EU Type Examination Certificate

DK0199.618 Revision 1

CWM-XX

AUTOMATIC CHECKWEIGHING INSTRUMENT

Issued by **DELTA Danish Electronics, Light & Acoustics**
EU - Notified Body No. 0199

In accordance with the requirements for the automatic weighing instrument of Directive 2014/32/EU of the European Parliament and Council on Measuring Instruments (MID).

Issued to **Bent Nygård Elektronik A/S**
Haremarksvej 12
8723 Løsning
DENMARK

In respect of Automatic checkweigher designated CWM-XX.with variants of modules of load receptor and load cell.
Accuracy class XIII(1) / Y(a)
Maximum capacity: 3 kg to 60kg
Verification scale interval: e = ≥ 1 g
Variants of modules and conditions for the composition of the modules are set out in the annex.

The conformity with the essential requirements in Annex 1 and the specific requirements in Annex VIII, chapter I & II of the Directive 2014/32/EU is met by the application of OIML R51-1:2006, OIML D11:2013 section 12 & 13 with severity level 3, WELMEC Guide 7.2:2011, and WELMEC Guide 8.16-1:2013.

The principal characteristics and approval conditions are set out in the descriptive annex to this certificate.

The annex comprises 9 pages.

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Descriptive annex

Contents

1. Name and type of instrument and modules

The automatic checkweigher is a belt weighing scale designated CWM-XX intended for dynamic or static weighing and manufactured by Bent Nygård Elektronik A/S.

2. Description of the construction and function

2.1 Construction

The CWM-XX is a traditionally built checkweigher with an infeed belt conveyor, a weighing belt conveyor placed on a load receptor with one or more load cells, and separate outlet belt conveyors.
The outlet conveyor may have an integrated system for rejection or sorting out over- and underweight items.
The outlet conveyor may also be equipped with a label printer
The electrical cabinet, the load receptor and the displaying unit can be placed in separate positions, the legs might vary accordingly.

The CWM-XX uses a Systec IT6000E Weighing Indicator (Evaluation Certificate TC8477).

2.1.1 Indication

The Systec IT6000E is used for all communication between the checkweigher and the operator.

2.1.2 Electronics

CWM-XX has the Systec IT6000E weighing indicator installed in which all setup and configuration parameters are stored. This indicator handles all weighing functions and functions also as interface to the operator.
The checkweigher can be connected to an optional label printer via a RS485 serial connection.

The checkweigher/catchweigher is power supplied from one phase 230 VAC, 50/60 Hz.

2.1.3 Load cell

Set out in Section 3.3.

2.1.4 Load receptor

Set out in Section 3.2.

2.1.5 Interfaces and peripheral equipment

Set out in Section 4.

2.2 Function

The functions provided are detailed below.

2.2.1 Functions and devices

The automatic weighing instrument has the following permitted functions and devices that are subject to the Measuring Instrument Directive:

- Power up test
- Initial zero setting device (≤ 20 % of Max)
- Semi-automatic zero setting device (≤ 4 % of Max and disabled in automatic mode)
- Zero tracking device (≤ 4 % of Max)
- Automatic zero setting device (≤ 4 % of Max)
- Dynamic linearization device
- Load dependent belt speed profile
- Extended indicating device by pressing a key (disabled in automatic mode)
- Audit trail
- Detection of significant fault

When the automatic weighing instrument is stopped, it can operate as a non-automatic weighing instrument of accuracy class III.

2.2.2 Software identification

The software for the IT6000E indicator is identified by a checksum

The approved software versions' checksums are,
Checksum: f3c7675a or checksum: 34b95a82

3. Technical data

3.1 CWM-XX automatic checkweigher/catchweigher

Type:	CWM-XX
Weighing mode:	Dynamic
Accuracy class:	XIII(1) / Y(a)
Weighing range:	single-interval
Maximum capacity (Max):	3 kg to 60 kg
Minimum capacity (Min):	50 × e
Verification scale interval (e =):	≥ 1 g
Number of Verification Scale Intervals (n):	≤ 3000
Belt speed:	≤ 70 m/min
Maximum time between automatic zero setting:	15 minutes
Temperature range:	5 °C to 35 °C
Electromagnetic class:	E2
Humidity:	Non-condensing
Power requirements:	230 VAC, 50/60 Hz
Peripheral interface:	Set out in Section 4

3.1.1 IT6000E weight indicator

Minimum input voltage per VSI:	0.33 µV
Excitation voltage:	5 VDC
Minimum input impedance:	43 Ohm
Maximum input impedance:	3300 Ohm

3.2 Load receptor

The weighing conveyor is a belt conveyor placed on a load receptor equipped with one or more load cells.

3.3 Load cell

CWM-XX uses a HBM PW18xH C3 or HBM PW12CC load cell

3.4 Documents

The documents filed at DELTA (reference No. T213028 and 117-22255) are valid for the weighing instruments described here.

4. Interfaces

The CWM-XX has the following communication interfaces.

- Serial interface RS 232C
- Ethernet

The interface is protective and does not have to be secured.

5. Approval conditions

CWM-XX is approved for fixed installation in indoor locations.

