



Nederlands Meetinstituut

EC type-approval certificate

Number **T6919** revision 0

Project number 506555

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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, **non-automatic weighing instrument**.
Manufacturer : A&D
Type : GH series

Characteristics $50 \text{ g} \leq \text{Max} \leq 320 \text{ g}$ or $250 \text{ ct} \leq \text{Max} \leq 1600 \text{ ct}$
 $e \geq 1 \text{ mg}$ or $e \geq 5 \text{ mct}$
 $d = e$ or $d = 1/10 e$ or $d = 1/100 e$
 $n \leq 320000$ divisions

Temperature range +10 °C / +30 °C

In the description number T6919 revision 0 further characteristics are described.

Valid until 24 February 2016

Description and documentation The instrument is described in the description number T6919 revision 0 and documented in the documentation folder T6919-1, appertaining to this EC type-approval certificate.

Dordrecht, 24 February 2006
NMI Certin B.V.


Ing. C. Oosterman
Manager Product Certification

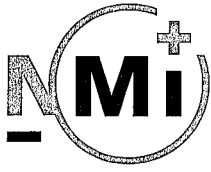
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1 General information about the non-automatic weighing instrument

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 "Block Diagram", drawing number GH-003;
The electronics;
The mechanical assembly with weighing cell.

EMC protection measures:

- The A/D board is shielded with a metal cover;
- The inside of the case is covered with a conductive coating;
- The weighing cell is located in a metal case;
- The electronics (except for the display board) is covered by a metal case;
- Coppertape over the cracks of all metal cases;
- A ferrite around the printer cable (near the non-automatic weighing instrument).

1.2 Essential characteristics

Power supply 12 V DC.

1.3 Essential shapes

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

- "Type", drawing number GH-001;
- "Exploded View", drawing number GH-007B.

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

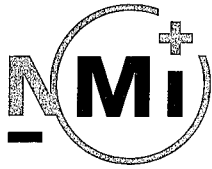
To secure components that may not be dismantled or adjusted by the user, the non-automatic weighing instrument has to be secured in a suitable manner on the locations indicated in drawing:

- "Markings and Sealing", drawing number GH-002.

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.

Inside the cabinet is a sealing switch, 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 may be connected to a printer, provided that the printer add brackets around the auxiliary digits.

The non-automatic weighing instrument is fitted with a levelling device and a level indicator that shows that the maximum tilt is being 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 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.

AC/DC-adapter or 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
Board Layout	GH-004B	--	Drawing including parts list
Board Layout	GH-004C	--	Drawing including parts list
A/D Board Layout	GH-004D	--	Drawing including parts list



2.1.2 Essential characteristics

List of devices:

- Determination stability of equilibrium;
- Zero-tracking;
- Combined initial zero-setting and subtractive tare balancing;
- Combined semi-automatic zero-setting and subtractive tare balancing;
- Indication of stable equilibrium;
- Calibration / set-up mode via a switch on the main board;
- Automatic span adjustment with internal calibration mass;
operational at least:
 - After switch on;
 - $\Delta t \leq 2$ °C;
 - After a fixed algorithm;
- Semi-automatic span adjustment with internal calibration mass;
- Semi-automatic span adjustment with external calibration mass;
- Acting upon significant faults;
- Checking the display;
- Underhook weighing;
- Auxiliary indicating with differentiated scale interval;
- Weight unit selection (g, mg, ct);
- Counting device (PCS);
- Percentage indication (%);
- Determination of the density;
- Indications other than primary indications;
- Indication of additional information.

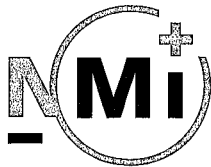
2.1.3 Conditional parts

The interface section is located 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;
- Input for external switch.

2.1.4 Non-essential parts

Display;
Keyboard.



2.2 The mechanical assembly with weighing cell

2.2.1 Essential parts

Description	Drawing number	Rev.	Remarks
Exploded View (Weighing cell)	GH-007A	--	

2.2.2 Essential characteristics

The maximum capacity of the weighing cell is 320 mg with $e = 1$ mg.

2.2.3 Essential shapes

Description	Drawing number	Rev.	Remarks
Exploded View (Weighing cell)	GH-007A	--	

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.