Test certificate

Issued by	NMi Certin B.V. Hugo de Grootplein 1 3314 EG Dordrecht The Netherlands
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_i, meant in the paragraph 3.5.4. of the standard is 0.7.
Manufacturer	Keli Electric Manufacturing (Ningbo) Co., Ltd. No. 199 Changxing Road, Jiangbei District, Ningbo 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-SS....
Characteristics	E_{max} : 100 kg up to and including 500 kg Accuracy class : C In the description number TC7673 revision 0 further characteristics are described.
Description and documentation	The load cell is described in the description number TC7673 revision 0 and documented in the documentation folder TC7673-1, appertaining to this test certificate.
Remarks	Summary of the test involved: see Appendix number TC7673 revision 0

The Notified Body no. 0122
NMi Certin, 29 December 2009

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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-SS100kg ~ 500kg	KL/JT-HSX-SS100kg ~ 500kg 0A	A	Mechanical/ 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.
- If the load cell is provided with a 6-wire system (="Remote-sensing").
  The cable length is not limited.
- The cable should be a shielded cable, the shield is not connected to the load cell.

1.2 Essential characteristics

Type		HSX-SS....
Maximum capacity	$\mathbf{E_{max}}$	100 kg up to and including 500 kg
Humidity classification		CH
Temperature range		-10 °C / +40 °C
Accuracy class		C
Maximum number of load cell verification intervals	$\mathbf{n_{max}}$	3000
Ratio of minimum LC verification interval	$\mathbf{Y} = E_{max} / v_{min}$	10000
Ratio of minimum dead load output return	$\mathbf{Z} = E_{max} /2*DR$	3000

The characteristics for $\mathbf{n_{max}}$ and **Y** can be reduced separately. **Z** is proportional or equal to $\mathbf{n_{max}}$

Each produced load cell is supplied with information about its characteristics.

Minimum dead load	:	0 kg
Safe overload	:	120 % of E_{max}
Rated Output	:	2 mV/V± 0.002 mV/V
Input impedance	:	400 Ω ± 20 Ω
Output impedance	:	352 Ω ± 3 Ω
Recommended excitation	:	10 V DC
Excitation maximum	:	15 V DC
Transducer material	:	Stainless Steel
Atmospheric protection	:	Welded Stainless Steel bellow

1.3 Essential shapes

The load cell is built according to drawing:
- HSX-SS100kg ~ 500kg, drawing number KL/JT-HSX-SS100kg ~ 500kg 0A.

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: TC7673.

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

Appendix

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-SS100 kg C3 CH
Temperature effect on minimum dead load output (20, 40, -10 and 20 °C)	NMi Certin B.V.	HSX-SS100 kg C3 CH
Creep (20, 40 and –10 °C)	NMi Certin B.V.	HSX-SS100 kg C3 CH
Minimum dead load output return (20, 40 and –10 °C)	NMi Certin B.V.	HSX-SS100 kg C3 CH
Barometric pressure effects at room temperature	NMi Certin B.V.	HSX-SS100 kg C3 CH
Damp heat, steady state: marked CH	NMi Certin B.V.	HSX-SS100 kg C3 CH