



NATIONAL TYPE EVALUATION PROGRAM

# Certificate of Conformance

for Weighing and Measuring Devices

**For:**

Load Cell  
Bending Beam  
Model: RL32011WB-X-Y  
 $n_{\max}$  Single Cell: 3 000  
 $n_{\max}$  Multiple Cell: 5 000  
Capacity: 250 lb to 20 000 lb  
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 covered by this Certificate are listed on Page 2.

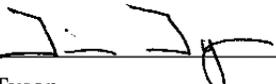
Output: 2.0 mV/V  
Bridge Impedance: 350 ohm  
4 wire design

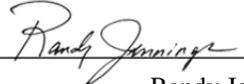
Model designation RL32011WB-X-Y, where:

X could be a T or L  
T designates threaded load hole  
L designates loaded via a chain link  
Y designates the load cell capacity

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.

  
Tim Tyson  
Chairman, NCWM, Inc.

  
Randy Jennings  
Chairman, National Type Evaluation Program Committee  
Issued: April 5, 2011

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## Rice Lake Weighing Systems

Load Cell / RL32011WB-X-Y

### Load Cell Parameters:

Model	Capacity (lb)	$v_{\min}$ (lb)		Minimum Dead Load (lb)
		Single Cell	Multiple Cell	
RL32011	250*	0.035	0.035	0
RL32011	500	0.070	0.070	0
RL32011	1 000*	0.140	0.140	0
RL32011	1 250	0.175	0.175	0
RL32011	2 500	0.350	0.350	0
RL32011	4 000	0.560	0.560	0
RL32011	5 000	0.700	0.700	0
RL32011	10 000*	1.400	1.400	0
RL32011	20 000	2.800	2.800	0

\* Load cell capacities tested

**Application:** The load cells may be used in Class III scales for single cell applications with up to 3000 divisions and 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 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.

**Test Conditions:** Two 250 lb, two 10 000 lb and one 1 000 lb capacity load cells were tested at NIST. The data were analyzed for single and 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. Previous test conditions are listed below for reference.

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

**Type Evaluation Criteria Used:** NIST, Handbook 44: Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices, 2011. NCWM, Publication 14: Weighing Devices, 2010.

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

**Information Reviewed By:** J. Truex (NCWM)



## Rice Lake Weighing Systems

Load Cell / RL32011WB-X-Y

### Examples of Device:



Chain Link Design



Threaded Hole Design