



## NATIONAL TYPE EVALUATION PROGRAM

# Certificate of Conformance

for Weighing and Measuring Devices

**For:**

Load Cell

Tension, S - Type

Models: OP-312 &amp; OP-312SSW

n<sub>max</sub>: Single Cell, Class III L: 10 000

Capacity: 1000 lb to 10 000 lb

Accuracy Class: III L

**Submitted By:**

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Email: [sales@optimascale.com](mailto:sales@optimascale.com)Web site: [www.optimascale.com](http://www.optimascale.com)**Standard Features and Options**

SSW suffix denotes sealed version

**Standard Features:**

- Nominal Output: 3 mV/V
- Cable: 4-wire
- Nominal Output Impedance: 350 Ohms
- Counterforce Material: Stainless Steel

**Load Cell Parameters:**

Capacity	V <sub>min</sub> Class III L Multiple Cell	Minimum Dead Load
1000 lb	0.10 lb	10 lb
1500 lb	0.15 lb	15 lb
2000 lb	0.20 lb	20 lb
2500 lb	0.25 lb	25 lb
3000 lb	0.30 lb	30 lb
5000 lb*	0.50 lb	50 lb
10 000 lb	1.00 lb	100 lb

\*Two 5000 lb capacity load cells tested

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.

James Cassidy  
Chairman, NCWM, Inc.

Kristin Macey  
Chairman, National Type Evaluation Program Committee  
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**Optima Scale Manufacturing Inc.**

Load Cell / OP-312 &amp; OP-312SSW

**Application:** The load cells may be used in for the applicable 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.

**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 was issued based upon the following tests and upon information provided by the manufacturer. Two 5000 lb capacity load cells were tested using dead weights as the reference standard. The excitation voltage was 10 V dc. The data were analyzed for multiple load cell applications. The cells were tested over a temperature range of -10 to 40 °C. The temperature effect on zero was measured and time dependence (creep) tests were performed. The barometric pressure test was waived due to the insensitivity of the load cell design to changes in barometric pressure. NCWM Pub 14 selection criteria was used to determine cells tested.

**Evaluated By:** K. Chesnutwood (NIST Force Group)

**Type Evaluation Criteria Used:** NIST, Handbook 44: Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices, 2017. NCWM, Publication 14: Weighing Devices, 2017.

**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)

**Examples of Device:**



Model OP-312



Model OP-312SSW