EU-type examination certificate

Number **T11908** revision 1
Project number 2600301

Issued by

NMi Certin B.V.,
designated and notified by the Netherlands to perform tasks with respect to conformity modules mentioned in article 17 of Directive 2014/32/EU, after having established that the Measuring instrument meets the applicable requirements of Directive 2014/32/EU, to:

Manufacturer

Rice Lake Weighing Systems
230 W. Coleman St.
Rice Lake, WI 54868
Unites States of America

Measuring instrument

Multidimensional measuring instrument
Type : iDimension Plus

Further properties are described in the annexes:
- Description T11908 revision 1;
- Documentation folder T11908-2.

Valid until

29 December 2030

Remark

This revision replaces the earlier version, including its documentation folder.

Issuing Authority

NMi Certin B.V., Notified Body number 0122
16 June 2021

Certification Board

NMi Certin B.V.
Thijsseweg 11
2629 JA Delft
The Netherlands
T +31 88 6362332
certin@nmi.nl
www.nmi.nl

INSPECTION RvA I 122

Description

1 General information about the multidimensional measuring instrument

All properties of the multidimensional measuring instrument, whether mentioned or not, shall not be in conflict with the legislation.

1.1 Essential parts

The instrument consists either of:
- A head assembly attached to a base plate by a pole and a touch screen user interface mounted on the pole, or;
- Custom setup with a head assembly in combination with a touch screen user interface and a reference surface for measurements.

The essential parts in this construction are in the head assembly and as follows:
- Measurement software (embedded to the single board computer);
- 3D depth sensor.

See block diagram:

Number	Pages	Description	Remarks
11908/1-01	1	Block diagram	-

EMI protection measures:
- Head assembly housing is made of metal;
- Ferrite on the DC side cable of the external AC/DC plug-in power supply.

1.2 Essential characteristics

Principle of operation		reflection of light		
Maximum dimension		Length	Width	Height
		max ≤ 1200 mm	max ≤ 800 mm	max ≤ 800 mm
Minimum dimension		min ≥ 140 mm	min ≥ 140 mm	min ≥ 50 mm
Scale interval		d ≥ 5 mm	d ≥ 5 mm	d ≥ 5 mm
Measuring range		Single interval		
Electromagnetic environment class		E2		
Mechanical environment class		M1		
Climatic environment	temperature range	+5 °C / +40 °C		
	humidity	non-condensing		
	intended location	closed		
Power supply voltage		100 – 240 V AC 50/60 Hz, through an AC/DC plug-in power supply		
Method of operation		semi-automatic		

Limitations of use	Rectangular and singulated objects only, transparent (bubble wrap) packaging is not included in the measurement
Minimum spacing between successive objects	spacing ≥ 10 cm (Objects those placed closer to each other in the measurement area are measured as one object)
Software identification	4.13.r.b ('r' is for bugfixes, minor updates and legally non-relevant part of the software and 'b' is a numeric build number assigned at the software build time)

The software identification is displayed after pressing device information key (*i*) in the display.

1.3 Essential shapes

Number	Pages	Description	Remarks
11908/1-02	1	Outline drawing	
11908/0-03	4	Head assembly	-

Inscriptions:
- The inscriptions have to fulfil the requirements stated in Directive 2014/32/EU Annex I clause 9 and OIML R 129 (2000) clause 8;
- The inscriptions contain the adjustment date and/or value of the event logger at the time of verification;
- The inscriptions contain limitations of use as mentioned in the essential characteristics;
- The inscriptions plate is fixed to the electronics of the multidimensional instrument and is secured against removal by sealing or will be destroyed when removed.

1.4 Conditional parts

AC/DC plug-in power supply;
- Producer: MeanWell, Type: GST60A series.

Power converter board (inside the head assembly):
- Producer: NetPower, Type: MRS2050x008xxx.

The multidimensional measuring instrument may be equipped with one or more of the following protective interfaces that have not to be secured:
- Ethernet;
- USB host.

The multidimensional measuring instrument may be equipped with peripheral equipment if the peripheral equipment is certified to be connected to a multidimensional measuring instrument by a Notified Body responsible for type examination under Directive 2014/31/EU or Directive 2014/32/EU taking into account the applicable electromagnetic environment class.

