



Number **TC6000** revision 4

Project number 802007

Page 1 of 6

Issued by NMI Certin B.V.
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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, OIML document D11:2004, by application of the OIML International Recommendation R60 (Edition 2000) and Welmec guide 7.2: May 2005. The applied error fraction p_i , meant in the paragraph 3.5.4. of the standard is 0.8.

Applicant Hottinger Baldwin Messtechnik GmbH
Im Tiefen See 45
D-64293 Darmstadt
Germany

In respect of The model of a **Bending Beam Load Cell**, with strain gauges and a digital output, tested as a part of a weighing instrument.
Manufacturer : HBM
Type : FIT/0...; FIT/1...; FIT/4....

Characteristics

Maximum capacity ($E_{\max}$)	5, 10, 20 and 50 kg	75 kg
Accuracy Class	C	
Maximum number of load cell intervals (n)	3000	4000
Ratio of minimum LC verification interval $Y = E_{\max} / V_{\min}$	10000	7500

In the description TC6000 revision 4 further characteristics are described.



Nederlands Meetinstituut

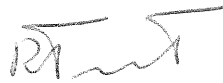
Test certificate

Number **TC6000** revision 4
Project number 802007
Page 2 of 6

Description and documentation The load cell is described in the description number TC6000 revision 4 and documented in the documentation folder number TC6000-4, appertaining to this test certificate.

Remarks Summary of the test involved: see Appendix number TC6000 revision 4.
This revision test certificate replaces the earlier version, including its documentation folder.

Dordrecht, 26 February 2008
NMI Certin B.V.

1/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
Montagezeichnung "FIT"	SD 01.03.22/1	--	--
Leiterplatten	AD4R4LOH	--	--
Leiterplatten	AD4R4LUH	--	--
Stücklisten	565.31-2120.3	--	4 pages
Data sheet D.FIT/S/L/D.0e	D.FIT/S/L/D.0e – 304.00-1014.4		Version a_nmi – 24.02.03 2 pages
Montagezeichnung FIT/H1	304.00-2007.3	b	page 2 of 2
Leiterplatte für AD210c	565.31-2122.3	b	
Stückliste LP AD210C	2.9260.1256	25.04.2003	6 pages
Leiterplatte für AD210m	565.31-2123.3	b	
Stückliste LP AD210C	2-9260.1257	25.04.2003	6 pages
FIT New Generation	1	11-22-2005	
Data Sheet FIT/0...	FIT/0-C4-1.0 en –11-10-05	--	4 pages
Data Sheet FIT/1...	FIT/1-C4-1.0 en –11-10-05	--	4 pages
Data Sheet FIT/4...	FIT/4-C4-1.0 en –11-10-05	--	4 pages
LP FIT3_ADU KPL.	565.31-2131.3	--	Drawing AD board
Stückliste LP FIT3_ADU KPL.	2-9260.1549	--	Parts list 7 pages

Cable:

The load cell is provided with 6-wire or 8-wire system (4 communications, 2 power supply) and a twisted tinned shield.

Second cable for control functions.



Number **TC6000** revision 4

Project number 802007

Page 4 of 6

1.2 Essential characteristics

Minimum dead load	: 0 kg
Safe overload	: 150 % of $E_{\max}$
Rated output	: 1 000 000 counts ($E_{\max} - E_{\min}$)
Max/Min excitation	: +5.6 V DC or 30 V DC
Transducer material	: Aluminum
Atmospheric protection	: Diaphragm bellows, Silicone R830

Software:

- The software has the identification number: P7x
- The identification number will be given by the load cell upon software request, see AED_Panel32 software package for command, drawing "IDN: Sonderfunktion – Identifikation", drawing number 26022008.

Data transmission:

- RS-232;
- RS-485, 4 wire or HCMOS (5V);
- CAN Open;
- DeviceNet.

The weight output of the digital load cell is in "counts", digitally compensated for temperature and time effects.

1.3 Essential shapes

The load cell is built according to the drawings:

- Montagezeichnung "FIT" with drawing number SD 01.03.22/1;
- Montagezeichnung FIT/H1 with drawing number 304.00-2007.3;
- Data Sheet FIT/0... with drawing number FIT/0-C4-1.0 en –11-10-05;
- Data Sheet FIT/1... with drawing number FIT/1-C4-1.0 en –11-10-05;
- Data Sheet FIT/4... with drawing number FIT/4-C4-1.0 en –11-10-05.

The data plate is sealed against removal 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: TC6000.

Securing:

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

Number **TC6000** revision 4

Project number 802007

Page 5 of 6

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.	FIT 5 kg C3, FIT 50 kg C3, FIT 5 kg C4 and FIT 20 kg C4
Temperature effect on minimum dead load output (20, 40, -10 and 20 °C)	NMi Certin B.V.	FIT 5 kg C3, FIT 50 kg C3, FIT 5 kg C4 and FIT 20 kg C4
Creep test (20, 40 and -10 °C)	NMi Certin B.V.	FIT 5 kg C3, FIT 50 kg C3, FIT 5 kg C4 and FIT 20 kg C4
Minimum load output return (20, 40 and -10 °C)	NMi Certin B.V.	FIT 5 kg C3, FIT 50 kg C3, FIT 5 kg C4 and FIT 20 kg C4
Barometric pressure test at room temperature	NMi Certin B.V.	FIT 5 kg C3, FIT 5 kg C4
Humidity test	NMi Certin B.V.	FIT 5 kg C3, FIT 5 kg C4
Warm-up time test	NMi Certin B.V.	FIT 5 kg C3, FIT 5 kg C4
Voltage variation	NMi Certin B.V.	FIT 5 kg C3, FIT 5 kg C4 On connected Digital Data Processing Unit
Short time power reductions	NMi Certin B.V.	FIT 5 kg C3, FIT 5 kg C4 On connected Digital Data Processing Unit
Electrical burst on power supply lines	NMi Certin B.V.	FIT 5 kg C3, FIT 5 kg C4 On connected Digital Data Processing Unit
Electrical burst on I/O line	NMi Certin B.V.	FIT 5 kg C3, FIT 5 kg C4
Electrostatic discharges	NMi Certin B.V.	FIT 5 kg C3, FIT 5 kg C4
Immunity to radiated electromagnetic fields up to 3 V/m	NMi Certin B.V.	FIT 5 kg C3, FIT 5 kg C4
Span stability	NMi Certin B.V.	FIT 5 kg C3, FIT 5 kg C4
Software examination according Welmec 7.2	NMi Certin B.V.	PW20i R5 C3 5 kg and PW20i R5 C3 10 kg



Number **TC6000** revision 4
Project number 802007
Page 6 of 6

Test	Institute	Type, version, remarks
Immunity to radiated electromagnetic fields up to 10 V/m	HBM GmbH	FIT3-5EC30-5kg C3 FIT3-0EB30-10kg C3 FIT3-1EB32-10kg C3
Electrical surges	HBM GmbH	FIT3-5EC30-5kg C3 FIT3-0EB30-10kg C3 FIT3-1EB32-10kg C3
Conducted radio-frequency fields	HBM GmbH	FIT3-5EC30-5kg C3 FIT3-0EB30-10kg C3 FIT3-1EB32-10kg C3