



NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance

for Weighing and Measuring Devices

For:

Load Cell
S Type
Model: RL20000ST Series*
 n_{max} : 3 000, Single/Multiple Cell, Class III
 n_{max} : 10 000, Single /Multiple Cell, Class III L
Capacity: 50 lb to 25 000 lb (see page 2)
Accuracy Class: III / III L

Submitted By:

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Standard Features and Options

* The RL20000ST Series is identified by the model designation RL20000ST-XXX (see table on Page 2); where the XXX character denotes the load cell capacity. 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:

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

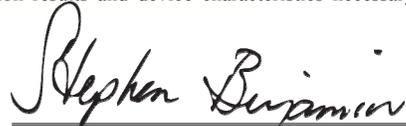
Excitation Voltage: 10.0 Vdc

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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Rice Lake Weighing Systems
Load Cell / RL20000ST Series

Application: The load cells may be used for Class III and III L scales for single 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, 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 and other required information is on the load cell. All other required information must be on an accompanying document including the serial number of the load cell.

Model Designation: (†Load cell capacity submitted for type evaluation)

Model	Capacity (lb)	v_{\min} (lb) III	v_{\min} (lb) III L	Minimum Dead Load (lb)
RL20000ST-50	50	0.004	0.0013	0
RL20000ST-75	75	0.006	0.0020	0
RL20000ST-100	100	0.008	0.0026	0
RL20000ST-150	150	0.012	0.0040	0
RL20000ST-200	200	0.016	0.0053	0
RL20000ST-250	250	0.020	0.0067	0
RL20000ST-300	300	0.024	0.0080	0
RL20000ST-500	500	0.040	0.0133	0
RL20000ST-750	750	0.060	0.0200	0
RL20000ST-1k	1000	0.080	0.0266	0
RL20000ST-1.5k	1500	0.120	0.0400	0
RL20000ST-2k	2000	0.160	0.0533	0
RL20000ST-2.5k	2500	0.200	0.0667	0
RL20000ST-3k	3000	0.240	0.0800	0
RL20000ST-5k	5000	0.400	0.1334	0
RL20000ST-10k	10 000	0.800	0.2667	0
RL20000ST-15k	15 000	1.200	0.4002	0
RL20000ST-20k	20 000	1.600	0.5334	0
RL20000ST-25k	25 000	2.000	0.6670	0

Test Conditions: This certificate supersedes Certificate of Conformance 03-007 and is issued to make a correction in the For: box changing Single Cell to Single/Multiple Cell to be consistent with application. Changes were also made to update the contact information. No additional testing was deemed necessary. Previous test conditions are listed below for reference.

Certificate of Conformance Number 03-007: This certificate is issued based upon the following tests and upon information provided by the manufacturer. One 100-lb, one 500-lb and one 3000-lb capacity load cells were tested at the manufacturer's facility using dead weights as the reference standard. In addition, two 300-lb, and two 3000-lb capacity load cells were tested at NIST using dead weights as the reference standard. The data were analyzed for single load cell applications. The cells were tested over a temperature range of $-10 \text{ }^{\circ}\text{C}$ to $40 \text{ }^{\circ}\text{C}$. 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. The test conditions for the previous evaluations are listed below for reference. Representatives from NIST evaluated the manufacturer's test facility, witnessed repeat tests on load cells and analyzed the data.

Evaluated By: NIST Force Group 03-007; M. Manheim (NCWM)

Type Evaluation Criteria Used: NIST Handbook 44 Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices, 1999 Edition. NCWM Publication 14 Measuring Devices, 1999 Edition.



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

Information Reviewed By: S. Patoray (NCMW), L. Bemetch (NCWM) 03-007, D. Flocken (NCWM) 03-007A1

Example(s) of Device:

