



# OIML Certificate of Conformity

**OIML Member State**  
The Netherlands

Number R60/2000-NL1-17.69  
Project number 1901777  
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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 : M130 or PR78, M130T or PR78T
Characteristics	See next page


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**  
19 December 2017



C. Oosterman  
Head Certification Board

NMi Certin B.V.  
Hugo de Grootplein 1  
3314 EG Dordrecht  
the Netherlands  
T +31 78 6332332  
certin@nmi.nl  
www.nmi.nl

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-1901061-04 revision 1 dated 15 December 2017 that includes 97 pages;
- No. NMI-1901061-05 revision 1 dated 15 December 2017 that includes 90 pages.

### Characteristics of the load cell:

Maximum capacity ( $E_{max}$ )	220 kg up to and including 1760 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>	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> $Z = E_{max} / (2 * DR)$	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	$350 \Omega \pm 0,35 \Omega$
Recommended excitation	10 V AC / DC
Excitation maximum	15 V AC / DC
Transducer material	Stainless steel
Atmospheric protection	Hermetically welded

### 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.

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 MAA Declaration of Mutual Confidence:

- R 60 DoMC-01 rev.0, Additional requirements from the United States;
- R 60 DoMC-02 rev.0, Additional requirements from the United States.