

# Calibration Report: Pressure Transducer

## S/N: 592635

Bryan Fabbri  
Analytical Services and Materials, Inc.  
Hampton, Virginia

---

### Summary

Calibration Date: 12 July 2004

Next Calibration Date: 12 July 2005

A collection, analysis and calibration of data from Vaisala Pressure Transducer, S/N:592635 has been completed. The calibration was performed by the calibration laboratory, Wyle Laboratories. This data was collected by Wyle Laboratories on July 12, 2004.

MODEL : PTA427

SERIAL NUMBER : 592635

The test data presented in data table format show the transducers deviation in volts and percent transducer deviation of full scale (FS). Note: Units in millibars per user's request.

APPLICATION: Add corrections to measurements per post calibration table.

---

REPORT OF CALIBRATION-WYLE LABORATORIES

STATIC CALIBRATION OF PRESSURE TRANSDUCER

MANUFACTURER	VAILASA	ECN	A022415	DATE	7/12/04
MODEL NUMBER	PTA427	SER #	592635	CAL BY	W2661
INPUT RANGE	800-1060 hPa	WO #	478436	ORDER #	<b>WYLE 3</b>

CALIBRATION NO. 1

REFERENCE STANDARD TORR X1	REF STD CORRECTED hPa X	TRANSDUCER OUTPUT VOLTS Y1	LEAST SQUARES STRAIGHT LINE VOLTS Y	TRANSDUCER DEVIATION VOLTS (Y1-Y)	TRANSDUCER DEVIATION % OF FS
600.05	800.00	0.0363	0.0338	0.0025	0.050
639.05	851.99	1.0264	1.0275	-0.0011	-0.022
678.06	904.00	2.0186	2.0214	-0.0028	-0.057
717.06	956.00	3.0145	3.0151	-0.0006	-0.012
756.06	1007.99	4.0098	4.0088	0.0010	0.021
795.07	1060.00	5.0036	5.0027	0.0009	0.018
756.06	1007.99	4.0107	4.0088	0.0019	0.039
717.06	956.00	3.0146	3.0151	-0.0005	-0.010
678.06	904.00	2.0188	2.0214	-0.0026	-0.053
639.05	851.99	1.0262	1.0275	-0.0013	-0.026
600.05	800.00	0.0363	0.0338	0.0025	0.050

ZERO BALANCE	-307.006 % OF FS	CONVERSION FACTOR	1.333220
MAX DEVIATION	+/- 0.057 % OF FS	AMBIENT TEMPERATURE	22.2 DEG C.
HYSTERESIS	+/- 0.009 % OF FS	AMBIENT HUMIDITY	46 PERCENT
SENSITIVITY	0.01911 V/hPa	AMBIENT PRESSURE	14.714 PSIA
STD DEVIATION	0.00201 VOLTS	OUTPUT AT BAROMETRIC PRESSURE	= 4.1329 VDC
INPUT VOLTAGE	24.000 VOLTS DC		
INSTRUMENT TEMPERATURE	22.2 DEG C.		

\*COMBINED NONLINEARITY AND HYSTERESIS

REPORT OF CALIBRATION-WYLE LABORATORIES

STATIC CALIBRATION OF PRESSURE TRANSDUCER

MANUFACTURER	VAILASA	ECN	A022415	DATE	7/12/04
MODEL NUMBER	PTA427	SER #	592635	CAL BY	W2661
INPUT RANGE	800-1060 hPa	WO #	478436	ORDER #	<b>WYLE 3</b>

AUX EQUIP	FLUKE DVM, MODEL NO 8842A, GFE NO. 5108
AUX EQUIP	H.P. POWER SUPPLY MODEL NO. 6102A, GFE NO. 2126
REF STD	RUSKA QUARTZ PRESSURE STANDARD, 0-1000 TORR
REF STD	S/N 27607, GFE# 3925, CALIBRATION DUE 2/3/05
MFR SPEC	COMBINED NONLINEARITY AND HYSTERESIS = 0.11 % OF FS

SUMMARY OF CALIBRATION DATA

EXCITATION VOLTAGE 24.000 VOLTS DC      BAROMETRIC PRESSURE 14.714 PSIA  
 INSULATION RESIST 1000 MOHM(50 VDC)      OUTPUT AT BAROMETRIC PRESSURE = 4.1329 V

OUTPUT AT 800.00 hPa	=	0.0363 VOLTS
OUTPUT AT 1060.00 hPa	=	5.0036 VOLTS
OUTPUT AT 800.00 hPa	=	0.0363 VOLTS

-----

: CAL :	INST :	ZERO :	INTERCEPT :	SENSITIVITY :	ZERO :	COMBINED :	HYSTERESIS :
: NO :	TEMP :	(X) :	(Y) :	(X/Y) :	(Y/X) :	BALANCE :	NONLIN+HYST :
: :	DEG C :	hPa :	V :	:	:	% OF FS :	% OF FS :
: :	:	:	:	:	:	% OF FS :	% OF FS :
: 1 :	22.2 :	798.229 :	-15.255 :	52.32663 :	0.01911 :	-307.01 :	+/- 0.057 :
:	:	:	:	:	:	:	+/- 0.009 :

-----

# Linear Fit of Vaisala Barometric Pressure Sensor (Model-PTA427, S/N:592635)

