



# OIML Certificate

**OIML Member State**  
The Netherlands

Number R60/2021-A-NL1-24.13 revision 2  
Project number 4020720  
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Issuing authority

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

Applicant and  
Manufacturer

Zhonghang Electronic Measuring Instruments (Xi'an) Co., Ltd.  
No.166, WestAve, Hi-tech District  
Xi'an, Shaanxi  
China

Identification of the  
certified type

A **double ended shear beam load cell**, with strain gauges.  
Registered trade name : ZEMIC  
Type : H9H

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 60-1:2021** 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**  
30 December 2025

Certification Board

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The notification of NMi Certin B.V. as Issuing Authority can be verified at [www.oiml.org](http://www.oiml.org)

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





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The conformity was established by the results of tests and examinations provided in the associated report:

- No. NMI-3678686-01 revision 1 dated 1 August 2024 that includes 51 pages.

## Characteristics of the load cell:

|                                                                                       |                                     |
|---------------------------------------------------------------------------------------|-------------------------------------|
| Characterization of load cell capabilities                                            | Analog-passive load cell            |
| Maximum capacity ( $E_{\max}$ )                                                       | 22,68 t up to and including 113,4 t |
| Minimum dead load                                                                     | 0 t                                 |
| Accuracy Class                                                                        | C                                   |
| Rated Output                                                                          | 3,0 mV/V $\pm$ 0,1 mV/V             |
| Maximum number of load cell intervals (n) <sup>(1)</sup>                              | 3000                                |
| Ratio of minimum LC Verification interval <sup>(1)</sup><br>$Y = E_{\max} / v_{\min}$ | 10000                               |
| Ratio of minimum dead load output return <sup>(1)</sup><br>$Z = E_{\max} / (2 * DR)$  | 3000                                |
| Input impedance                                                                       | 700 $\Omega \pm 7 \Omega$           |
| Temperature range                                                                     | -10 °C / + 40 °C                    |
| Fraction $p_{LC}$                                                                     | 0,7                                 |
| Humidity Class                                                                        | CH                                  |
| Safe overload                                                                         | 150 % of $E_{\max}$                 |
| Output impedance                                                                      | 703 $\Omega \pm 4 \Omega$           |
| Recommended excitation                                                                | 5-12 V AC / DC                      |
| Excitation maximum                                                                    | 18 V AC / DC                        |
| Transducer material                                                                   | Steel                               |
| Atmospheric protection                                                                | Silicon rubber                      |

### Remark:

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.

The above identified Type (represented by the sample(s) identified in the OIML Test Report) have been found to comply with the additional national requirements established by the United States of America (NIST Handbook 44 and NCWM Publication 14), included in the Utilizer Declaration:

- R 60 OIML-CS rev.2 Additional requirements from the United States Accuracy class III L;
- R 60 OIML-CS rev.2 Additional requirements from the United States Marking requirements.



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## Revision History

| Revision | Date       | Change(s)                          |
|----------|------------|------------------------------------|
| 0        | 2024-07-09 | Initial issue.                     |
| 1        | 2024-08-01 | Correction of transducer material. |
| 2        | 2025-12-30 | Change of address.                 |