Nederlands Meetinstituut

EC type-approval certificate

Number **T2733** revision 3
Project number 603911

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 (I), electronic, single-interval **non-automatic weighing instrument**. Manufacturer : A&D Type : HR-EC
Characteristics	Max ≤ 210 g or 1050 ct e ≥ 1 mg or 0.005 ct e = d or e = 10d n ≤ 210000 divisions Temperature range 15 °C / 25 °C In the description number T2733 revision 3 further characteristics are described.
Valid until	10 November 2015
Description and documentation	The instrument is described in the description number T2733 revision 3 and documented in the documentation folder T2733-1, appertaining to this EC type-approval certificate.
Remarks	This revision EC type-approval certificate replaces the earlier versions, except for its documentation folder.

Dordrecht, 24 April 2006
NMi Certin B.V.

Ing. C. Oosterman
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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

The electronics;
The mechanical assembly with weighing cell.

EMC protection measures:
- The A/D board is shielded.

1.2 Essential characteristics

Power supply: 12 V DC.

1.3 Essential shapes

The non-automatic weighing instrument is built according to the drawing:
- Figure 1, The Type, drawing number HR 001.

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:
- Fig 3.1 Sealing, drawing number HR 003.1.

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 another party to the EEA agreement.

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 level indicator, which shows that the maximum tilt is being exceeded.
Power supply filter board (not applicable if a battery pack is installed).

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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.

Wind screen over the load receptor;
Battery pack;
AC/DC-adapter.

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
Block diagram	HR 005	-	
A to D component list and layout	HR 006	-	
Fig 7 – main board layout and component list	HR 007	-	

2.1.2 Essential characteristics

List of devices:
- Determination stability of equilibrium;
- Combined semi-automatic zero-setting and substractive tare balancing device, with an overall effect ≤ -Max;
- Initial zero-setting, with a maximum of ≤ 20% of Max. Above this range this device functions as a tare balancing device;
- Zero-tracking;
- Semi-automatic calibration;
- Checking the display;
- Auxiliary indication with differentiated scale interval;
- Percentage mode;
- Comparator / set point mode;
- Counting mode.

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2.1.3 Conditional parts

The interface section is located on a separate interface 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;
- Serial current loop.

2.2 The mechanical assembly with weighing cell

2.2.1 Essential parts

Description	Drawing number	Rev.	Remarks
Exploded view HR-series	View 2	-	

2.2.2 Essential characteristics

Maximum capacity of the weighing cell:
- Max = 210 g with e = 1 mg.

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.

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