

Issued by Notified Body No. 0402 according to Directive 2014/32/EU MID annex II Module B, regarding:

Automatic catchweighing instrument - DNP-DLC01

Issued to

Dametric AB

Jägerhorns väg 19, SE-141 75 Kungens Kurva, Sweden

In respect of (type of instrument)

An electronic automatic catchweighing instrument – used for weighing of loose waste material.

Certificate

The instrument specified in this certificate fulfils the requirements of directive 2014/32/EU on measuring instruments (MID), implemented in Swedish law by SWEDAC Regulation STAFS 2016:1 and STAFS 2016:7, The Regulations and Guidelines concerning Automatic weighing Instruments. The conformity assessment is performed according to annex II, Module B of Directive 2014/32/EU. RISE Certification Rule SPCR 302 issue 2021-12-21 has been applied.

Applicable requirements of directive 2014/32/EU

- Annex I, Essential requirements
- Annex VIII, (MI-006), Automatic weighing instruments

Harmonised standards and normative documents used

- OIML R51, edition 2006, Automatic catchweighing Instruments

Further applied documents

- WELMEC 2.6, Guide for the testing of automatic catchweighing instruments (Issue 3)
- WELMEC 7.2, Software Guide Issue 2020
- WELMEC CT-006-II issue 2020

Rated operating conditions

Measurand:	mass in containers	Electromagnetic environment class:	E3
Measurement range:	5- 300 kg	Climatic environment:	-25to +55 °C (non-condensing)
Accuracy class:	Y(b)		

The principal characteristics and approval conditions are set out in appendix to this certificate.

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Martin Tillander
Director Product Certification

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140184

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Specification of the instrument

1. Design of the instrument

1.1 Construction

Product name

DNP-DLC01

Measuring system description

DNP-DLC01 is a built for purpose measuring instrument – (Type P) with an embedded loadcell. One or two bin (single/dual) lifting devices are mounted on a refuse collecting vehicle. On the lifting devices are mounted one or two instruments. The instruments are connected to an electronic indicator. A bin or container is placed on an instrument and is lifted up to its emptying position, where it is being emptied. During the upward movement, a dynamic gross weighing is performed. A dynamic weighing operation is performed on the downward movement of the lift. The weighing instrument presents the net weight of the emptied waste

The weighing instrument DNP-DLC01 consists of:

- Dynamic Load cell (fulfilling requirements in 1.2)
- CAN Hub (also see 1.3)
- Communication Interface Module
- RFID-Antenna
- Display unit 3,5"

Supply voltage

24 VDC

1.2 Measurement value processing

Hardware

The weighing instrument consists of an embedded load cell, measuring the load in the container hooked on to the lifting arm, an embedded accelerometer for correction of tilting (and g-value) of the vehicle, and embedded control. The load transport system and unit are mounted on a vehicle.

Software

The validation of software was based on the essential requirements given in MID and WELMEC Guide 7.2 issue 2020. A report with number P110933.DP01.A01 dated 2022-03-24 was issued and is held by RISE. The software identification for the DNP-DLC01 is version 1.111 and may be checked using the DNP-HID01. The current checksum is D849.

1.3 Indication of the measurement results

An indicating terminal DNP-HID01 is used for showing the weight.

1.4 Technical documentation

The operating manual includes technical specifications and for example how to get access to the checksum.

1.5 Integrated equipment and functions not subject to MID

See operating manual.

2. Technical data

2.1 Rated operating conditions

Measurand

Mass of any material within the measuring range, weight expressed in kg.

Measurement range

Maximum capacity:	300 kg/ load receptor
Minimum capacity:	5 e
Verification scale interval, e:	≥ 0,5 kg

Accuracy

Accuracy class:	Y(b)
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Environments / influence quantities:

Climatic:	-25 to +55°C (non-condensing)
Electromagnetic class:	E3

Software specification according to Welmec Guide 7.2:

Software type:	P
Risk class:	B
Extension:	L, D, I

Power supply

24 VDC

Durability period under rated operating conditions estimated by the manufacturer

Durability period estimated to be 12 months.

2.2 Other operating conditions

Not applicable.

3. Interfaces and compatibility conditions

The instrument may use the following protective interfaces for data communication:
CAN.

4. Requirements on production, putting into use and utilization

4.1 Requirements on production

No special requirements identified.

4.2 Requirements on putting into use

Verification at the place of use is required.

