

EC type-approval Certificate

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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 9 of Directive 2009/23/EC, after having established that the measuring instrument meets the applicable

requirements of Directive 2009/23/EC, to:

Manufacturer Shinko Denshi Co., Ltd.

3-9-11 Yushima, Bunkyo-ku

Tokyo 113-0034

Japan

Measuring instrument A Non-automatic weighing instrument

Type : AJ[H], AJ[H]P, AJ for carat (CT), SJ or

SJP

Further properties are described in the annexes:

Description T6124 revision 6;

- Documentation folder T6124-5.

Valid until 5 November 2022

Remarks This revision replaces the earlier versions, except for its documentation

folder.

Issuing Authority

NMi Certin B.V., Notified Body number 0122

5 November 2012

C. Oosterman Head Certification Board

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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

See drawings:

- AJ-CE/AJH-CE/AJP-CE/AJHP-CE Block Diagram 1, drawing number 20YE001 rev. 2.1;
- AJ-CE/AJH-CE/AJP-CE/AJHP-CE Block Diagram 2, drawing number 20YE002 rev. 1.1;
- SJP Block Diagram 1, drawing number 21YE001;
- SJP Block Diagram 2, drawing number 21YE002.

The electronics;

The mechanical assembly with weighing cell.

EMC protection measures:

- See AJ-CE/AJH-CE/AJH-CE Block Diagram 2, drawing number 20YE002 rev. 1.1 or;
- See SJP Block Diagram 2, drawing number 21YE002;
- The weighing cell is shielded with a metal cover;
- Filter in the incoming power line;
- Ferrite (5 loops) around the power supply cable to the main board;
- Ferrite (1 loop) around the cable between main board and calibration weight unit mechanism;
- The weighing mechanism is connected to ground.

1.2 Essential characteristics

Accuracy class	(I)	(II)
Maximum capacity	500 g ≤ Max ≤ 6200 g or 2500 ct ≤ Max ≤ 31000 ct	$50 \text{ g} \le \text{Max} \le 12 \text{ kg or}$ $250 \text{ ct} \le \text{Max} \le 60000 \text{ ct}$
Verification scale interval	$e \ge 0.01 \text{ g or } e \ge 0.1 \text{ ct}$ e = d or e = 10d	
Maximum number of scale intervals	$n \le 82000 \text{ divisions}$	n ≤ 42000 divisions
Temperature range	+10 °C / +30 °C	
Weighing range(s)	Single interval	
Power supply voltage	9 or 12 V DC supplied by AC/DC adapter or by internal battery.	



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1.3 Essential shapes

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

- AJ(H) and AJ(H)P-220CE~620CE External View, drawing number 20YM069 rev. 0.1;
- AJ and AJP-820CE~1200CE External View, drawing number 20YM070 rev. 0.1;
- CT and CT-DB External View, drawing number 20YM072 rev. 0.1;
- AJ(H)-2200~12KCE External View, drawing number 20YM071 rev. 0.1;
- CT-T and CT-TDB External View, drawing number 20YM073 rev. 0.1;
- SJ(P)-220~820CE External View, drawing number 20YM074 rev. 0.1;
- SJ(P)-1200CE External View, drawing number 20YM075 rev. 0.1;
- SJ(P)-2200~12KCE External View, drawing number 20YM076 rev. 0.1.

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

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 Directive 2009/23/EC, provided that the peripheral equipment is certified to be connected to an EC type-approved non-automatic weighing instrument by a Notified Body responsible for type examination under Directive 2009/23/EC, or that the equipment and the use of the equipment comply with the requirements of WELMEC 2.5 Issue 2 Section 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. 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 Directive 2009/23/EC 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.

Windscreen over the load receptor (in case of type AJ(H)-220CE/-320CE/-420CE/-620CE and AJ(H)P); AC/DC-adapter.



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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
20YE004	1	AJDP PCB Parts Assignment	rev 1.1
21YE004	1	SJP-DP PCB Parts Assignment	rev 1.1
AJDP PCB	1	Parts list AJ / AJH / SJ / SJP series	-

2.1.2 Essential characteristics

List of legally relevant functions:

- Determination stability of equilibrium;
- Zero indicator;
- Zero-tracking;
- Combined initial zero-setting and subtractive tare balancing;
- Combined semi-automatic zero-setting and subtractive tare balancing;
- Indication of stable equilibrium;
- Semi-automatic span adjustment with internal calibration mass (optional for class $\stackrel{ ext{(II)}}{ ext{(II)}}$;
- Semi-automatic span adjustment with internal or external calibration mass (only for class $\stackrel{(1)}{\smile}$);
- Calibration / set-up mode via a switch on the main board;
- Acting upon significant faults;
- Checking the display;
- Weight unit selection (g, ct, %, pcs);
- Auxiliary indication with differentiated scale division (optional).

2.1.3 Conditional parts

Number	Pages	Description	Remarks
20YE006	1	PCB lay-out of Battery unit DJBT-1	Including parts list

The non-automatic weighing instrument may be equipped with one or more of the following protective interfaces that have not to be secured:

RS232C.



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2.1.4 Non-essential parts

Display; Keyboard.

2.1.5 Non-essential characteristics

- Check weighing mode (=limit function);
- Percentage weighing mode;
- Piece counting mode.

2.2 The mechanical assembly with load cell

2.2.1 Essential parts

Number	Pages	Description	Remarks
20YM007	1	View of Components AJ-CE /AJ-SCE/AJH-CE	rev 1.1
20YM013	1	View of Components AJ / AJH / SJ / SJP	rev 1.1
20YM019	1	View of Components AJ for carat (CT)	rev 1.1
20YM004	1	Mechanical Unit	-
20YM012	1	Mechanical Unit	-

2.2.2 Essential characteristics

Maximum capacity of the weighing cell in case of class 1:

- Max = 820 g with e = 0.01 g;
- Max = 6200 g with e = 0.1 g.

Maximum capacity of the weighing cell in case of class (II):

- Max = 420 g with e = 0.01 g;
- Max = 4200 g with e = 0.1 g;
- Max = 12 kg with e = 1 g.

2.2.3 Essential shapes

See drawings:

- Mechanical Unit, drawing number 20YM004;
- Mechanical Unit, drawing number 20YM012.



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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 drawings:

- AJ(H) and AJ(H)P-220CE~620CE External View, drawing number 20YM069 rev. 0.1;
- AJ and AJP-820CE~1200CE External View, drawing number 20YM070 rev. 0.1;
- CT and CT-DB External View, drawing number 20YM072 rev. 0.1;
- AJ(H)-2200~12KCE External View, drawing number 20YM071 rev. 0.1;
- CT-T and CT-TDB External View, drawing number 20YM073 rev. 0.1;
- SJ(P)-220~820CE External View, drawing number 20YM074 rev. 0.1;
- SJ(P)-1200CE External View, drawing number 20YM075 rev. 0.1;
- SJ(P)-2200~12KCE External View, drawing number 20YM076 rev. 0.1.

4 Conditions for conformity assessment

The marks, facilities for the marks and the inscriptions on the non-automatic weighing instrument fulfill the requirements of article 1 of Annex IV of Directive 2009/23/EC.