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).
Manufacturer	Zhonghang Electronic Measuring Instruments Co., Ltd. No. 66, Zhongyuan Road, Puzhen, Hanzhong 723007, Shaanxi China
In respect of	A **double ended shear beam load cell**, with strain gauges, tested as a part of a weighing instrument. Manufacturer : Zhonghang Electronic Measuring Instruments Co., Ltd Type : HM9E Series
Characteristics	E_{max} : 22 t up to and including 100 t Accuracy class : C In the description number TC7810 revision 0 further characteristics are described.
Description and documentation	The load cell is described in the description number TC7810 revision 0 and documented in the documentation folder TC7810-1, appertaining to this test certificate.
Remarks	Summary of the test involved: see Appendix number TC7810 revision 0

Issuing Authority

NMi Certin B.V. Notified Body number 0122
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INSPECTION
RvA I 122

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
HM9E Load cells Catalogue for using	24082010003	0	Mechanical / Electrical 5 Pages

Cable:
- The load cell is provided with a 4-wire system;
- The cable length mentioned on the load cell, see chapter "Naming example" in the HM9E Load cells Catalogue for using;
- 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

Type		HM9E
Humidity classification		CH
Fraction p_{lc}		0.7
Temperature range		-10 °C / +40 °C
Maximum capacity	Emax	22 t up to and including 100 t
Accuracy class		C
Maximum number of load cell verification intervals	$\mathbf{n_{max}}$	3000
Ratio of minimum LC verification interval	$\mathbf{Y} = E_{max} / v_{min}$	13000
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	: 150 % of E_{max}
Rated Output	: 3 mV/V ± 0.003 mV/V
Input impedance	: 700 Ω ± 7 Ω
Output impedance	: 703 Ω ± 4 Ω
Recommended excitation	: 5 - 12 V AC/DC
Excitation maximum	: 18 V AC/DC
Transducer material	: Alloy Steel
Atmospheric protection	: Hermetically welded

1.3 Essential shapes

The load cell is built according to drawing:
- HM9E Load cells Catalogue for using, drawing number 24082010003.

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: TC7810.

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.	HM9E-C3-22t-9 B
Temperature effect on minimum dead load output (20, 40, -10 and 20 °C)	NMi Certin B.V.	HM9E-C3-22t-9 B
Creep (20, 40 and –10 °C)	NMi Certin B.V.	HM9E-C3-22t-9 B
Minimum dead load output return (20, 40 and –10 °C)	NMi Certin B.V.	HM9E-C3-22t-9 B
Barometric pressure effects at room temperature	NMi Certin B.V.	HM9E-C3-22t-9 B
Damp heat, cyclic: marked CH (or not marked)	NMi Certin B.V.	HM9E-C3-22t-9 B