National Conference on Weights and Measures

1135 M Street, Suite 110 • Lincoln, Nebraska 68508

Certificate Number: 09-037

National Type Evaluation Program

Certificate of Conformance for Weighing and Measuring Devices

For:

Load Cell (Force Transducer)
Double-ended Shear Beam
Model: KL-40 Series
n_{max}: Class IIIL / Multiple Cell: 10 000

Capacity: 20 000 lb to 200 000 lb

Accuracy Class: IIIL (see table page 2)

Submitted by:

Keli Electric Manufacturing (Ningbo) Co. Ltd.
No. 199 Changxing Road, Jiangbei District
Ningbo, Zhejiang, China 315033
Tel: 630-364-2542
Fax: 630-364-2542
Contact: Frank Li
Email: Frank@west-east-international.com
URL: www.kelichina.com

Standard Features and Options

Nominal output: 3 mV/V
4-wire design
Material: Alloy Steel
Nominal Input Impedance: 750 ohms
Minimum dead load: 0 lb
Load cell parameters: (* capacity evaluated)

Model Number	Capacity (lb)	Multiple Cell Class III L v_{min} (lb)	Minimum Dead Load(lb)
KL-40	20 000	1.00	1000
KL-40	25 000	1.25	1250
KL-40	40 000	2.00	2000
KL-40	50 000	2.50	2500
KL-40SE	50 000	2.50	2500
KL-40	60 000	3.00	3000
KL-40SE	60 000	3.00	3000
KL-40	75 000*	3.75	3750
KL-40SE	75 000	3.75	3750
KL-40	100 000	5.00	5000
KL-40	125 000	6.25	6250
KL-40	150 000	7.50	7500
KL-40	200 000	10.00	10000

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.

Jack Kane
Chairman, NCWM, Inc.

Judith L. Cardin
Chairman, National Type Evaluation Program Committee

Issue date: June 5, 2009

Keli Electric Manufacturing (Ningbo) Co. Ltd.
Load Cell (Force Transducer)
Model: KL-40 Series

Application: The load cells may be used in Class IIIL multiple cell applications consistent with the model designations, number of scale divisions, and parameters specified in this certificate. 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, serial number, capacity, n_{max}, accuracy class and certificate 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: Two 75 000 lb capacity load cells were tested at NIST using dead weights as the reference standard. The data were analyzed for multiple load cell applications. The cells were tested over a temperature range of -10 °C to 40 °C. 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.

Evaluated By: Tom Bartel (NIST Force Group)

Type Evaluation Criteria Used: NIST Handbook 44, 2008 Edition; NCWM Publication 14, 2008 Edition

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

Information Reviewed By: J. Truex (NCWM)

Example of Model KL-40: