

EU-type examination certificate

Number **T6974** revision 2
Project number SO16202354
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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 13 of Directive 2014/31/EU, after
having established that the measuring instrument meets the applicable
requirements of Directive 2014/31/EU, to:

Manufacturer A&D Instruments Ltd.
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United Kingdom

Measuring instrument **A Non-automatic weighing instrument**
Type : FG...

Further properties are described in the annexes:
– Description T6974 revision 2;
– Documentation folder T6974-2.

Valid until 15 June 2026

Remarks 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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1 General information about the non-automatic weighing instrument

All properties of the non-automatic weighing instrument, whether mentioned or not, shall not be in conflict with the legislation.

1.1 Essential parts

The electronics;
 The mechanical assembly with load cell.

EMI protection measures:

- The A/D board is shielded with a metal cover;
- Ferrite ring in the cable between load cell and main board;
- Ferrite ring in the cable between adapter input and main board;
- Ferrite ring on the optional printer board.

1.2 Essential characteristics

Accuracy class	III
Maximum capacity	$30 \text{ kg} \leq \text{Max} \leq 150 \text{ kg}$
Verification scale interval	$e \geq 10 \text{ g}$
Weighing range	Single interval
Maximum number of scale intervals	$n \leq 3000$ divisions
Tare	$T \leq -\text{Max}$
Temperature range	$-10 \text{ °C} / +40 \text{ °C}$
Power supply voltage	Plug-in power supply 100 – 240 V AC 50 Hz to 7 -10 V DC, or 4x C size (R14P/LR14) dry batteries (6 V DC)
Software identification	Version number: b-4.xx (xx = 00 to 99 and shows the non-legally relevant part)

Software:

- The identification number will be displayed after pressing the key sequence (valid for software versions b-4.xx and newer):
 - While pressing and holding the re-zero button, turn the power on.
- The non-automatic weighing instrument has embedded software.

1.3 Essential shapes

Number	Pages	Description	Remarks
6974/1-01	1	General overview of the instrument	-
6974/1-02	1	Exploded view base unit (AL)	-
6974/1-03	1	Exploded view base unit (AM)	-
6974/1-04	1	Exploded view base unit (BM)	-
6974/1-05	1	Exploded view indicator unit	-

The data plate is secured against removal by sealing or will be destroyed when removed.

Inside the cabinet is an adjustment lock, located on the main board.

1.4 Conditional parts

The non-automatic weighing instrument may be equipped with peripheral equipment which is used for the applications listed in Article 1(2), (a) to (f) of Directive 2014/31/EU, provided that the peripheral equipment is certified to be connected to a non-automatic weighing instrument by a Notified Body responsible for type examination under Directive 2014/31/EU, or, that the equipment and the use of the equipment complies with the requirements of WELMEC 2.5 Issue 2 clause 2.2.

The non-automatic weighing instrument is fitted with a levelling device and a level indicator, unless the instrument is installed in a fixed position. A ring on the level indicator indicates when the maximum tilt is exceeded.

1.5 Non-essential parts

The non-automatic weighing instrument may be connected to non-essential devices, for example but not limited to bar code readers, foot switches, second displays and cash drawers, provided that:

- They do not present primary data used for purposes mentioned in Article 1(2), (a) to (f) of Directive 2014/31/EU unless the "Preliminary observation" in Annex I of the Directive is satisfied;
- They do not lead to an instrument having other essential characteristics than those fixed by this certificate.

Other non-essential parts:

- Internal battery;
- AC/DC plug-in power supply;
- Comparator relay output.

2 Information about the main constituent parts of the non-automatic weighing instrument

2.1 The electronics

2.1.1 Essential parts

Number	Pages	Description	Remarks
6974/1-06	3	Main board layout with parts list	initial version PC4340
6974/1-07	3	Main board layout with parts list	updated version PC6534

2.1.2 Essential characteristics

List of legally relevant functions:

- Determination stability of equilibrium;
- Zero indicator;
- Initial zero-setting;
- Zero-tracking;
- Semi-automatic zero-setting and semi-automatic subtractive tare balancing operated by the same key;
- Adjustment / set-up mode and gravity compensation via a switch on the main board;
- Checking the display;
- Counting mode;
- Comparator mode with upper and lower limits;
- Digital printing.

2.1.3 Conditional parts

The interface section is located on the main board. The non-automatic weighing instrument may be equipped with one or more of the following protective interfaces that have not to be secured:

- RS232C (namely OP-23 for FG-23 and namely OP-24 for FG-24 with comparator relay output).

The interface cable connected to the instrument will not be longer than 30 meters.

2.1.4 Non-essential parts

Display;
 Keyboard.

2.2 The mechanical assembly with load cell

2.2.1 Essential parts

Number	Pages	Description	Remarks
6974/1-08	1	Specifications for the load cells	-



Description

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2.2.2 Essential characteristics

$e \geq E_{\max} / 5000$;
Excitation power supply 5 V DC.

2.2.3 Essential shapes

See chapter 2.2.1.

3 Seals

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

Number	Pages	Description	Remarks
6974/1-09	1	Sealing diagram	-

4 Conditions for conformity assessment

The marks, facilities for the marks and the inscriptions on the non-automatic weighing instrument fulfill the requirements of point 1 of Annex III of Directive 2014/31/EU.