greater than:

Model	Range	Specification ¹
PM200-G3.5M	0 kPa to 3,500 kPa	±(0.02% of Full Scale)

Adjustment Tolerance²:

Pressure: ±(0.01% of Full Scale)

Notes:

1. One year specification. Full Scale is defined as maximum positive full scale value of the PM200.
2. Adjustment tolerance is the As Left specification.

If manufacturer's specifications are listed, measured values greater than the manufacturer's specification limits are indicated by 'MV>Spec'.

Applied	Test Result	Error	Measurement Uncertainty	Specification
AS LEFT DATA				
GAUGE PRESSURE VERIFICATION				
PM200-G3.5M ORIENTATION: HORIZONTAL				
Reported Unit: kPa				
Conversion Factor: 1 kPa = 1000 Pa				
0.0000 kPa	0.016 kPa	0.0160 kPa	9.7E-001 Pa	0.350 kPa
703.1536 kPa	703.133 kPa	-0.0206 kPa	1.3E+001 Pa	0.350 kPa
1395.7820 kPa	1395.767 kPa	-0.0150 kPa	2.6E+001 Pa	0.350 kPa
2099.0470 kPa	2099.047 kPa	0.0000 kPa	3.8E+001 Pa	0.350 kPa
2801.7080 kPa	2801.681 kPa	-0.0270 kPa	5.1E+001 Pa	0.350 kPa
3503.1790 kPa	3503.259 kPa	0.0800 kPa	6.4E+001 Pa	0.350 kPa
2801.7080 kPa	2801.737 kPa	0.0290 kPa	5.1E+001 Pa	0.350 kPa
2099.0467 kPa	2099.125 kPa	0.0783 kPa	3.8E+001 Pa	0.350 kPa
1395.7810 kPa	1395.871 kPa	0.0900 kPa	2.6E+001 Pa	0.350 kPa
703.1526 kPa	703.272 kPa	0.1194 kPa	1.6E+001 Pa	0.350 kPa
0.0000 kPa	0.197 kPa	0.1970 kPa	1.1E+000 Pa	0.350 kPa

AS LEFT COEFFICIENTS:
 C0: -0.032898 psi C1: 0.999993
 Medium used: Nitrogen
 Date Tested: 20180503

Reported Unit: psi
 Conversion Factor: 1 psi = 6894.759 Pa

0.00000 psi	0.0023 psi	0.00232 psi	1.3E-004 psi	0.0508 psi
101.98378 psi	101.9808 psi	-0.00299 psi	1.9E-003 psi	0.0508 psi
202.44101 psi	202.4388 psi	-0.00218 psi	3.7E-003 psi	0.0508 psi
304.44095 psi	304.4409 psi	0.00000 psi	5.6E-003 psi	0.0508 psi
406.35328 psi	406.3494 psi	-0.00392 psi	7.4E-003 psi	0.0508 psi
508.09302 psi	508.1046 psi	0.01160 psi	9.2E-003 psi	0.0508 psi
406.35328 psi	406.3575 psi	0.00421 psi	7.4E-003 psi	0.0508 psi
304.44090 psi	304.4523 psi	0.01136 psi	5.6E-003 psi	0.0508 psi
202.44087 psi	202.4539 psi	0.01305 psi	3.7E-003 psi	0.0508 psi
101.98364 psi	102.0010 psi	0.01731 psi	2.4E-003 psi	0.0508 psi
0.00000 psi	0.0286 psi	0.02857 psi	1.5E-004 psi	0.0508 psi

Reported Unit: bar
 Conversion Factor: 1 bar = 1E+05 Pa

0.000000 bar	0.00016 bar	0.000160 bar	9.7E-006 bar	0.00350 bar
7.031536 bar	7.03133 bar	-0.000206 bar	1.3E-004 bar	0.00350 bar
13.957820 bar	13.95767 bar	-0.000150 bar	2.6E-004 bar	0.00350 bar
20.990470 bar	20.99047 bar	0.000000 bar	3.8E-004 bar	0.00350 bar
28.017080 bar	28.01681 bar	-0.000270 bar	5.1E-004 bar	0.00350 bar
35.031790 bar	35.03259 bar	0.000800 bar	6.4E-004 bar	0.00350 bar
28.017080 bar	28.01737 bar	0.000290 bar	5.1E-004 bar	0.00350 bar
20.990467 bar	20.99125 bar	0.000783 bar	3.8E-004 bar	0.00350 bar
13.957810 bar	13.95871 bar	0.000900 bar	2.6E-004 bar	0.00350 bar
7.031526 bar	7.03272 bar	0.001194 bar	1.6E-004 bar	0.00350 bar
0.000000 bar	0.00197 bar	0.001970 bar	1.1E-005 bar	0.00350 bar