

Issued by NMI Certin B.V.

In accordance with WELMEC 8.8 2017, WELMEC 2.4 Issue 2, OIML R 60 (2017), EN 45501:2015.

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

Measuring instrument A **bending beam load cell**, with strain gauges, tested as a part of a weighing instrument.

Registered trade name : HBM
Designation : HLC

Further properties are described in the annexes:

- Description TC11977 revision 0;
- Documentation folder TC11977-1.

An overview of performed tests is given in the annex:

- Description TC11977 revision 0.

Issuing Authority

NMI Certin B.V.
28 May 2021

Certification Board

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1 General information about the load cell

All properties of the load cell, whether mentioned or not, shall not be in conflict with the standards mentioned in this certificate.

This certificate is the positive result of the applied voluntary, modular approach, for a component of a measuring instrument, as described in WELMEC 8.8. The complete measuring system must be covered by an EC type-approval certificate, an EC-type examination certificate or an EU-type examination certificate.

1.1 Essential parts

Number	Pages	Description	Remark
11977/0-01	3	Outline drawing	Mechanical and Electrical

Cable:

- The load cell is provided with a 6-wire system (=“Remote-sensing”):
 - The cable length is not limited.
- The cable is shielded; the shield is connected to the load cell.
- The cable is optionally connected to the load cell by a plug. In case the connection of the load cell is made with a plug and socket, the cable is provided with the possibility to seal.

1.2 Essential characteristics

Characterization of load cell capabilities	Analog-passive load cell		
Maximum capacity (E_{max})	220 kg up to and including 4400 kg	220 kg up to 1100 kg	1100 kg up to and including 4400 kg
Minimum dead load	0 kg		
Accuracy Class	D	C	
Rated Output	1,94 mV/V \pm 0,05 mV/V		
Maximum number of load cell intervals (n) ⁽¹⁾	1000	3000	6000
Ratio of minimum LC Verification interval ⁽¹⁾ $Y = E_{max} / v_{min}$	12500		
Ratio of minimum dead load output return ⁽¹⁾ $Z = E_{max} / (2 * DR)$	15000	18000	15000
Input impedance	415 Ω \pm 65 Ω		
Temperature range	-10 $^{\circ}$ C / +40 $^{\circ}$ C		
Fraction p_{LC}	0,7		
Humidity Class	CH		
Safe overload	150 % of E_{max}		
Output impedance	350 Ω \pm 2 Ω		
Recommended excitation	5 V AC		
Excitation maximum	15 V AC / DC	10 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.

1.3 Essential shapes

Number	Pages	Description	Remark
11977/0-01	3	Outline drawing	Mechanical and Electrical

The descriptive markings plate is secured against removal by sealing or will be destroyed when removed and contains at least the information and markings as described in OIML R 60 (2017) and:

- This certificate number TC11977 (in the countries where it is mandatory);
- Producers name or mark.

2 Seals

The connecting cable of the load cell or the junction box is provided with possibility to seal.

3 Conditions for conformity assessment

Each load cell produced is provided with an accompanying document with information about its characteristics.

The compatibility of load cells and indicator is established by the manufacturer by means of the compatibility of modules form, contained in EN45501:2015 clause F.4 at the time of putting into use.

Other parties may use this certificate without the written permission of the producer.

4 Reports

An overview of performed tests is given in the reports:

- No. NMI-2515827-01 dated 26 May 2021 that includes 51 pages;
- No. NMI-2515827-02 dated 26 May 2021 that includes 47 pages.

A report can be a test report, an evaluation report, a type evaluation report and/or a pattern evaluation report.