NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance

for Weighing and Measuring Devices

For:
Load Cell
Digital, Beam, Double-ended
Models: SCBD Series
n_{max}: 10 000, Class IIIL, Multiple cell
Capacity: 20 000 lb to 200 000 lb

Accuracy Class: IIIL

Submitted By:
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Standard Features and Options

- Stainless Steel material
- 5 wire design
- Minimum Dead Load: 350 lb

Model	Capacity (lb)	v_{min} (lb)	Minimum Dead Load (lb)
SCBD20	20 000	0.4	175
SCBD35	35 000	0.7	350
SCBD50 *	50 000	1.0	350
SCBD75	75 000	1.5	350
SCBD100	100 000	2.0	500
SCBD200	200 000	4.0	1000

*Load cell tested

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.

Kristin Macey
Chairman, NCWM, Inc.

Jerry Buendel
Chairman, National Type Evaluation Program Committee
Issued: October 13, 2016

Cardinal Scale Manufacturing Company

Load Cell / SCBD Series

Application: The load cells may be used in Class IIIL 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} 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: Identification information containing the manufacturer's name, model designation, capacity and serial number is on a foil label attached to the load cell, or laser-etched directly on the load cell body. 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 supersedes National Type Evaluation Program (NTEP) Certificate of Conformance (CC) Number 16-088 and was issued to correct the v_{min} values of the cells, stating the correct values obtained during testing in the NTEP laboratory. No additional testing was necessary. Previous test conditions are listed below for reference.

Certificate of Conformance Number 16-088: Two 50 000 lb capacity load cells were tested using dead weights as the reference standard. The data was analyzed for multiple cell applications. The load cells were tested over a temperature range of -10 °C to 40 °C (14 °F to 104 °F). 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. NCWM Publication 14 selection criteria was used to issue this certificate.

Evaluated By: K. Chesnutwood (NIST Mass and Force Group) 16-088

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

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) 16-088, 16-088A1

Example of Device: