

# EU-type examination certificate

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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

Quantronix Inc.  
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Farmington Utah, 84025  
United States of America

Measuring instrument

**Multidimensional measuring instrument**

Type

: CS150-L  
Cubiscan 150-TLFT

Further properties are described in the annexes:

- Description T10290 revision 2;
- Documentation folder T10290-2.

Valid until

14 June 2030

Remark

This revision replaces the earlier versions, except for its documentation  
folder.

Issuing Authority

**NMi Certin B.V., Notified Body number 0122**  
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Certification Board

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## 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 electronics;

The sensors.

See block diagrams:

Number	Pages	Description	Remarks
10290/0-01	1	Interconnection diagram CS150-L	-
10290/1-01	1	Block diagram Cubiscan 150-TLFT	-

EMI protection measures (model CS150-L):

- Ferrite bead around the cable between power supply and motherboard (power supply side);
- Ferrite bead around the cable between junction box and motherboard (junction box side);
- Ferrite bead around the cable to the Ethernet connection (motherboard side);
- Ferrite bead around the cable to the USB connection (motherboard side);
- See also drawing 10290/0-01.

EMI protection measures (model Cubiscan 150-TLFT):

- Ferrite on the cable of the power supply to the indicator.

### 1.2 Essential characteristics

Principle of operation		Reflection of sound		
Maximum dimension		Length	Width	Height
		Max $\leq$ 1200 mm	Max $\leq$ 1000 mm	Max $\leq$ 1000 mm
Minimum dimension		Min $\geq$ 80 mm	Min $\geq$ 60 mm	Min $\geq$ 60 mm
Scale interval		d $\geq$ 5 mm	d $\geq$ 5 mm	d $\geq$ 5 mm
Measuring range		Single interval		
Electromagnetic environment class		E1		
Mechanical environment class		M1		
Climatic environment	temperature range	-10 °C / +40 °C		
	humidity	non-condensing		
	intended location	open and closed		
Power supply voltage		240 V AC 50 Hz 100 – 240 V AC 50/60 Hz (for Cubiscan 150-TLFT)		
Method of operation		semi-automatic		

Limitations of use		rectangular, non-sound-absorbing, reflective, transparent and objects with regular surfaces	
Software identification	Model:	CS150-L	Cubiscan 150-TLFT
	Version:	4.YZZ (Y,Z = 0 ... 9)	5.xxx (x = 0 ... 9)

Software identification:

- For model CS150-L: the software version number will be displayed during the power-up sequence of the instrument in the Dim-Weight field of the display;
- For model Cubiscan 150-TLFT: Press 'about' and 'version' to display the software identification.

The multi-dimensional measuring instrument has embedded software.

Security:

- Hardware sealing is used to protect memory components from being swapped;
- Hardware sealing is used to protect adjustment settings and audit trail;
- The software and data are protected by means of checksums;
- The software is placed in board resident flash memory

### 1.3 Essential shapes

Number	Pages	Description	Remarks
10290/0-02	2	CS150-L Main 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 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

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 display's, 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.

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

### 2.1 The electronics

#### 2.1.1 Essential parts

Number	Pages	Description	Remarks
10290/0-03	2	PCB component layout for ASY 12329	-
10290/0-04	1	PCB assembly motherboard CS150-L	-
10290/1-02	2	Main board Cubiscan 150-TLFT	Including parts list

#### 2.1.2 Conditional parts

Power supply:

- For model CS150-L:  
AC/DC plug-in power supply: XP power, type: AEH45US12.
- For model Cubiscan 150-TLFT:  
AC/DC plug-in power supply: CINCON ELECTRONICS CO., LTF, type TRH50A120Y.

The multidimensional measuring instrument may be equipped with one or more of the following protective interfaces that have not to be secured:

- RS232;
- USB;
- Ethernet.

#### 2.1.3 Non-essential parts

Display;  
Keyboard.

### 2.2 The sensors

#### 2.2.1 Essential parts

Number	Pages	Description	Remarks
10290/0-05	2	PCB component layout for ASY 12834	-

#### 2.2.2 Essential shapes

Number	Pages	Description	Remarks
10290/0-06	1	Sensor ASY	-

## 2.3 The software

### 2.3.1 Essential parts

Legally relevant parts named:

- Cs150\_eu\_v4\_115.flash (for model CS150-L)
- 5\_xxxboxx.bin (for model Cubiscan 150-TLFT; x=0...9).

### 2.3.2 Essential characteristics

Software specification (WELMEC 7.2):

- Software type P;
- Risk class: B;
- Extension: L (for model CS150-L)
- Extension: T/L/S (for model Cubiscan 150-TLFT).

Operating system:

- The software runs directly on the hardware (no operating system).

Legally relevant functions of the software:

- Calculation of the dimensions from raw measurement data;
- Static adjustment;
- Calculation of dimensional weight;
- Acting upon significant faults;
- Checking the (remote) display (only for model CS150-L).

The following processes take place using the software:

- Determination of height by means of input from the ultrasonic sensor mounted on the arm;
- Determination of length and width by means of input from the other three ultrasonic sensors.

## 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 drawings:

Number	Pages	Description	Remarks
10290/0-07	7	CS150-L sealing instructions	-
10290/1-03	2	Cubiscan 150-TLFT sealing	-

## 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 multidimensional measuring instrument may be connected to a non-automatic weighing instrument provided that this instrument meets the applicable requirements of Directive 2014/31/EU for non-automatic weighing instruments.