National Conference on Weights and Measures

15245 Shady Grove Road, Suite 130 • Rockville, MD 20850

National Type Evaluation Program

Certificate of Conformance for Weighing and Measuring Devices

For:
Force Transducer (Load Cell)
Tension
Model: PA6110, PA6210, PA6110P, PA6210P
n_{max}: 5000
Class: III Single Cell
n_{max}: 10 000
Class: III L Single Cell
Capacity: (See Page 2)

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
Nominal Bridge Impedance:	385 ohms
Material:	Alloy Steel, Stainless Steel

Model designation: PA6110 and PA6110P are alloy steel, PA6210 and PA6210P are stainless steel. The "P" at the end of the model number designates overload protection.

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

This device was evaluated under the National Type Evaluation Program (NTEP) and was found to comply with the applicable technical requirements of 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.

Mike Cleary
Chairman, NCWM, Inc.

Don Onwiler
Chairman, National Type Evaluation Program Committee

Issue date: September 1, 2006

Yuyao Pacific Weighing Engineering Co. LTD.
Force Transducer (load cell)
Model: PA6110, PA6210, PA6110P, PA6210P

Application: The load cells may be used in Class III scales for single/multiple cell applications with up to 5000 divisions and Class III L scales for single/multiple cell applications with up to 10 000 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.

Load Cell Parameters:

Capacity (lb)	n_{max}	v_{min}, Single Cell (lb)	n_{max}	v_{min}, Single Cell (lb)	Min. Dead Load (lb)	Capacity (kg)	n_{max}	v_{min}, Single Cell (kg)	n_{max}	v_{min}, Single Cell (kg)	Min. Dead Load (kg)
150	5000	0.011	10 000	0.006	3	70	5000	0.005	10 000	0.003	1.4
200	5000	0.014	10 000	0.008	4	100	5000	0.007	10 000	0.004	2
250	5000	0.018	10 000	0.010	5	150	5000	0.011	10 000	0.006	3
300	5000	0.021	10 000	0.012	6	200	5000	0.014	10 000	0.008	4
500*	5000	0.035	10 000	0.020	10	250	5000	0.018	10 000	0.010	5
750	5000	0.053	10 000	0.030	15	300	5000	0.021	10 000	0.012	6
1000	5000	0.070	10 000	0.040	20	500	5000	0.035	10 000	0.020	10
1500	5000	0.105	10 000	0.060	30	700	5000	0.049	10 000	0.028	14
2000	5000	0.200	10 000	0.080	40	1000	5000	0.100	10 000	0.040	20
2500	5000	0.250	10 000	0.100	50	1500	5000	0.150	10 000	0.060	30
3000	5000	0.300	10 000	0.120	60	2000	5000	0.200	10 000	0.080	40
5000*	5000	0.500	10 000	0.200	100	2500	5000	0.250	10 000	0.100	50
7500	5000	0.750	10 000	0.300	150	3000	5000	0.300	10 000	0.120	60
10 000	5000	1.000	10 000	0.400	200	4000	5000	0.400	10 000	0.160	80
15 000	5000	1.500	10 000	0.600	300	5000	5000	0.500	10 000	0.200	100
20 000	5000	2.000	10 000	0.800	400	7000	5000	0.700	10 000	0.280	140
						10 000	5000	1.000	10 000	0.400	200

* Two cells submitted for evaluation

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 500 lb capacity load cells models PA6110 and PA6210 and two 5000 lb capacity load cells models PA6110 and PA6210P with 3.0 mV/V output were tested at NIST Force Group. The data were analyzed for single 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.

Yuyao Pacific Weighing Engineering Co. LTD.
Force Transducer (load cell)
Model: PA6110, PA6210, PA6110P, PA6210P

Type Evaluation Criteria Used: NIST Handbook 44, 2006 Edition, NCWM Publication 14, 2006 Edition

Evaluated By: NIST Force Group, NIST Office of Weights and Measures

Conclusion: The results of the evaluations and information provided by the manufacturer indicate the devices comply with applicable requirements.

Information Reviewed By: S. Patoray (NCWM), L. Bernetich (NCWM)

Example of typical device: