



Certificate of Calibration

Transducer Model: PDI Transducer

PDI Dynamics Inc

Serial Number: L494

PDI Gage Factor: 93.6 $\mu\text{e}/\text{V}$

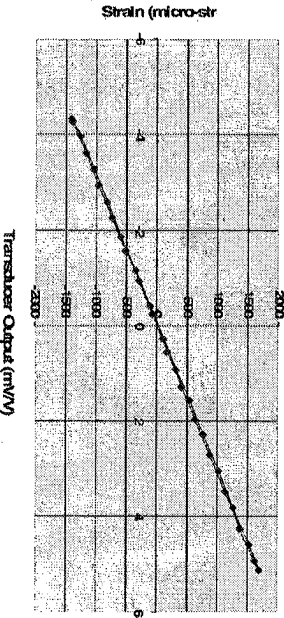
General Gage Factor: 3252 $\mu\text{e}/\text{mV}_{\text{exc}}$

Initial Offset Voltage: 0.088 $\text{mV}/\text{V}_{\text{exc}}$

Table 1 - Representative Calibration Data

Applied Strain (μe)	Transducer Output ($\text{mV}/\text{V}_{\text{exc}}$)	Applied Strain (μe)	Transducer Output ($\text{mV}/\text{V}_{\text{exc}}$)
0	0.088	119	0.290
50	0.292	239	0.584
100	0.584	359	0.878
150	0.878	479	1.172
200	1.172	599	1.466
250	1.466	719	1.760
300	1.760	839	2.054
350	2.054	959	2.348
400	2.348	1079	2.642
450	2.642	1199	2.936
500	2.936	1319	3.230
550	3.230	1439	3.524
600	3.524	1559	3.818
650	3.818	1679	4.112
700	4.112	1799	4.406
750	4.406	1919	4.700
800	4.700	2039	4.994
850	4.994	2159	5.288
900	5.288	2279	5.582
950	5.582	2399	5.876
1000	5.876	2519	6.170
1050	6.170	2639	6.464
1100	6.464	2759	6.758
1150	6.758	2879	7.052
1200	7.052	2999	7.346
1250	7.346	3119	7.640
1300	7.640	3239	7.934
1350	7.934	3359	8.228
1400	8.228	3479	8.522
1450	8.522	3599	8.816
1500	8.816	3719	9.110
1550	9.110	3839	9.404
1600	9.404	3959	9.698
1650	9.698	4079	9.992
1700	9.992	4199	10.286
1750	10.286	4319	10.580
1800	10.580	4439	10.874
1850	10.874	4559	11.168
1900	11.168	4679	11.462
1950	11.462	4799	11.756
2000	11.756	4919	12.050
2050	12.050	5039	12.344
2100	12.344	5159	12.638
2150	12.638	5279	12.932
2200	12.932	5399	13.226
2250	13.226	5519	13.520
2300	13.520	5639	13.814
2350	13.814	5759	14.108
2400	14.108	5879	14.402
2450	14.402	5999	14.696
2500	14.696	6119	14.990
2550	14.990	6239	15.284
2600	15.284	6359	15.578
2650	15.578	6479	15.872
2700	15.872	6599	16.166
2750	16.166	6719	16.460
2800	16.460	6839	16.754
2850	16.754	6959	17.048
2900	17.048	7079	17.342
2950	17.342	7199	17.636
3000	17.636	7319	17.930
3050	17.930	7439	18.224
3100	18.224	7559	18.518
3150	18.518	7679	18.812
3200	18.812	7799	19.106
3250	19.106	7919	19.400
3300	19.400	8039	19.694
3350	19.694	8159	19.988
3400	19.988	8279	20.282
3450	20.282	8399	20.576
3500	20.576	8519	20.870
3550	20.870	8639	21.164
3600	21.164	8759	21.458
3650	21.458	8879	21.752
3700	21.752	8999	22.046
3750	22.046	9119	22.340
3800	22.340	9239	22.634
3850	22.634	9359	22.928
3900	22.928	9479	23.222
3950	23.222	9599	23.516
4000	23.516	9719	23.810
4050	23.810	9839	24.104
4100	24.104	9959	24.398
4150	24.398	10079	24.692
4200	24.692	10199	24.986
4250	24.986	10319	25.280
4300	25.280	10439	25.574
4350	25.574	10559	25.868
4400	25.868	10679	26.162
4450	26.162	10799	26.456
4500	26.456	10919	26.750
4550	26.750	11039	27.044
4600	27.044	11159	27.338
4650	27.338	11279	27.632
4700	27.632	11399	27.926
4750	27.926	11519	28.220
4800	28.220	11639	28.514
4850	28.514	11759	28.808
4900	28.808	11879	29.102
4950	29.102	11999	29.396
5000	29.396	12119	29.690
5050	29.690	12239	29.984
5100	29.984	12359	30.278
5150	30.278	12479	30.572
5200	30.572	12599	30.866
5250	30.866	12719	31.160
5300	31.160	12839	31.454
5350	31.454	12959	31.748
5400	31.748	13079	32.042
5450	32.042	13199	32.336
5500	32.336	13319	32.630
5550	32.630	13439	32.924
5600	32.924	13559	33.218
5650	33.218	13679	33.512
5700	33.512	13799	33.806
5750	33.806	13919	34.100
5800	34.100	14039	34.394
5850	34.394	14159	34.688
5900	34.688	14279	34.982
5950	34.982	14399	35.276
6000	35.276	14519	35.570
6050	35.570	14639	35.864
6100	35.864	14759	36.158
6150	36.158	14879	36.452
6200	36.452	14999	36.746
6250	36.746	15119	37.040
6300	37.040	15239	37.334
6350	37.334	15359	37.628
6400	37.628	15479	37.922
6450	38.000	15599	38.216
6500	38.216	15719	38.510
6550	38.510	15839	38.804
6600	38.804	15959	39.098
6650	39.098	16079	39.392
6700	39.392	16199	39.686
6750	39.686	16319	39.980
6800	39.980	16439	40.274
6850	40.274	16559	40.568
6900	40.568	16679	40.862
6950	40.862	16799	41.156
7000	41.156	16919	41.450
7050	41.450	17039	41.744
7100	41.744	17159	42.038
7150	42.038	17279	42.332
7200	42.332	17399	42.626
7250	42.626	17519	42.920
7300	42.920	17639	43.214
7350	43.214	17759	43.508
7400	43.508	17879	43.802
7450	43.802	17999	44.096
7500	44.096	18119	44.390
7550	44.390	18239	44.684
7600	44.684	18359	44.978
7650	44.978	18479	45.272
7700	45.272	18599	45.566
7750	45.566	18719	45.860
7800	45.860	18839	46.154
7850	46.154	18959	46.448
7900	46.448	19079	46.742
7950	46.742	19199	47.036
8000	47.036	19319	47.330
8050	47.330	19439	47.624
8100	47.624	19559	47.918
8150	47.918	19679	48.212
8200	48.212	19799	48.506
8250	48.506	19919	48.800
8300	48.800	20039	49.094
8350	49.094	20159	49.388
8400	49.388	20279	49.682
8450	49.682	20399	49.976
8500	49.976	20519	50.270
8550	50.270	20639	50.564
8600	50.564	20759	50.858
8650	50.858	20879	51.152
8700	51.152	20999	51.446
8750	51.446	21119	51.740
8800	51.740	21239	52.034
8850	52.034	21359	52.328
8900	52.328	21479	52.622
8950	52.622	21599	52.916
9000	52.916	21719	53.210
9050	53.210	21839	53.504
9100	53.504	21959	53.798
9150	53.798	22079	54.092
9200	54.092	22199	54.386
9250	54.386	22319	54.680
9300	54.680	22439	54.974
9350	54.974	22559	55.268
9400	55.268	22679	55.562
9450	55.562	22799	55.856
9500	55.856	22919	56.150
9550	56.150	23039	56.444
9600	56.444	23159	56.738
9650	56.738	23279	57.032
9700	57.032	23399	57.326
9750	57.326	23519	57.620
9800	57.620	23639	57.914
9850	58.000	23759	58.208
9900	58.208	23879	58.502
9950	58.502	23999	58.796

