National Conference on Weights and Measures
15245 Shady Grove Road, Suite 130 • Rockville, MD 20850

National Type Evaluation Program
Certificate of Conformance
for Weighing and Measuring Devices

For:
Load Cell
Double-Ended Shear Beam
Model: 5223-XX-YK-ZZZZ Series
n_{max}: Multiple Cells: 10 000
Capacity: 50K, 65K, 100K, 125K, & 200K lb

Accuracy Class: III L

Submitted by:

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Standard Features and Options

The Model 5223 Series is identified by the designation 5223-X_1 X_2-YK-Z_1 Z_2 Z_3 Z_4 where

5223	X_1	X_2	YK	Z_1	Z_2	Z_3	Z_4
	B = Class III L	n_{max} in thousands	capacity in thousands of pounds	electrical cable length or connector		P = analog D = digital	wiring and private label variations

Note: A unique alphanumeric Z_3Z_4 suffix combination (for example S499, etc.) Is used to define analog or digital-option equipped load cells which have non-standard features that have no metrological effect (for example, special color).

Load Cell Parameters		
Capacity (lb)	**v_{min} (lb)**	**Minimum Dead Load (lb)**
50 000	1.6	1000
65 000	2.1	1000
100 000	3.3	1000
125 000	4.0	1000

Temperature Range: -10 ˚C to 40 ˚C (14 ˚F to 104 ˚F)

This device was evaluated under the National Type Evaluation Program (NTEP) and was found to comply with the applicable technical requirements of 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.

Effective Date: April 9, 1999

Louis E. Straub
Chairman, NCWM, Inc.

G. Weston Diggs
Chairman, National Type Evaluation Program Committee

Issue date: July 12, 1999

This is a reissuance by the NCWM of a Certificate of Conformance already issued by the National Institute of Standards and Technology.

Revere Transducers, Inc.
Double-Ended Shear Beam Load Cell
Model: 5223-XX-YK-ZZZZ Series

Application: The load cells may be used in Class III L scales for multiple cell applications consistent with the model designations 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 load cells with fewer scale 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 Number 86-038A2 and is issued to include a digital output option. A representative sample of a load cell equipped with a digital output option was tested at NIST (Model SSB Certificate of Conformance Number 86-041A3) using dead weights as the reference standard. The data were analyzed for single cell load cell applications. The load cell was tested over a temperature range of -10 ˚C to 40 ˚C. Three tests were run at each temperature. The temperature effect on zero was measured and a time dependence test (creep) was performed. The barometric pressure test was waived due to the insensitivity of the load cell to barometric pressure. Previous test conditions are listed below for reference.

Certificate of Conformance Number 86-038A2: This Certificate superseded Certificate of Conformance Number 86-038A1 and was issued to add 125 000-lb capacity to the model 5223-B10.

Certificate of Conformance Number 86-038A1: This Certificate superseded Certificate of Conformance Number 86-038 and was issued at the manufacturer's request to extend the 5223-B10 Family to include the 200 000-lb capacity load cell.

Certificate of Conformance Number 86-038: This Certificate superseded Certificate of Conformance Number 86-038P Amended and was issued to upgrade the certificate from provisional to full. This Certificate reflects new values for v_{min} based upon the change to Handbook 44 performance requirements for the temperature effect on zero effective January 1, 1991.

Two 50 000-lb capacity load cells were tested at NIST using dead weights as the reference standard. The excitation was 10 V dc. 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.

Type Evaluation Criteria Used: NIST Handbook 44, 1999 Edition

Tested By: NIST Force Group

Information Reviewed By: T. Grimes (NIST) 86-038A2; L. T. Sebring (NIST) 86-038A3