NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance

for Weighing and Measuring Devices

For:
Load Cell
Compression Loading
Model: BM14G and BM14K Series
n_{max}: 5 000, Class III, Multiple Cell
10 000, Class IIIL, Multiple Cell
Capacity: 10 000 to 100 000 kg
Accuracy Class: III / IIIL

Submitted By:
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Standard Features and Options

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

- The G model designates load button on both ends, square junction box with cable exit at bottom
- The K model designates load button on both ends, round junction box with cable exit at bottom

Standard Features:

- Nominal Output: 2.0 mV/V
- Stainless Steel
- 4 Wire Design

Capacity	V_{min} Class III Multiple cell, n=5000	v_{min} Class IIIL Multiple cell, n=10 000	Minimum Dead Load
10 000 kg	1.04 kg	0.37 kg	0 kg
20 000 kg	2.08 kg	0.74 kg	0 kg
*30 000 kg	3.12 kg	1.11 kg	0 kg
40 000 kg	4.16 kg	1.48 kg	0 kg
50 000 kg	5.20 kg	1.85 kg	0 kg
100 000 kg	10.40 kg	3.70 kg	0 kg

*2 load cells 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.

Tim Tyson
Chairman, NCWM, Inc.

Randy Jennings
Chairman, National Type Evaluation Program Committee

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Zemic USA, Inc.

Load Cell / BM14G & BM14K Series

Application: The load cells may be used in Class III scales for multiple cell applications and Class IIIL 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 number, serial number, rated capacity, rated output, V_{min}, class, CC number and country of origin. Other pertinent information will be specified on the Calibration Certificate accompanying the cell.

Test Conditions: One Model BM14K (30 000 kg capacity) load cell and one Model BM14G (30 000 kg capacity) load cell were tested by the NIST Force Group, 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 was waived due to the insensitivity of the load cell design to changes in barometric pressure. The data were analyzed for multiple load cell applications. NCWM Publication 14 selection criteria was used to determine cells tested.

Evaluated By: T. Bartel, NIST Force Group

Type Evaluation Criteria Used: NIST, Handbook 44: Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices, 2010. NCWM, Publication 14: Weighing Devices, 2010.

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)

Examples of Device:

BM14G

BM14K