Calibration Curve



Mean Linear Correlation Coefficient (LCC): 9.998590E-1

Calibrated By: VT

Date/Time: 11/4/2014 1:05 PM

LCC Standard Deviation: 4.021626E-6

Signature: *W Black*

Temperature: 26.4

Specifications PDI Automated Strain Transducer Calibration System (PDI-ASTCS)

ASTCS Calibration Information	
ASTCS Serial Number:	ASTCS-0005
ASTCS Software Version:	2.310
ASTCS Independent Verification Date:	5/15/2014 9:00 AM
Strain Transducer Gage Length:	3.0 inches (76.2 mm)
Applied Full Scale Displacement Range:	±6.0000000E-3 inches
Method for Applying Displacement:	Precision Step Motor Coupled to Linear Stage
Excitation Voltage for Calibration:	2.5 VDC
Displacement Measurements:	Dual Precision AC LVDT's, Output Averaged
Displacement Certifications:	NIST Certificate #729970 & #82174437-07
Linearity Verification Technique:	Linear Correlation Coefficient > 0.9999
Repeatability Verification Technique:	Standard Deviation < 0.5 % (of mean)
ASTCS System Checks	
Reference Strain Transducer:	4367T
Reference General Gage Factor:	293.000 $\mu\text{e}/\text{mV}/\text{V}$
LVDT #1 Sensitivity (inches/volt):	8.045400E-3
LVDT #2 Sensitivity (inches/volt):	7.986200E-3
Date/Time of Last System Check:	11/4/2014 12:50 PM
PDI Strain Transducer Connections	
Black:	+ Excitation
Green:	- Excitation
Red:	+ Signal
White:	- Signal
Grey/BARE:	Shield

NIST Reference:

PDI certifies the above PDI-ASTCS instrument meets or exceeds published specifications and has been verified using standards and instruments whose accuracies are traceable to the National Institute of Standards and Technology (NIST), an accepted value of a natural physical constant or a ratio calibration technique. The calibration of this instrument was performed in accordance with the PDI Quality Assurance program. Measurements and information provided on this report are valid at the time of calibration only.

Smart Sensor? Yes No Smart Chip

Programmed by: *VT*

Date: _____

CRC value

7674