1.5 Non-essential parts

The multidimensional measuring instrument may be connected to non-essential devices, for example but not limited to bar code readers; second displays, etc. provided that:
- They do not present primary data;
- They do not lead to an instrument having other essential characteristics than those fixed by this certificate.

Part(s) not subject to legal control (WELMEC 7.2, 2015 clause 2):
The software may contain files or programs that have non-essential properties, for example (but not limited to) invoice modules, database modules and operating system components, provided that they do not lead to an instrument having other characteristics than those fixed by this certificate.

Other non-essential parts:
- Distance sensor (used for high resolution measurements only and not covered by this certificate);
- Camera;
- USB hub;
- eMMC module.

2 Information about the main constituent parts of the multidimensional measuring instrument

2.1 Measurement software

2.1.1 Essential characteristics

Software specification (WELMEC 7.2):
- Software type P;
- Risk Class B;
- Extension L/T/S/D.

Operating system:
- The software runs on the Linux operating system embedded in the single board computer.

All legally relevant components are stored in the folder ‘usr/protected’ :

Legally relevant software part	Location and name
Measurement display	/usr/protected/www/displays/dsdisplay.php /usr/protected/www/displays/touchdisplay_v*.php
Measurement calculations	/usr/protected/lib/libQubeVuDimensioningLib.so
Checksum	/usr/protected/www/jscripts/crc32.js
Measurement data storage	/usr/protected/bin/ProtectedMgr
Inspector GUI	/usr/protected/www/inspector/insp.php

Data storage file is created during configuration of the system, at which time also the size is set. The file size shall accommodate the storage of all transactions for the required number of days according to the applicable national regulations.
Stored measurement data can be retrieved from the ‘Transaction Log’ tab under the device information menu.

Legally relevant functions of the software:
- Calculation of the dimensions from raw measurement data;
- Static adjustment;
- Zero adjustment, in case a weighing platform is added/removed under the measuring head;
- Storage of dimensions into a protected file;
- Looking up dimensions from a protected file;
- Securing the service mode with password and sealing using an event logger that increments each time a parameter change or adjustment is made and saved;
- Acting upon significant faults;
- Measuring unit selection (mm, cm, m).

Audit Trail:
- After software locking of the configuration any configuration or parameter change is recorded in the Audit Trail. These records are protected against modifications and cannot be deleted.
- Audit Trail can be accessed from the 'Certification change log' tab under the device information menu.

Security and software protection:
- Upon hardware power-up the software is automatically started;
- Access to the operating system level is controlled using Linux policy settings;
- The software is placed on the internal hard drive in executable files;
- The software operates with protected software interfaces;
- The software configuration is protected by login passwords and checksums;
- Configuration settings that do not affect legally relevant data are not protected by checksums.

2.1.2 Conditional parts

Any single board computer which has a CE marking may be used for instruments under this certificate, taking into account the applicable electromagnetic environment class where the instrument is in service.

A touchscreen monitor, as user interface, CE marked and with a minimum resolution of 800x480.

2.2 3D depth sensor

2.2.1 Essential parts

Number	Pages	Description	Remarks
11908/0-04	1	3D depth sensor specifications	-

3 Seals

To secure components that may not be dismantled or adjusted by the user, the multidimensional measuring instrument has to be secured in a suitable manner on the locations indicated in the drawing:

Number	Pages	Description	Remarks
11908/1-03	2	Sealing drawing	

The adjustment date / event logger can be displayed following the procedure:
- In the operator screen, press the device information key (i);
- In the device info screen, press the inspector icon;
- In the inspection screen, press the “Certification Change Log” key and check ‘#’ value.

4 Conditions for conformity assessment

The marks, facilities for the marks and the inscriptions on the multidimensional measuring instrument fulfil the requirements of Directive 2014/32/EU.

The inscriptions contain the adjustment date and/or value of the event logger.

The multidimensional measuring instrument may be connected to a non-automatic weighing instrument. If applicable, the weighing instrument meets the applicable requirements of Directive 2014/31/EU for non-automatic weighing instruments.

The multidimensional measuring instrument may be connected to an automatic catchweighing instrument weighing statically during automatic operation. If applicable, the weighing instrument meets the applicable requirements of Directive 2014/32/EU for automatic weighing instruments.