4.3 Requirements for consistent utilizations

No special requirements identified.

5. Control of the measuring tasks of the instrument in use

No special measuring tasks are identified.

6. Security measures

6.1 Sealing

Interfaces

No sealing of interfaces is necessary.

Descriptive plate

The descriptive plate (plates) shall be secured with sealing stickers unless the plate cannot be removed without being destroyed.

6.2 Data logger.

The weighing equipment has capacity to store the following amount of information about bin lift data: The legally relevant measure data are stored in permanent memory (EEPROM), which has a capacity to store 500,000 measurements.

The weighing results may be accessed by DNP-HID01

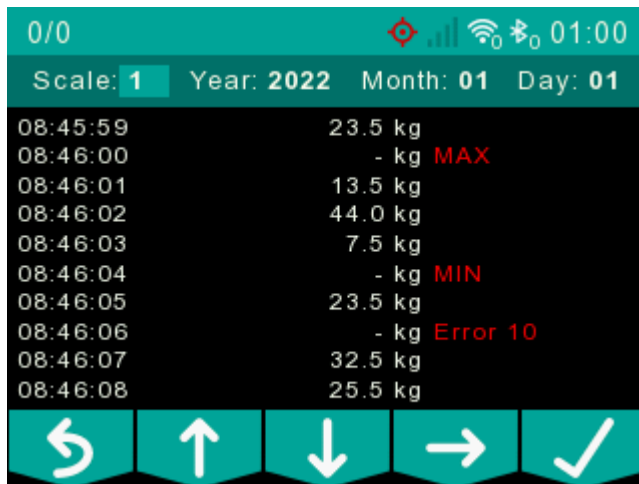


Figure 1 Readout from data logger

7. Labelling and inscriptions

7.1 Information to be borne by the instrument

The descriptive plate mounted on the instrument shall contain the following information:

- name or identification mark and postal address of the manufacturer
- serial number and type designation
- EU Type Examination certificate number
- accuracy class
- verification scale interval, e
- maximum capacity, Max
- minimum capacity, Min
- temperature range
- electrical supply

7.2 Conformity marking in accordance to MID article 21

The instrument shall be marked in accordance to MID article 21 which e.g. describes the CE-marking together with M, year of marking and the id number of the notified body responsible for module F.

7.3 Further inscriptions, if necessary

No further inscriptions considered necessary

7.4 Drawings/pictures

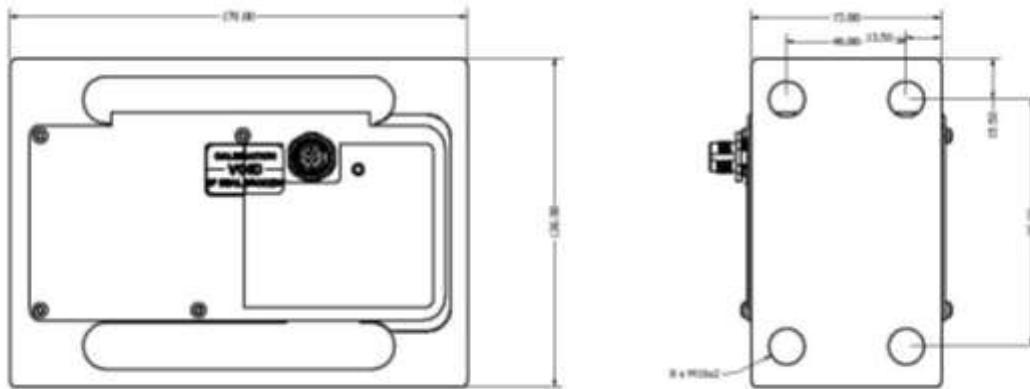


Figure 2. Weighing instrument dimensions



Figure 3. Weighing instrument with descriptive plate mounted and seal



Figure 4. 3.5" Display with weight result



Figure 5. The weighing instrument (Installed Behind the Load Receiver Frame)

8. Manuals

The following manuals are to accompany the different systems in the official language of the country of use (the manufacturer is responsible for the translation of approved documents).

<i>Program version</i>	<i>Title of manual</i>	<i>Document version</i>	<i>Language of examined version</i>
1.0	DNP-DLC01 User Manual	1.3 2022-02-25	English

9. Testing and examination

All the plans, schematic diagrams and documentations are recorded under reference file 140184.