National Conference on Weights and Measures

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

Certificate Number: 05-113

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National Type Evaluation Program Certificate of Conformance for Weighing and Measuring Devices

For:

Force Transducer (Load Cell)

Double Bending Beam (Single Point - LC)

Model: RLPWM12 Series n_{max}: Single: 5000 Capacity: See Below

Accuracy Class: III

Submitted by:

Rice Lake Weighing Systems 230 West Coleman Street Rice Lake, WI 54868 Tel: (715) 234-9171

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Standard Features and Options

The specific capacities, v_{min}, and minimum dead loads covered by this Certificate are listed in the table below:

Model	Capacity (kg)	v _{min} (kg)	Minimum Dead Load
RLPWM12	50*	0.007	0
RLPWM12	75	0.011	0
RLPWM12	100	0.014	0
RLPWM12	150	0.021	0
RLPWM12	200*	0.028	0
RLPWM12	250*	0.035	0
RLPWM12	300	0.042	0
RLPWM12	500	0.070	0
RLPWM12	600	0.084	0
RLPWM12	635	0.089	0
RLPWM12	1000	0.140	0

^{*} Load cells submitted for evaluation.

Nominal output: 2.0 mV/V Excitation voltage: 5 to 15 Vdc 6-wire design Counterforce material: Aluminum

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

Don Onwiler Chairman, NCWM, Inc. James C. Truex Chairman, National Type Evaluation Program Committee

Issue date: December 6, 2005

Note: The National Conference on Weights and Measures does not "approve"," recommend", or "endorse" any proprietary product or material, either as a single item or as a class or group. Results shall not be used in advertising or sales promotion to indicate explicit or implicit endorsement of the product or material by the NCWM.

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Rice Lake Weighing Systems Force Transducer (Load Cell) Model: RLPWM12 Series

Application: The load cells may be used in Class III scales for single cell applications 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 v_{min} for which the load cell may be used.

<u>Identification:</u> A pressure sensitive identification badge containing the manufacturer, model designation, and serial number is located on the load cell. All other required information, if not marked on the load cell, must be on an accompanying document including the serial number of the load cell.

<u>Test Conditions:</u> This certificate is issued based upon the following tests and upon information provided by the manufacturer. Two 200-kg capacity load cells, one 50 kg and one 250 kg load cell were tested at NIST using dead weights as the reference standard. 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.

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

Type Evaluation Criteria Used: NIST Handbook 44, 1999 Edition

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)