Nederlands Meetinstituut

Test certificate

Number **TC7163** revision 0
Project number 700145

Issued by

NMi Certin B.V.
Hugo de Grootplein 1
3314 EG Dordrecht
The Netherlands

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_i, 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 City
P.R. of China

In respect of

A **tension (S-type) load cell**, with strain gauges, tested as a part of a weighing instrument.
Manufacturer : Keli Electric Manufacturing (Ningbo) Co., Ltd.
Type : DEE...

Characteristics

Maximum capacity (E_{max})	100 kg up to and including 500 kg
Accuracy class	C
Maximum number of load cell verification intervals (n_{max})	3000
Ratio of minimum LC verification interval $Y = E_{max} / V_{min}$	3500
Ratio of minimum dead load output return $Z = E_{max} / (2 * DR)$	3500

In the description number TC7163 revision 0 further characteristics are described.

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Subsidiary companies:
NMi Van Swinden Laboratorium B.V. (27228703)
NMi Certin B.V. (27.233.418)
Verispect B.V. (27.228.700)

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Description and documentation	The load cell is described in the description number TC7163 revision 0 and documented in the documentation folder TC7163-1, appertaining to this test certificate.
Remarks	Summary of the test involved: see Appendix number TC7163 revision 0

Dordrecht, 16 March 2007
NMi Certin B.V.

i/a

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
DEE Load cell, 100kgf	7001451	0	Mechanical
Electrical diagram of the DEE load cell	7001452	0	Electrical

Cable:
- The load cell is provided with a 4-wire system.
  The cable length has to be approximately 5 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
Input impedance	:	400 Ω ± 10 Ω
Output impedance	:	352 Ω ± 2 Ω
Recommended excitation	:	10 / 12 V DC
Excitation maximum	:	15 V DC
Transducer material	:	Alloy Steel
Atmospheric protection	:	Silicone rubber and metal cover

1.3 Essential shapes

The load cell is built according to drawing:
- DEE Load cell, 100kgf, drawing number 7001451.

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: TC7163.

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

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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.	DEE 100kg C3
Temperature effect on minimum dead load output (20, 40, -10 and 20 °C)	NMi Certin B.V.	DEE 100kg C3
Creep (20, 40 and –10 °C)	NMi Certin B.V.	DEE 100kg C3
Minimum dead load output return (20, 40 and –10 °C)	NMi Certin B.V.	DEE 100kg C3
Barometric pressure effects at room temperature	NMi Certin B.V.	DEE 100kg C3
Damp heat, cyclic: marked CH (or not marked)	NMi Certin B.V.	DEE 100kg C3