



# OIML Certificate

**OIML Member State**  
The Netherlands

Number R60/2021-A-NL1-25.27 revision 0  
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 bending beam and shear beam load cell**, with strain gauges  
Registered trade name : ZEMIC  
Type : BM8D-xx-xx-xxx-xx Series

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.

This certificate and supporting reports comply with the requirements of OIML-CS-PD-07 clause 6.2.

*Important note:* Apart from the mention of the Certificate's reference number and the name of the OIML Member State in which the Certificate was issued, partial quotation of the Certificate and of the associated OIML Test Report(s) is not permitted, although either may be reproduced in full.

Issuing Authority

**NMi Certin B.V., OIML Issuing Authority NL1**  
30 December 2025

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](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 reports:

- No. NMi-10200947-09 dated 24 December 2010 that includes 59 pages;
- No. NMi-11200684-05 dated 24 October 2011 that includes 65 pages;
- No. NMi-12200100-01 dated 25 April 2012 that includes 52 pages.

## Characteristics of the load cell:

| Characterization of load cell capabilities  | Analog-passive load cell                                |                                    |                                      |
|---|---|------------------------------------|--------------------------------------|
| Load cell construction  | Bending beam  | Shear beam                         |                                      |
| Maximum capacity ( $E_{max}$ )  | 150 kg up to and including 300 kg                       | 500 kg up to and including 2500 kg | 3000 kg up to and including 15000 kg |
| Minimum dead load   | 0 kg  |                                    |                                      |
| Accuracy Class  | C   |                                    |                                      |
| Rated Output  | 2,0 mV/V $\pm$ 0,04 mV/V or<br>3,0 mV/V $\pm$ 0,08 mV/V |                                    |                                      |
| Maximum number of load cell intervals (n) <sup>(1)</sup>                            | 3000  | 6000                               | 5000                                 |
| Ratio of minimum LC Verification interval <sup>(1)</sup><br>$Y = E_{max} / v_{min}$ | 15000   | 20000                              | 20000                                |
| Ratio of minimum dead load output return <sup>(1)</sup><br>$Z = E_{max} / (2 * DR)$ | 3000  | 6000                               | 5000                                 |
| Input impedance   | 350 $\Omega \pm 3,5 \Omega$                             |                                    |                                      |
| Temperature range   | -10 °C / +40°C  |                                    |                                      |
| Fraction $p_{LC}$   | 0,7   |                                    |                                      |
| Humidity Class  | CH  |                                    |                                      |
| Safe overload   | 150 % of $E_{max}$                                      |                                    |                                      |
| Output impedance  | 350 $\Omega \pm 3,5 \Omega$                             |                                    |                                      |
| Recommended excitation  | 5-12 V AC / DC  |                                    |                                      |
| Excitation maximum  | 18 V AC / DC  |                                    |                                      |
| Transducer material   | Stainless steel   |                                    |                                      |
| Atmospheric protection  | Hermetically welded                                     |                                    |                                      |

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.



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## Revision History

| Revision | Date       | Change(s)      |
|----------|------------|----------------|
| 0        | 2025-12-30 | Initial issue. |