5.1 Compatibility of modules

CWM-XX shall fulfil compatibility of modules (EN45501:2015 annex F) for an input voltage per verification scale interval not less than 1 µV.

6. Special conditions for verification

In stopped mode the CWM-XX can operate as a non-automatic weighing instrument and shall be tested as such during verification or marked: “Not to be used for non-automatic weighing”.

7. Securing and location of seals and verification marks

7.1 Securing and sealing

Seals shall bear the verification mark of a notified body according to ANNEX II. Module F of the Directive 2014/32/EU or alternative mark of the manufacturer according to ANNEX II, module D of the Directive 2014/32/EU.

7.1.1 Mechanical sealing

The identification plate shall be secured against removal with a brittle plastic sticker.

The load-cell connector is sealed with a sticker covering part of the terminal screw area.

The serial number of the indicator is marked on the main with a brittle plastic sticker.

7.2 Verification marks

A sticker with verification marks is to be placed on or near the identification plate of the instrument.

8. Location of CE mark of conformity and inscriptions

8.1 Identification plate

All inscriptions for the instrument shall be placed on the identification plate, which is to be placed on a visible place on the measuring instrument.

8.1.1 CE mark

The CE mark of conformity and the supplementary metrology marking consisting of the capital letter 'M' and the last two digits of the year of its affixing, surrounded by a rectangle, shall be located on the identification plate.

8.1.2 Markings on display

The following markings are permanently shown on or close to the display,

- Max, Min, e and accuracy class

8.1.3 Markings on inscription plate

The identification plate shall at least bear the following inscriptions:

- Manufacturer's trademark and / or name
- The postal address of the manufacturer
- Type designation
- Serial number
- Max. belt speed
- Temperature range
- Electromagnetic class: E2
- Humidity: Non-condensing
- Supply voltage
- Check number
- Type examination certificate number

9. Pictures

Figure 1 CWM-XX – example of mechanical construction

Figure 2 CWM-XX – example of mechanical construction

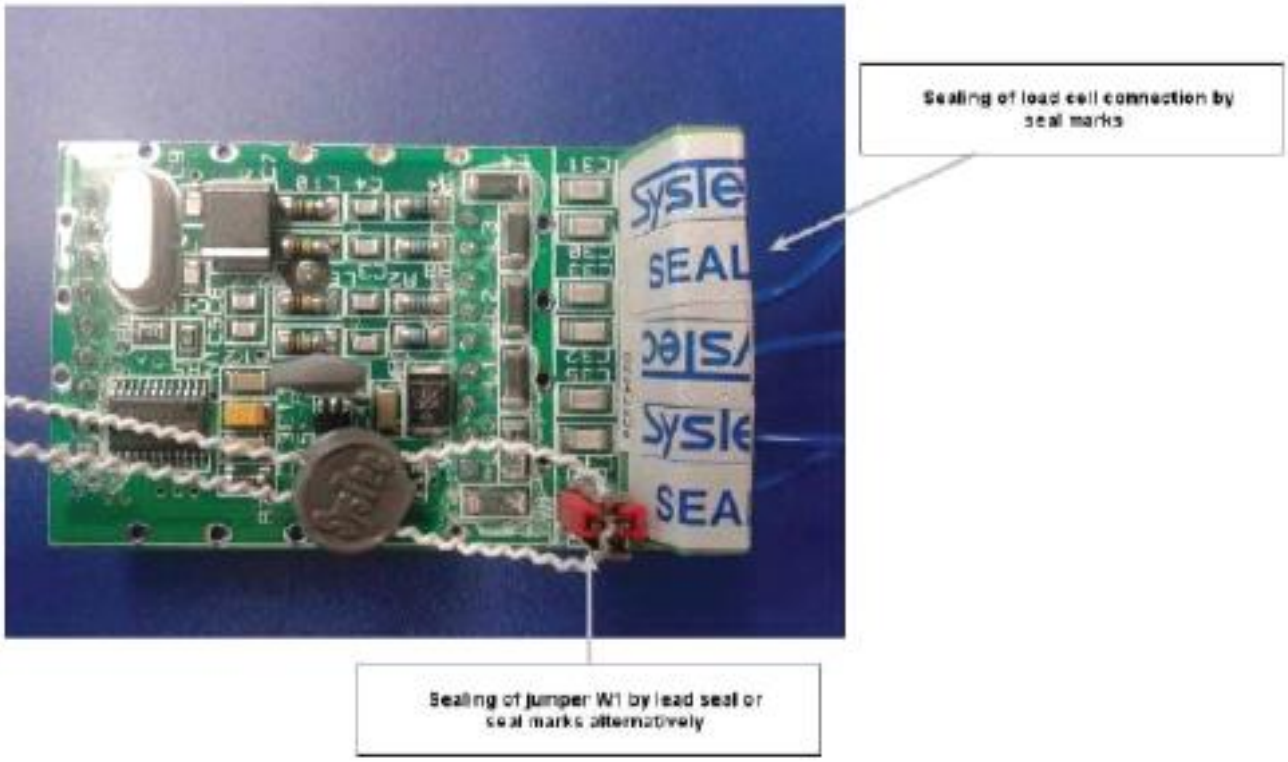

Figure 3 Sealing of calibration jumper and load cell cable's connection to IT6000E's A/D-module.