

Nederlands Meetinstituut

EC type-approval certificate

Number **T6391** revision 0
Project number 213685
Page 1 of 5

Issued by NMI Certin B.V.
Hugo de Grootplein 1
3314 EG Dordrecht
The Netherlands

Notified Body Number 0122

In accordance with The Council Directive 90/384/EEC on non-automatic weighing instruments.

Applicant A&D Instruments Ltd.
24 Blacklands Way
Abingdon Business Park
Abingdon, Oxfordshire
OX14 1DY United Kingdom

In respect of A class **(II)** or **(III)**, electronic, single- or multi-range
non-automatic weighing instrument.
Manufacturer : A&D
Type : EW-...i

Characteristics $30 \text{ g} \leq \text{Max} \leq 12 \text{ kg}$
 $e \geq 0.02 \text{ g}$
 $n \leq 3000$ divisions (per weighing range)
maximum of 3 weighing ranges

Temperature range +5 °C / +40 °C

In the description number T6391 revision 0 further characteristics are described.

Valid until 17 December 2013

Description and documentation The instrument is described in the description number T6391 revision 0 and documented in the documentation folder T6391-1, appertaining to this EC type-approval certificate.

Delft, 17 December 2003
NMI Certin B.V.


Ing. C. Oosterman
Manager Product Certification

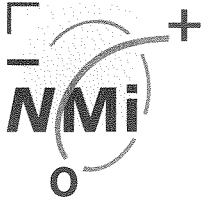
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1 General information about the non-automatic weighing instrument

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

1.1 Essential parts

See drawing EW-i Series Block Diagram, drawing number BD-EW-I-1;
The electronics;
The mechanical assembly with load cell.

EMC protection measures:

- The A/D board is shielded with a metal cover;
- The upper plate and the platform are made of metal;
- The ground plate inside the balance is made of metal.

1.2 Essential characteristics

Power supply:
Input AC/DC-adaptor: 220-240 V AC, 50/60 Hz or
Input external power supply: 7 ~ 10 V DC.

1.3 Essential shapes

The non-automatic weighing instrument is built according to drawings:

- Exploded View, drawing number 1-1-1;
- Exploded View, drawing number 1-2-1.

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

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 Sealing diagram, drawing number figure 3.

The securing component has to bear either:

- A mark of the manufacturer laid down in a notified body approved quality system (Annex II of the directive 90/384/EEC), or
- An official mark of a Member State of the EEC, or an other party to the EEA agreement.

Inside the cabinet is a calibration 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) of the EC Directive (90/384/EEC), if the peripheral equipment is certified to be connected to an EC type-approved non-automatic weighing instrument by a Notified Body appointed to certify non-automatic weighing instruments according to paragraph I of Annex II of the EC directive on Non-Automatic Weighing Instruments.

The non-automatic weighing instrument is fitted with a leveling device and a level indicator, unless the instrument is installed in a fixed position. The level indicator has a sensitivity of at least 2 mm for a tilt of 2/1000.



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 display's and cash drawers, provided that:

- They do not present primary data used for purposes mentioned in article 1(2)(a) of the EC Directive (90/384/EEC) unless the "preliminary observations" in Annex 1 of this directive is satisfied.
- They do not lead to an instrument having other essential characteristics than those fixed by this type-approval document.

Rechargeable battery;
AC/DC-adapter;
External power supply.

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

2.1 The electronics

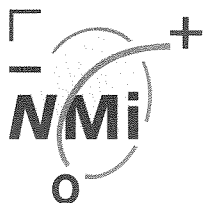
2.1.1 Essential parts

Description	Drawing number	Rev.	Remarks
Parts lay out of PZ:3762	2-1-2	--	Main board
Parts list of PZ:3762	2-1-3	--	Parts list (2 pages)

2.1.2 Essential characteristics

List of devices:

- Determination stability of equilibrium;
- Zero indicator;
- Initial zero-setting;
- Zero-tracking;
- Combined initial zero-setting and subtractive tare balancing (only for class ^(II));
- Combined semi-automatic zero-setting and subtractive tare balancing;
- Indication of stable equilibrium;
- Gravity compensation;
- Calibration / set-up mode via a switch on the main board;
- Underhook weighing;
- Acting upon significant faults;
- Checking the display;
- Indications other than primary indications;
- Indication of additional information;



2.1.3 Conditional parts

Description	Drawing number	Rev.	Remarks
Parts lay out of PZ:3765	2-3-2	--	Rechargeable battery OP-09

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

- RS232C;
- Comparator Output OP-04 (optional).

2.1.4 Non-essential parts

Display;
Keyboard.

2.1.5 Non-essential characteristics

Counting device (pcs);
Percentage indication (%);
Check weighing mode (Comparator).

2.2 The mechanical assembly with load cell

2.2.1 Essential parts

Description	Drawing number	Rev.	Remarks
Load cell drawings + specifications LC148-300 / LC140-3000 / LC140-12K	EW-I LC	--	

2.2.2 Essential characteristics

In case $e < 1$ g: $e \geq E_{\max}/30000$;

In case $e \geq 1$ g: $e \geq E_{\max}/12000$

Excitation power supply 5 V DC.

2.2.3 Essential shapes

Description	Drawing number	Rev.	Remarks
Exploded View EW-150-i	1-1-1	--	
Exploded View EW-1500-i / EW-12Ki	1-2-1	--	

3 Approval conditions

See chapter 1.3, essential shapes.

4 Seals and verification marks

See chapter 1.3, essential shapes.

5 CE-mark of conformity and inscriptions

The marks, facilities for the marks and the inscriptions on the non-automatic weighing instrument fulfill the requirements of article 1 of Annex IV.