Nederlands Meetinstituut

Test certificate

Number **TC6981** revision 1
Project number 600810

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 0.8.

Applicant

ARPÈGE MASTER-K
38 Aveneu des Frères Montgolfier BP 186
69 686 Chassieu Cedex
France

In respect of

A **digital compression load cell**, with strain gauges, tested as a part of a weighing instrument.
Manufacturer : ARPÈGE MASTER-K
Type : DC 285..... and CPFN-A.....

Characteristics

Maximum capacity (E_{max})	15 t up to and including 75 t			
Accuracy class	C			
Maximum number of load cell verification intervals (n_{max})	1000	3000	4000	5000
Ratio of minimum LC verification interval $Y = E_{max} / V_{min}$	15 000			
Ratio of minimum dead load output return $Z = E_{max} / (2 * DR)$	8000			

In the description number TC6981 revision 1 further characteristics are described.

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Description and documentation	The load cell is described in the description number TC6981 revision 1 and documented in the documentation folder TC6981-2, appertaining to this test certificate.
Remarks	Summary of the test involved: see Appendix number TC6981 revision 1. This revision test certificate replaces the earlier version, including its documentation folder.

Dordrecht, 6 November 2006
NMi Certin B.V.

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
Digi cell 285 Numerique 15 t / 30 t / 50 t / 75 t	103780	1	Mechanical
Digi cell 285 Numerique 15 t / 30 t / 50 t / 75 t	103780A	1	Mechanical
Digi cell 285 or CPFN-A 15 t / 30 t / 50 t / 75 t	104170	0	Mechanical
Fulle Bridge circuit type load cell Digi cell 285 15 t / 30 t / 50 t / 75 t	103848	0	Electrical
Implantation Reperes face soudures carte capteur numerique Nouveau Modèle (CCC NM)	104166RES-P0	0	
Implantation Reperes face composants carte capteur numerique Nouveau Modèle (CCC NM)	104166REC-P0	0	
Carte capteur num.nm. proto	104166NOM_PO	0	2 pages

1.2 Essential characteristics

Minimum dead load : 0 kg
Safe overload : 150 % of E_{max}
Number of counts for E_{max} : 100 000
Recommended excitation : 7.5 a 16 V DC
Excitation maximum : 16 V DC
Transducer material : Stainless Steel
Atmospheric protection : Stainless Steel welded IP68

Data transmission:
There are two types of data transmission:
CAN:
- Transmission speed 125 000 bit/s;
- Transmission connection Bus CAN (2 wire);
- Cable length 15 m.

RS485:
- Transmission speed 9 600 bit/s;
- Transmission connection RS485 (2 wire);
- 1 Start bit;
- 8 numeric bits;
- 1 Stop bit;

- No Parity bit;
- Cable length 15 m.

Calibration procedure:
The calibration procedure is depending of the used indicator.

1.3 Essential shapes

The load cell is built according to the drawings:
- Digi cell 285 Numerique 15 t / 30 t / 50 t / 75 t, drawing number 103780;
- Digi cell 285 Numerique 15 t / 30 t / 50 t / 75 t, drawing number 103780A.
- Digi cell 285 or CPFN-A 15 t / 30 t / 50 t / 75 t, drawing number 104170.

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: TC6981.

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.	DC285 15 t C4
Temperature effect on minimum dead load output (20, 40, -10 and 20 °C)	NMi Certin B.V.	DC285 15 t C4
Creep (20, 40 and –10 °C)	NMi Certin B.V.	DC285 15 t C4
Minimum dead load output return (20, 40 and –10 °C)	NMi Certin B.V.	DC285 15 t C4
Barometric pressure effects at room temperature	NMi Certin B.V.	DC285 15 t C4
Damp heat, cyclic: marked CH (or not marked)	NMi Certin B.V.	DC285 15 t C4 with washer on the body and DC285 15 t C4 with washer on the top
Additional tests for load cells equipped with electronics:		
Warm-up time	NMi Certin B.V.	DC285 15 t C4
Power voltage variations	NMi Certin B.V.	DC285 15 t C4
Short time power reductions	NMi Certin B.V.	DC285 15 t C4
Bursts (electrical fast transients)	NMi Certin B.V.	DC285 15 t C4
Electrostatic discharge	NMi Certin B.V.	DC285 15 t C4
Electromagnetic susceptibility	NMi Certin B.V.	DC285 15 t C4
Span stability test	NMi Certin B.V.	DC285 15 t C4