

## NATIONAL TYPE EVALUATION PROGRAM

# Certificate of Conformance for Weighing and Measuring Devices

For: Load cell

Tension & Compression Model: 101xx Series

 $n_{max}$ : 4 500, Single/Multiple Cell, Class III, 100 to 500 lb  $n_{max}$ : 5 500, Single/Multiple Cell, Class III, 1000 to 20 000 lb

Capacity: 100 to 20 000 lb Accuracy Class: III **Submitted By:** 

Anyload LLC

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## **Standard Features and Options**

Model 101xx, where the x in the model designation may be BH, BS, NH, NS

The specific load cell capacities,  $v_{min}$  values, and minimum dead loads covered by this Certificate are listed in the table below.

Nominal output: 2.0 and 3.0 mV/V Steel Stainless and Alloy Steel material

4 wire design

Minimum Dead Load: 0 lb

Models	Capacity	v <sub>min</sub> Class III Single cell	n <sub>max</sub> Class III Single cell
101xx	100 lb	0.0067 lb	4500
Load Cells Tested: 200 kg & 2000 kg	250 lb	0.017 lb	4500
	500 lb	0.03 lb	4500
	1000 lb	0.07 lb	5500
	2000 lb	0.14 lb	5500
	3000 lb	0.21 lb	5500
	5000 lb	0.36 lb	5500
	10 000 lb	0.70 lb	5500
	15 000 lb	1.07 lb	5500
	20 000 lb	1.43 lb	5500

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.

Craig VanBuren
Chairman, NCWM, Inc.

Stephen Benjamin Committee Chair, NTEP Committee Issued: September 24, 2019

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# Anyload LLC Load Cell / 101xx Series

**Application:** The load cells may be used in Class III scales for single cell and 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 label located on the cell, states manufacturer name, model, serial number, rated capacity, class and  $v_{min}$ . Other pertinent information will be specified on the Calibration Certificate accompanying the cell.

<u>Test Conditions</u>: This certificate supersedes Certificate of Conformance 12-094A1 and is issued to make a correction in the For: box changing Single Cell to Single/Multiple Cell to be consistent with application. No additional testing was deemed necessary. Previous test conditions are listed below for reference.

<u>Certificate of Conformance Number 12-094A1</u>: This Certificate supersedes Certificate of Conformance Number 12-094 and was issued to adjust the v<sub>min</sub> values and increase the n<sub>max</sub> values for the load cells. The NMi laboratory re-calculated the values shown on the initial test report and issued revisions. The test data was accepted by NTEP in accordance with the OIML DoMC Mutual Acceptance Arrangement, signed by the NCWM as a utilizing participant for load cell testing. No additional testing was deemed necessary. Previous test conditions are listed below for reference.

Certificate of Conformance Number 12-094: A Model 101BH, 200 kg and 2000 kg capacity load cells were tested by the NMi Certain B.V. at The Netherlands facility. Testing was conducted in accordance with the OIML DoMC Mutual Acceptance Arrangement, signed by the NCWM as a utilizing participant for load cell testing. Testing was conducted 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 to determine sensitivity of the load cell design to changes in barometric pressure was conducted. The data were analyzed for single load cell applications. OIML R60 selection criteria were used to determine cells tested.

Evaluated By: C. Bontenbal (NMi, A. Tjoa (NMi) 12-094; M.M.J. Meijer (NMi), E. van der Grinten (NMi) 12-094A1; M. Manheim (NCWM)12-094A2

<u>Type Evaluation Criteria Used</u>: *NIST Handbook 44 Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices*, 2016 Edition. *NCWM Publication 14 Measuring Devices*, 2016 Edition.

**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) 12-094, 12-094A1; D. Flocken (NCWM) 12-094A2

### **Example(s) of Device:**

