



NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance

for Weighing and Measuring Devices

For:

Load Cell
Single-Ended Shear Beam
Models: PA6140, PA6240, PA6240W, PA6240WA
 n_{\max} : 5 000, Multiple Cell
Accuracy Class: III

Submitted By:

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Standard Features and Options

The specific load cell capacities, v_{\min} values, and minimum dead loads are listed on page 2.

- Number of Wires: 4-wire
- Excitation Voltage (nominal): 10 V
- Maximum Excitation Voltage: 15 V
- Output Rating: 3.0 mV/V, 2.0 mV/V for Model PA6240WA
- Nominal Bridge Impedance: 385 ohms
- Material: Model PA6140 - Alloy Steel, Model PA6240 - Stainless Steel
Model PA6240W & PA6240WA - Stainless Steel Welded

Temperature Range: -10 °C to 40 °C (14 °F to 104 °F)

This device was evaluated under the National Type Evaluation Program and was found to comply with the applicable technical requirements of "NIST Handbook 44: Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices." Evaluation results and device characteristics necessary for inspection and use in commerce are on the following pages.

Randy Jennings
Chairman, NCWM, Inc.

Judy Cardin
Chairman, National Type Evaluation Program Committee
Issued: September 8, 2009

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Load Cell / PA6140, PA6240, PA6240W, PA6240WA

Load Cell Parameters:

Model	Capacity	v_{\min} , Multiple Cell	Min. Dead Load
PA6140 & PA6240	1000 lb	0.075 lb	10 lb
PA6140 & PA6240	1500 lb	0.120 lb	15 lb
PA6140 & PA6240	2000 lb	0.150 lb	20 lb
PA6140 & PA6240	2500 lb	0.190 lb	25 lb
PA6140 & PA6240	3000 lb	0.230 lb	30 lb
PA6140 & PA6240	4000 lb*	0.300 lb	40 lb
PA6140 & PA6240	5000 lb	0.380 lb	50 lb
PA6140 & PA6240	7500 lb	0.570 lb	75 lb
PA6140 & PA6240	10 000 lb	0.750 lb	100 lb
PA6240W & PA6240WA	1000 lb	0.098 lb	10 lb
PA6240W & PA6240WA	1500 lb	0.147 lb	15 lb
PA6240W & PA6240WA	2000 lb	0.196 lb	20 lb
PA6240W & PA6240WA	2500 lb	0.244 lb	25 lb
PA6240W & PA6240WA	3000 lb	0.293 lb	30 lb
PA6240W & PA6240WA	4000 lb*	0.390 lb	40 lb
PA6240W & PA6240WA	5000 lb	0.488 lb	50 lb
PA6240W & PA6240WA	7500 lb	0.732 lb	75 lb
PA6240W & PA6240WA	10 000 lb	0.976 lb	100 lb

* Load cells submitted for evaluation

Application: The load cells may be used in Class III scales for multiple cell applications with up to 5000 divisions consistent with the model designations, number of scale divisions, and parameters specified in this certificate. Load cells of a given accuracy class may be used in applications with lower accuracy class requirements provided the number of scale divisions, the v_{\min} values, and temperature range are suitable for the application. The manufacturer may market the load cell with fewer divisions (n_{\max}) and with larger v_{\min} values than those listed on the certificate. However, the load cells must be marked with the appropriate n_{\max} and v_{\min} for which the load cell may be used.

Identification: A pressure sensitive identification badge containing the manufacturer, model designation, and serial number and other required marking information is located on the load cell or on accompanying document.

Test Conditions: Two 4000 lb capacity load cells (Models PA6240 and PA6240WA) were tested at NIST Force Group. The data were analyzed for multiple load cell applications. The cells were tested over a temperature range of -10 °C to 40 °C. Three tests were run on each cell at each temperature. The temperature effect on zero was measured and a time dependence (creep) test was performed. The time dependence requirements for load cells adopted by the NCWM in July, 2009 (Handbook 44, Paragraph T.N.4.6.) was used for the evaluation of the test results. The barometric pressure test was waived due to the insensitivity of the load cell design to changes in barometric pressure.

Certificate of Conformance 05-123: Two 4000 lb capacity load cells (Model PA6140) with 3.0 mV/V output were tested at NIST Force Group. The data were analyzed for multiple load cell applications. The cells were tested over a temperature range of -10 °C to 40 °C. Three tests were run on each cell at each temperature. The temperature effect on zero was measured and a time dependence (creep) test was performed. The barometric pressure test was waived due to the insensitivity of the load cell design to changes in barometric pressure.

Evaluated By: T. Bartel, NIST Force Group 05-123 & 05-123A1

Type Evaluation Criteria Used: NIST, Handbook 44: Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices, 2009. NCWM, Publication 14: Weighing Devices, 2009.



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Conclusion: The results of the evaluation and information provided by the manufacturer indicate the device complies with applicable requirements.

Information Reviewed By: S. Patoray (NCWM), L. Bernetich (NCWM) 05-123 J. Truex (NCWM) 05-123A1

Examples of Device:

