



NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance

for Weighing and Measuring Devices

For:

Load Cell
 Double-Ended Shear Beam
 Model: ML400 Series
 n_{\max} Multiple Cell: 10 000
 Capacity: 25 000 lb to 125 000 lb
 Accuracy Class: III L

***Submitted By: Contact Info. Updated Nov. 2013**

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Standard Features and Options

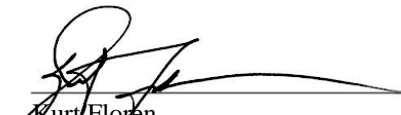
- Nominal Output: 3.0 mV/V
- 4-wire Design

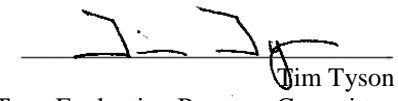
Model	Maximum Capacity	Minimum Load Cell Interval (v_{\min})	Multiple Cells	Minimum Dead Load
ML400	25 000 lb	1.0 lb		500 lb
ML400	40 000 lb	1.6 lb		2500 lb
ML400	50 000 lb*	2.0 lb		2500 lb
ML400	60 000 lb	2.4 lb		2500 lb
ML400	75 000 lb	3.0 lb		2500 lb
ML400	100 000 lb	4.0 lb		2500 lb
ML400	125 000 lb	5.0 lb		2500 lb

*Load cell capacity submitted for type evaluation.

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.


 Kurt Floren
 Chairman, NCWM, Inc.


 Jim Tyson
 Chairman, National Type Evaluation Program Committee
 Issued: April 23, 2012

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**Massload Technologies, Inc.**

Load Cell / ML400 Series

Application: The load cells may be used in Class III L 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} 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: This Certificate supersedes Certificate of Conformance number 99-035 and was issued without additional testing to reactivate Certificate of Conformance number 99-035. Changes were also made to update the contact information. Previous test conditions are listed below for reference.

Certificate of Conformance Number 99-035: Two 50 000 lb capacity load cells were tested at NIST using dead weights as the reference standard. 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: NIST Force Group, 99-035

Type Evaluation Criteria Used: NIST, Handbook 44: Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices, 2012. NCWM, Publication 14: Weighing Devices, 2012.

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

Information Reviewed By: G. Newrock (NIST) and J. Williams (NIST) 99-035; J. Truex (NCWM) 09-035A1

Example of Device:

