

Nederlands Meetinstituut

Test certificate

Number **TC6053** revision 0
 Project number 203796
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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 **A&D Instruments Ltd.**
 24 Blacklands Way
 Abingdon Business Park
 Abingdon, Oxfordshire
 United Kingdom OX14 1DY

In respect of The model of a **compression load cell**, with strain gauges, tested as a part of a weighing instrument.
 Manufacturer : **A&D Company Ltd.**
 Type : **LCC11**

Characteristics

Maximum capacity (E_{max})	10 and 20 t	30 t
Accuracy Class	C	
Maximum number of load cell intervals (n)	3000	
Ratio of minimum LC Verification interval $Y = E_{max} / V_{min}$	10000	6000
Ratio of minimum dead load output return $Z = E_{max} / (2 * DR)$	4000	4000

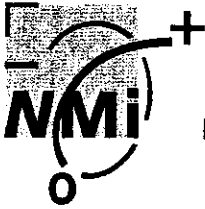
In the description TC6053 revision 0 further characteristics are described.

Nederlands Meetinstituut
 Hugo de Grootplein 1
 3314 EG Dordrecht
 Telephone + 31 78 6332332
 Telefax + 31 78 6332309

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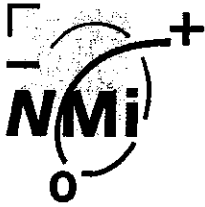
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Description and documentation The load cell is described in the description number TC6053 revision 0 and documented in the documentation folder TC6053-1, appertaining to this test certificate.

Remarks Summary of the test involved: see Appendix number TC6053 revision 0

Delft, 17 May 2002
NMI Certin B.V.

P.P.M. van Enkevort
Manager Certification Delft



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
LCC11 Series The Type	LCC11-001	-	Mechanical
LCC11 Series The Elements	LCC11-002	-	Mechanical
LCC11 Series The Electrical Circuit	LCC11-003	-	Electrical
L1 SILK GAIKEI	PC3832A	-	Electrical

Cable:

- The load cell is provided with a 4-wire system.
- The cable length has to be approximately 12 meters.
- 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	: 200 % of E_{max}
Rated Output	: 2 mV/V
Input impedance	: $800 \Omega \pm 80 \Omega$
Output impedance	: $2200 \Omega \pm 10 \Omega$
Recommended excitation	: 10 V DC
Excitation maximum	: 15 V DC
Transducer material	: Stainless steel
Atmospheric protection	: Hermetically sealed

1.3 Essential shapes

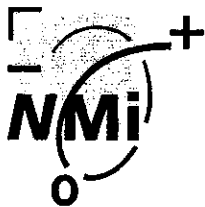
The load cell is built according to drawing:

- LCC11 Series The Elements, drawing number LCC11-002.

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: TC6053.

Securing:

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



Tests carried out for this test certificate:

Test	Institute	type, version, remarks
Temperature test and repeatability (20, 40, -10 and 20 °C)	NMi Certin B.V	LCC11 C3 10t
Temperature effect on minimum dead load output (20, 40, -10 and 20 °C)	NMi Certin B.V	LCC11 C3 10t
Creep test (20, 40 and -10 °C)	NMi Certin B.V	LCC11 C3 10t
Minimum load output return (20, 40 and -10 °C)	NMi Certin B.V	LCC11 C3 10t
Barometric pressure test at room temperature	NMi Certin B.V	LCC11 C3 10t
Humidity test	NMi Certin B.V.	LCC11 C3 10t
Additional tests for load cells equipped with electronics:		
Bursts (electrical fast transients)	NMi Certin B.V.	LCC11 C3 10t
Electrostatic discharge	NMi Certin B.V.	LCC11 C3 10t
Electromagnetic susceptibility	NMi Certin B.V.	LCC11 C3 10t