

**OIML Member State**  
The Netherlands

Number R60/2017-A-NL1-22.12  
Project number 2623826  
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Issuing authority

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

Applicant and  
Manufacturer

Hottinger Brüel & Kjaer GmbH  
Im Tiefen See 45  
D-64293 Darmstadt  
Germany

Identification of the  
certified type

A **single point load cell**, with strain gauges, equipped with electronics, tested as a part of a weighing instrument.

Registered trade name : HBK

Type : FIT7

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 2017 (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**  
31 March 2022

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.



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

- No. NMI-14200321-01 dated 11 December 2015 that includes 59 pages;
- No. NMI-14200321-02 dated 11 December 2015 that includes 56 pages;
- No. NMI-2261846-01 dated 14 August 2019 that includes 67 pages;
- No. NMI-2623826-01 dated 31 March 2022 that included 8 pages.

### Characteristics of the load cell:

Characterization of load cell capabilities	Digital load cell		
Assembly version	VA, VB, VP		VC, VQ
Maximum capacity ( $E_{max}$ )	3 kg up to 20 kg	20 kg up to and including 75 kg	10 kg up to and including 50 kg
Minimum dead load	0 kg		
Accuracy Class	C		
Maximum number of load cell intervals (n) <sup>(1)</sup>	4000	4000	6000
Ratio of minimum LC Verification interval <sup>(1)</sup> $Y = E_{max} / V_{min}$	20000	35000	50000
Ratio of minimum dead load output return <sup>(1)</sup> $Z = E_{max} / (2 * DR)$	8100	8600	17200
Temperature range	-10 °C / + 40 °C		
Fraction $p_{LC}$	0,8		
Humidity Class	CH		
Safe overload	150 % of $E_{max}$		
Recommended excitation	24 V DC		
Excitation maximum	30 V DC		
Transducer material	Stainless steel		
Atmospheric protection	Silicone membrane		
Electromagnetic environment class	E2		
Number of counts for $E_{max}$	$\geq Y * 5 / p_{LC}$		
Software identification	Version number: 80, Checksum: 240413 or Version number: 81, Checksum: 244554		

### 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.



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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.