

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).
Manufacturer	Keli Electric Manufacturing (Ningbo) Co., Ltd. No. 199 Changxing Road, Jiangbei District 315033 Ningbo City China
In respect of	A bending beam load cell , with strain gauges, tested as a part of a weighing instrument. Manufacturer : Keli Electric Manufacturing (Ningbo) Co., Ltd. Type : UDB
Characteristics	E_{max} : 15 kg up to and including 500 kg Accuracy class : C In the description number TC7820 revision 0 further characteristics are described.
Description and documentation	The load cell is described in the description number TC7820 revision 0 and documented in the documentation folder TC7820-1, appertaining to this test certificate.
Remarks	Summary of the test involved: see Appendix number TC7820 revision 0

Issuing Authority

NMi Certin B.V. Notified Body number 0122
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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
UDB15~500 kg	KL/JT-UDB15~500kg.0A	0	Mechanical/Electrical

Cable:

- The load cell is provided with a 4-wire system.
 The cable length as is mentioned on the marking plate by the manufacturer.
 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

Fraction	0.7
Maximum capacity (E_{max})	15 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 (n_{max})	3000
Ratio of minimum LC verification interval $Y = E_{max} / v_{min}$	7500
Ratio of minimum dead load output return $Z = E_{max} / 2 * DR$	3000

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

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

Minimum dead load	: 0 kg
Safe overload	: 150 % of E_{\max}
Rated Output	: $2 \text{ mV/V} \pm 0.2 \text{ mV/V}$
Input impedance	: $404 \Omega \pm 10 \Omega$
Output impedance	: $350 \Omega \pm 3 \Omega$
Recommended excitation	: 10 V DC
Excitation maximum	: 15 V DC
Transducer material	: Aluminum
Atmospheric protection	: Silicone rubber

1.3 Essential shapes

The load cell is built according to drawing:

- UDB15~500 kg, drawing number KL/JT-UDB15~500kg.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: TC7820.

Securing:

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

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.	UDB 15 kg C3 and UDB 100 kg C3
Temperature effect on minimum dead load output (20, 40, -10 and 20 °C)	NMi Certin B.V.	UDB 15 kg C3 and UDB 100 kg C3
Creep (20, 40 and -10 °C)	NMi Certin B.V.	UDB 15 kg C3 and UDB 100 kg C3
Minimum dead load output return (20, 40 and -10 °C)	NMi Certin B.V.	UDB 15 kg C3 and UDB 100 kg C3
Barometric pressure effects at room temperature	NMi Certin B.V.	UDB 15 kg C3
Damp heat, steady state: marked CH	NMi Certin B.V.	UDB 15 kg C3