National Conference on Weights and Measures

15245 Shady Grove Road, Suite 130 • Rockville, MD 20850

Certificate Number: 07-065A1

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

For:

Force Transducer (Load Cell)

Tension

Model: UL/UB Series*

n_{max}: Class III 5000; Single Cell n_{max}: Class III L 10 000; Single Cell

Capacity: 50 kg to 5000 kg

250 lb to 10 000 lb Accuracy Class: III / III L **Submitted by: Contact Info. Updated October**

2025

Flintec, Inc.

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Website: www.flintec.com

Standard Features and Options

* The specific capacities v_{min} values covered by this certificate are listed in the table on page 2.

Minimum Dead Load: 0.0kg / 0.0lbs

Material: Stainless Steel Cable: 4-wire design

Nominal Input Impedance: 350 Ohms (ULG) and 1000 Ohms (ULB, UB6, UB1)

Nominal Output: 2 mV/V / 3 mV/V (ULG)

Excitation Voltage: 5.0 volt (minimum) to 15.0 volt (maximum) AC/DC

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

dith I. Carden

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.

Judith L. Cardin Chair, NCWM, Inc.

Don Onwiler

Chairman, National Type Evaluation Program Committee

Issued Date: October 11, 2007

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Flintec, Inc. Force Transducer (Load Cell) Model: UL / UB Series

Application: The load cells may be used in Class III and Class IIIL scales for single 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 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.

Load Cell Parameters:

| Model | Output (mV/V) nominal | Capacity | v _{min} Class III / IIIL |
|-------|--------------------------|----------|-----------------------------------|
| ULB | 2.0 | 50 kg | 0.002 kg |
| ULB | 2.0 | 100 kg | 0.004 kg |
| ULB* | 2.0 | 200 kg | 0.008 kg |
| ULB | 2.0 | 500 kg | 0.020 kg |
| ULB | 2.0 | 1000 kg | 0.040 kg |
| ULB | 2.0 | 2000 kg | 0.080 kg |
| ULB | 2.0 | 3000 kg | 0.120 kg |
| ULB | 2.0 | 5000 kg | 0.200 kg |
| UB1 | 2.0 | 1000 kg | 0.040 kg |
| UB1* | 2.0 | 2000 kg | 0.080 kg |
| UB1 | 2.0 | 5000 kg | 0.200 kg |
| UB6 | 2.0 | 100 kg | 0.004 kg |
| UB6* | 2.0 | 200 kg | $0.008~\mathrm{kg}$ |
| UB6 | 2.0 | 500 kg | 0.020 kg |
| ULG | 3.0 | 250 lb | 0.02 lb |
| ULG | 3.0 | 500 lb | 0.03 lb |
| ULG | 3.0 | 750 lb | 0.05 lb |
| ULG | 3.0 | 1k lb | 0.06 lb |
| ULG | 3.0 | 2.5k lb | 0.15 lb |
| ULG* | 3.0 | 5k lb | 0.3 lb |
| ULG | 3.0 | 10k lb | 0.6 lb |

* Load cells tested

<u>Identification:</u> A pressure sensitive identification badge containing the manufacturer, model designation, and serial number is located on the load cell. 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.

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Flintec, Inc. Force Transducer (Load Cell) Model: UL / UB Series

<u>Test Conditions:</u> This Certificate supersedes Certificate of Conformance Number 07-065 and is issued to correct an error in the Nominal Input Impedance in the "SFO" Box and to correct an omission in the "For Box" on page one of the Certificate. The Class III L Single n_{max} : 10 000 was in advertently left off the Certificate. No additional testing was deemed necessary. Previous test conditions are listed below for reference.

Certificate of Conformance Number 07-065: Load cells submitted were ULB-200 kg, UB1-2000 kg, UB6-200 kg, and ULG-5k lb. These load cells were tested 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 degrees. Three tests were run at each temperature. The temperature effect on zero was measured and a time dependence (creep) test was performed. The barometric pressure test was conducted on these load cells.

Evaluated By: T. Bartel (NIST)

Type Evaluation Criteria Used: NIST Handbook 44, 2007 Edition, NCWM Publication 14, 2006 Edition

<u>Conclusion</u>: The results of the evaluations and information provided by the manufacturer indicate the devices comply with applicable requirements.

Information Reviewed By: S. Patoray, L. Bernetich (NCWM) 07-065, 07-065A1

Example of models:

ULB UB1





UB6 ULG



