



OIML Certificate

OIML Member State
The Netherlands

Number R60/2017-A-NL1-21.23 revision 1
Project number 2602161
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Issuing authority

NMi Certin B.V.
Person responsible: M.Ph.D. Schmidt

Applicant and
Manufacturer

Cardinal Scale Manufacturing Company
102 East Daugherty Street
Webb City, MO 64870
United States of America

Identification of the
certified type

A **shear beam load cell**, with strain gauges.

Type

: HSB, HAB and TB

Characteristics

See next page

This OIML Certificate is issued under scheme A.

This Certificate attests the conformity of the above identified Type (represented by the sample(s) identified in the OIML Test Report) with the requirements of the following Recommendation of the International Organization of Legal Metrology (OIML):

OIML R 60 - Edition 2017 (E) for accuracy class C

This Certificate relates only to the metrological and technical characteristics of the type of measuring instrument covered by the relevant OIML International Recommendation above-identified. This Certificate does not bestow any form of legal international approval.

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Issuing Authority

NMi Certin B.V., OIML Issuing Authority NL1
5 May 2021

Certification Board

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This document is issued under the provision that no liability is accepted and that the applicant shall indemnify third-party liability.

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

This document is digitally signed and sealed. The digital signature can be verified in the blue ribbon at the top of the electronic version of this certificate.



The conformity was established by the results of tests and examinations provided in the associated OIML Type Evaluation Reports:

- No. NMI-2445645-01 dated 22 December 2020 that includes 27 pages;
- No. NMI-2445645-02 dated 22 December 2020 that includes 26 pages;
- No. NMI-2445645-03 dated 22 December 2020 that includes 24 pages.

Characteristics of the load cell:

Characterization of load cell capabilities	Analog-passive load cell
Maximum capacity (E_{max})	300 kg up to and including 5000 kg
Minimum dead load	0 kg
Accuracy Class	C
Rated Output	2 mV/V \pm 0,2 mV/V or 3 mV/V \pm 0,3 mV/V
Maximum number of load cell intervals (n) ⁽¹⁾	3000
Ratio of minimum LC Verification interval ⁽¹⁾ $Y = E_{max} / V_{min}$	15000
Ratio of minimum dead load output return ⁽¹⁾ $Z = E_{max} / (2 * DR)$	3000
Input impedance	400 Ω \pm 20 Ω
Temperature range	- 10 $^{\circ}$ C / + 40 $^{\circ}$ C
Fraction p_{LC}	0,7
Humidity Class	CH
Safe overload	150 % of E_{max}
Output impedance	350 Ω \pm 5 Ω
Recommended excitation	10 V AC / DC
Excitation maximum	15 V AC / DC
Transducer material	Alloy steel or stainless steel
Atmospheric protection	Silicone sealing or hermetically welded

Remarks:

1. The characteristics for n_{max} , Y and Z can be reduced separately.

Each load cell produced is provided with an accompanying document with information about its characteristics.



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Revision History

This revision replaces the previous versions.

Revision	Date	Changes
0	2021-04-29	Initial issue
1	2021-05-05	Corrected an error in the zip code.