NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance

for Weighing and Measuring Devices

For:
Load Cell
S-Type Tension
Model: RL20000FLS Series*
n_{max} : 5 000, Single/Multiple Cell, Class III
n_{max} : 10 000, Single/Multiple Cell, Class III L
Capacity: 100 lb to 10 000 lb / 50 kg to 5.0 t
Accuracy Class: III / III L

Submitted By:
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Standard Features and Options

Standard Features:

- Nominal Output: 3.0 mV/V
- Cable: 4-wire design
- Material: Stainless Steel
- Nominal Bridge Resistance: 350 Ω
- Nominal Excitation Voltage: 5 - 20 Volts

*The specific load cell capacities, v_{min} values and minimum dead loads covered by this Certificate are listed in the tables on Page 2. The RL20000FLS Series is identified by the model designation RL20000FLS-X_1X_2-YK-$Z_1Z_2Z_3Z_4$ where:

RL20000FLS	X_1	X_2 n_{max}	YK (see page 2)	Z_1	Z_2	Z_3	Z_4
	A = Class III B = Class III L	3 = 3 000 5 = 5 000 10 = 10 000	Capacity in pound or kg (e.g., 500 = 500 lb) (e.g., 5K = 5000 lb)	Electrical Cable Length		Features which have no metrological effect	Wiring and private label variations

Temperature Range: -10 ºC to 40 ºC (14 ºF to 104 ºF)

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 25, 2019

Rice Lake Weighing Systems

Load Cell / RL20000FLS Series

Model Designation: The manufacturer's model number RL20000FLS is designated with a suffix X_1X_2-YK-$Z_1Z_2Z_3Z_4$, where YK represents the capacities listed in the tables below:

Capacity		Class III S (3 000) v_{min} (lb)	Class III S (5 000) v_{min} (lb)	Class III L S (10 000) v_{min} (lb)	Minimum Dead Load (lb)
YK	lb				
100	100	0.010	0.01	0.003	2
150	150	0.015	0.016	0.005	2
200	200	0.020	0.021	0.006	2
250	250	0.025	0.026	0.008	2
300*	300	0.030	0.031	0.009	2
500	500	0.050	0.052	0.015	5
750	750	0.075	0.078	0.026	5
1K	1 000	0.100	0.104	0.034	10
1.5K	1 500	0.150	0.156	0.051	10
2K	2 000	0.200	0.208	0.068	10
2.5K	2 500	0.250	0.260	0.085	10
3K*	3 000	0.300	0.312	0.102	10
5K	5 000	0.500	0.520	0.170	10
10K	10 000	1.000	1.040	0.340	10

* Load Cells Submitted for Evaluation

Capacity (t) metric ton		Class III (3 000) v_{min} (kg)	Class III (5 000) v_{min} (kg)	Class III L (10 000) v_{min} (kg)	Minimum Dead Load (kg)
YK	kg				
50 kg	50	0.005	0.005	0.002	0.9
0.1 t	100	0.010	0.010	0.003	0.9
0.25 t	250	0.025	0.026	0.008	2.3
0.50 t	500	0.050	0.052	0.017	4.5
1.00 t	1000	0.100	0.104	0.034	4.5
2.50 t	2500	0.250	0.260	0.085	4.5
5.00 t	5000	0.500	0.520	0.170	4.5

Application: The load cells may be used in 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, 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 must be on an accompanying document including the serial number of the load cell.

Test Conditions: This certificate supersedes Certificate of Conformance 06-087 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 06-087: This certificate is issued based upon the following tests and upon information provided by the manufacturer. 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 °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. The test conditions for the previous evaluations are listed below for reference.

Rice Lake Weighing Systems
Load Cell / RL20000FLS Series

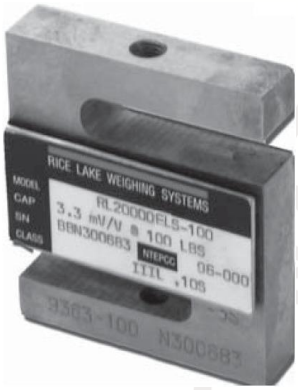
Evaluated By: NIST Force Group, NIST Office of Weights and Measures; M. Manheim (NCWM) 06-087A1

Type Evaluation Criteria Used: *NIST Handbook 44 Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices*, 1998 Edition. *NCWM Publication 14 Measuring Devices*, 1998 Edition.

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

Information Reviewed By: S. Patoray (NCWM); L. Bernetich (NCWM) 06-087; D. Flocken (NCWM) 06-087A1

Example(s) of Device:



Model RL20000FLS