

OIML Certificate of Conformity

OIML Member State

The Netherlands

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ssuing authority NMi Certin B.V.

Person responsible: C. Oosterman

Applicant and MINEBEA CO., LTD.

Manufacturer 1-1-1, Katase Fujisawa-shi, Kanagawa-ken

251-8531 Fujisawa

Japan

Identification of the

A single point load cell, with strain gauges

certified type

Type : M040 or PR44

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 R60 - 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

30 August 2016

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 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

Parties concerned can lodge objection against this decision, within six weeks after the date of submission, to the general manager of NMi (see www.nmi.nl).







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The conformity was established by the results of tests and examinations provided in the associated OIML Test Report(s):

- No. NMi-16200461-01 dated 29 August 2016 that includes 51 pages.

Characteristics of the load cell:

Maximum capacity (E _{max})	50 kg up to and including 250 kg
Minimum dead load	0 kg
Accuracy Class + + + + + + + + +	+ + + + + + + + + + + + + + + + + + +
Rated Output	+ + + + + + + + 2,0 mV/V + + + + + + +
Maximum number of load cell intervals (n)	6000
Ratio of minimum LC Verification interval $Y = E_{max} / v_{min}$	+ + + + + + + + 20000 + + + + + + + + +
Ratio of minimum dead load output return $Z = E_{max} / (2 * DR)$	+ + + + + + + + + 6000 + + + + + + + + +
Input impedance	380 Ω ± 38 Ω * * * * * * *
Temperature range	-10 °C / + 40 °C
Fraction p _{LC}	+ + + + + + + + + + + + + + + + + + + +
Humidity Class + + + + + + + + + +	+ + + + + + + + + - CH+ + + + + + + + + + + + + + + + + + +
Safe overload	150 % of E _{max}
Output impedance	350 Ω ± 25 Ω
Recommended excitation + + + + + +	+ + + + + + + 10 V AC/DC + + + + + + +
Excitation maximum	20 V AC / DC
Transducer material	Aluminium
Atmospheric protection + + + + + +	+ + + + Butyl rubber and silicone + + + + +

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

Each produced load cell 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.