



# OIML Certificate

**OIML Member State**  
The Netherlands

Number R60/2000-A-NL1-18.29  
Project number 1901392  
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Issuing authority	NMi Certin B.V. Person responsible: C. Oosterman
Applicant and Manufacturer	MinebeaMitsumi Inc. 1-1-1, Katase Fujisawa-shi, Kanagawa-ken 251-8531 Japan
Identification of the certified type	A <b>bending beam load cell</b> , with strain gauges Type : M100 or PR77
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 2000 (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.

*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**  
10 December 2018



C. Oosterman  
Head 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)



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

- No. NMI-16200589-01 revision 1 dated 2 March 2017 that includes 51 pages;
- No. NMI-16200589-02 revision 2 dated 2 March 2017 that includes 46 pages;
- No. NMI-16200589-03 revision 2 dated 2 March 2017 that includes 46 pages;
- No. NMI-1901392-03 dated 8 August 2017 that includes 46 pages.

**Characteristics of the load cell:**

Maximum capacity ( $E_{max}$ )	10 kg up to 50 kg	50 kg up to and including 500 kg
Minimum dead load	0 kg	
Accuracy Class	C	
Rated Output	2,0 mV/V	
Maximum number of load cell intervals (n) <sup>(1)</sup>	4000	6000
Ratio of minimum LC Verification interval <sup>(1)</sup> $Y = E_{max} / V_{min}$	20000	
Ratio of minimum dead load output return <sup>(1)</sup> $Z = E_{max} / (2 * DR)$	6600	7500
Input impedance	415 $\Omega \pm 65 \Omega$	
Temperature range	-10 °C / + 40 °C	
Fraction $p_{LC}$	0,7	
Humidity Class	CH	
Safe overload	150 % of $E_{max}$	
Output impedance	406 $\Omega \pm 0,35 \Omega$	
Recommended excitation	10 V AC / DC	
Excitation maximum	15 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.

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.