Nederlands Meetinstituut

Test certificate

Number **TC7232** revision 0
Project number 704819

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

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

In respect of

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

Characteristics

Maximum capacity (E_{max})	5 t up to and including 100 t
Accuracy class	C
Maximum number of load cell verification intervals (n_{max})	4000
Ratio of minimum LC verification interval $Y = E_{max} / V_{min}$	15000
Ratio of minimum dead load output return $Z = E_{max} / (2 * DR)$	4100

In the description number TC7232 revision 0 further characteristics are described.

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Nederlands **Meetinstituut**

Test certificate

Number **TC7232** revision 0
Project number 704819

Description and documentation	The load cell is described in the description number TC7232 revision 0 and documented in the documentation folder TC7232-1, appertaining to this test certificate.
Remarks	Summary of the test involved: see Appendix number TC7232 revision 0.

Dordrecht, 13 June 2007
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
CA40X Construction & position jauges	131064	A	Construction
CA40X ensemble 5t a 60t	131018	A	Outline
CA40X 5t a 30 t ensemble fond plat	131027	A	Outline
Ensemble CA40X 100t	131029	A	Outline
Nouveau CA40X ensemble 5t à 60 t	131113	A	Outline
CA40X 5 t to 60 t New options: Cable output & Stop in rotation	131134	A	Outline
Schema Capteur type CA40X	131102	A	Electrical diagram

Cable:
- The load cell is provided with a 4-wire system.
- Because no "remote-sensing" is used for the 4-wire system the cable length has to be correspond with the cable length mentioned on the load cell
  The cable length shall not be modified.
- The load cell is provided with a 6-wire system (="Remote-sensing").
  The cable length is not limited.
- The cable should be a shielded cable, the shield is not connected to the load cell or other wise mentioned on the data plate (additional marking "TR").

1.2 Essential characteristics

Minimum dead load	:	2% of E_{max}
Safe overload	:	150 % of E_{max}
Rated Output	:	2 mV/V
Input impedance	:	820 Ω ± 50 Ω
Output impedance	:	700 Ω ± 5 Ω
Recommended excitation	:	10 V DC/AC
Excitation maximum	:	15 V DC/AC
Transducer material	:	Stainless Steel
Atmospheric protection	:	hermetically

1.3 Essential shapes

The load cell is built according to the drawings:
- CA40X Construction & position jauges, drawing number 131064;
- CA40X ensemble 5t a 60t, drawing number 131018 ;
- CA40X 5t a 30 t ensemble fond plat, drawing number 131027 ;
- Ensemble CA40X 100t, drawing number 131029 ;
- Nouveau CA40X ensemble 5t à 60 t, drawing number 131113 ;
- CA40X 5 t to 60 t New options: Cable output & Stop in rotation, drawing number 131134;
- Marking specifications, drawing number 131136.

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: TC7232.

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.	CA40X 5t C4 10e CA40X20t C4 10e
Temperature effect on minimum dead load output (20, 40, -10 and 20 °C)	NMi Certin B.V.	CA40X 5t C4 10e CA40X20t C4 10e
Creep (20, 40 and –10 °C)	NMi Certin B.V.	CA40X 5t C4 10e CA40X20t C4 10e
Minimum dead load output return (20, 40 and –10 °C)	NMi Certin B.V.	CA40X 5t C4 10e CA40X20t C4 10e
Barometric pressure effects at room temperature	NMi Certin B.V.	CA40X 5t C4 10e
Damp heat, cyclic: marked CH (or not marked)	NMi Certin B.V.	CA40X 5t C4 10e CA40X 5t C4 10e (new cable connection)

Nederlands Meetinstituut

OIML Member state
The Netherlands

OIML Certificate N° R60/2000-NL1-07.11
Project number 704819

OIML CERTIFICATE OF CONFORMITY

Issuing authority

Name: NMi Certin B.V.

Address: Hugo de Grootplein 1
3314 EG Dordrecht
The Netherlands

Person responsible: Ing. C. Oosterman

Applicant

Name: ARPÈGE Master-K

Address: 38 Aveneu des Frères Montgolfier BP 186
69 686 Chassieu Cedex
France

Manufacturer of the certified type

Name: ARPÈGE Master-K

Address: 38 Aveneu des Frères Montgolfier BP 186
69 686 Chassieu Cedex
France

Identification of certified type

A compression load cell
Family of type : CPFA-A
Fraction : $P_I = 0.7$
Temperature range : -10 °C / +40 °C

Maximum capacity (E_{max})	5 t up to and including 100 t
Accuracy Class	C
Maximum number of load cell intervals (n)	4000
Ratio of minimum LC Verification interval $Y = E_{max} / V_{min}$	15000
Ratio of minimum dead load output return $Z = E_{max} / (2 * DR)$	4100

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Parties concerned can lodge objection against this decision, within six weeks after the date of submission, to the general manager of NMi B.V. (see "Regulation objection and appeal against decisions of NMi B.V.")

NMi Certin B.V., chamber o.c. nr. 27.233.418

This document is issued under the provision that no responsibility is accepted and that the applicant gives warranty for each responsibility against third parties.

The notification of NMi Certin as Issuing Authority can be verified at www.oiml.org.

Nederlands Meetinstituut

OIML Certificate N° R60/2000-NL1-07.11
Project number 704819

OIML Member state
The Netherlands

This Certificate attests the conformity of the above identified type (represented by the sample or samples identified in the associated Test Report, the test certificate and the description with number TC7232 and the appertaining documentation folder) with the requirements of the following Recommendation of the International Organization of Legal Metrology (OIML):

R60
Edition 2000 (E)
for accuracy class C

This Certificate relates only to the metrological and technical characteristics of the type of instrument covered by the relevant OIML Recommendation identified above.

This Certificate does not bestow any form of legal international approval.

The conformity was established by the results of tests and examinations provided in the associated Test Reports:
N° R60/2000-NL-01.08A, that includes 37 pages;
N° R60/2000-NL-01.08B, that includes 40 pages;
N° R60/2000-NL1-05.22, that includes 13 pages;
N° R60/2000-NL1-07.10A, that includes 37 pages;
N° R60/2000-NL1-07.10B, that includes 40 pages;
N° R60/2000-NL1-07.10C, that includes 13 pages.

The Issuing Authority
Ing. C. Oosterman
Manager Product Certification

13 June 2007

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