



Issued by NMI Certin B.V.  
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Notified Body Number 0122

In accordance with Paragraph 8.1 of the European Standard on Metrological aspects of non-automatic weighing instruments EN 45501:1992/AC:1993 and by application of the OIML International Recommendation R 60 (Edition 2000). The applied error fraction  $p_j$ , meant in the paragraph 3.5.4. of the standard is 0.7.

Applicant Keli Electric Manufacturing (Ningbo) Co., Ltd.  
No. 199 Changxing Road  
Jiangbei District, Ningbo  
P.R. of China

In respect of A **shear beam load cell**, with strain gauges, tested as a part of a weighing instrument.

Manufacturer : Keli Electric Manufacturing (Ningbo) Co. Ltd.  
Type : HSX- A ....

Characteristics

Maximum capacity ( $E_{max}$ )	50 kg up to and including 250 kg
Accuracy class	C
Maximum number of load cell verification intervals ( $n_{max}$ )	3000
Ratio of minimum LC verification interval $Y = E_{max} / V_{min}$	10000
Ratio of minimum dead load output return $Z = E_{max} / (2 * DR)$	3000

In the description number TC7034 revision 1 further characteristics are described.



Nederlands Meetinstituut

# Test certificate

Number **TC7034** revision 1  
Project number 607069  
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Description and documentation The load cell is described in the description number TC7034 revision 1 and documented in the documentation folder TC7034-1, appertaining to this test certificate.

Remarks Summary of the test involved: see Appendix number TC7034 revision 1. This revision test certificate replaces the earlier version, except for its documentation folder.

Dordrecht, 9 October 2006  
NMI Certin B.V.



Ing. C. Oosterman  
Manager Product Certification

## 1 General information about the load cell

All properties of the load cell, whether mentioned or not, may not be in conflict with the standard mentioned in the test certificate.

### 1.1 Essential parts

Description	Drawing number	Rev.	Remarks
HSX Load cell, 50 kg Specifications	0001	0	Mechanical
Electric diagram	0002	0	Electrical

Cable:

- The load cell is provided with a 4-wire system.  
 The cable length has to be approximately 3 meters.  
 The cable length shall not be modified.
- The cable should be a shielded cable, the shield is not connected to the load cell.

### 1.2 Essential characteristics

Minimum dead load	: 0 kg
Safe overload	: 120 % of $E_{max}$
Rated Output	: 2 mV/V $\pm$ 0.002 mV/V
Input impedance	: 400 $\Omega$ $\pm$ 10 $\Omega$
Output impedance	: 352 $\Omega$ $\pm$ 2 $\Omega$
Recommended excitation	: 10 / 12 V DC
Excitation maximum	: 15 V DC
Transducer material	: Alloy Steel
Atmospheric protection	: Welded Steel bellows

### 1.3 Essential shapes

The load cell is built according to the drawing:

- HSX Load cell 50 kg Specifications, drawing number 0001.

The data plate is secured against removal by sealing or will be destroyed when removed. The data plate mentions at least the information and markings as described in the OIML R60 document. In the countries where it is mandatory the load cell should bear this test certificate number: TC7034.

Securing:

The connecting cable of the load cell or the junction box is provided with possibility to seal.

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Tests performed for this test certificate:

Test	Institute	type, version, remarks
Temperature test and repeatability (20, 40, -10 and 20 °C)	NMi Certin B.V.	HSX-A 50 kg C3
Temperature effect on minimum dead load output (20, 40, -10 and 20 °C)	NMi Certin B.V.	HSX-A 50 kg C3
Creep (20, 40 and -10 °C)	NMi Certin B.V.	HSX-A 50 kg C3
Minimum dead load output return (20, 40 and -10 °C)	NMi Certin B.V.	HSX-A 50 kg C3
Barometric pressure effects at room temperature	NMi Certin B.V.	HSX-A 50 kg C3
Damp heat, cyclic: marked CH (or not marked)	NMi Certin B.V.	HSX-A 50 kg C3