



NATIONAL TYPE EVALUATION PROGRAM

# Certificate of Conformance

for Weighing and Measuring Devices

**For:**

Load Cell  
Compression  
Model: LP7110Y Series  
 $n_{max}$ : 5000, Multiple Cell  
Capacity: 1 000 to 10 000 lb (500 to 4 500 kg)  
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 in the table on Page 2.

**Standard Features:**

- Alloy Steel
- 4 Wire Design

**Nominal Output:**

- 2.0 to 3.0 mV/V

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  
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**Locosc Ningbo Precision Technology Co. Ltd**

Load Cell / LP7110Y Series

Capacity	$V_{\min}$ Class III n=5000	Minimum Dead Load
1 000 lb	0.099 lb	15 lb
1 500 lb	0.149 lb	15 lb
2 000 lb	0.199 lb	15 lb
2 500 lb	0.247 lb	40 lb
3 000 lb	0.297 lb	40 lb
4 000 lb*	0.390 lb	40 lb
5 000 lb	0.490 lb	100 lb
7 500 lb	0.740 lb	100 lb
10 000 lb	0.990 lb	100 lb
500 kg	0.050 kg	8 kg
700 kg	0.070 kg	8 kg
1 000 kg	0.100 kg	8 kg
1 500 kg	0.149 kg	20 kg
2 000 kg	0.199 kg	20 kg
2 500 kg	0.249 kg	20 kg
3 000 kg	0.295 kg	50 kg
4 000 kg	0.395 kg	50 kg
4 500 kg	0.445 kg	50 kg

\*2 Load Cells Tested

**Application:** The load cells may be used in Class III scales for multiple 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  $v_{\min}$  value, and temperature range are suitable for the application. The manufacturer may market the load cell with fewer divisions ( $n_{\max}$ ) and with greater  $v_{\min}$  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 on the load cell. All other required information is on an accompanying document including the serial number of the load cell.

**Test Conditions:** Two Model LP7110Y (4 000 lb capacity) load cells were tested by the NIST Force Group, using deadweights as the reference standard. The load cells were tested over a temperature range of -10 °C to 40 °C with tests 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. The data were analyzed for multiple load cell applications.

**Evaluated By:** T. Bartel, NIST Force Group

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



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Load Cell / LP7110Y Series

**Examples of Device:**

