



Nederlands Meetinstituut

# EC type-approval certificate

Number **T6124** revision 3  
Project number 501358  
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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 Shinko Denshi Co., Ltd.  
3-9-11 Yushima, Bunkyo-ku  
Tokyo 113-0034  
Japan

In respect of A class **I** or **II**, electronic, self-indicating **non-automatic weighing instrument**.  
Manufacturer : Shinko Denshi  
Type : AJ[H], AJ for carat (CT), SJ or SJP

Characteristics

Class <b>I</b>	Class <b>II</b>
$n \leq 82000$ divisions	$n \leq 42000$ divisions
$500 \text{ g} \leq \text{Max} \leq 6200 \text{ g}$ or $2500 \text{ ct} \leq \text{Max} \leq 31000 \text{ ct}$	$50 \text{ g} \leq \text{Max} \leq 12 \text{ kg}$ or $250 \text{ ct} \leq \text{Max} \leq 60000 \text{ ct}$
$e \geq 0.01 \text{ g}$ or $e \geq 0.1 \text{ ct}$	$e \geq 0.01 \text{ g}$ or $e \geq 0.1 \text{ ct}$
$e = d$ or $e = 10d$	$e = d$ or $e = 10d$

Temperature range +10 °C / +30 °C

In the description number T6124 revision 3 further characteristics are described.

Valid until 5 November 2012

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Description and documentation The instrument is described in the description number T6124 revision 3 and documented in the documentation folder T6124-3, appertaining to this EC type-approval certificate.

Remarks This revision replaces the earlier versions, including its documentation folder.

Dordrecht, 31 March 2005  
NMI Certin B.V.

  
Ing. C. Oosterman  
Manager Product Certification



## 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 drawings:

- CT / AJ / AJH Block Diagram 1, drawing number 20YE001 rev. 1.1;
- AJ / AJH Block Diagram 2, drawing number 20YE002;
- 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 / AJH Block Diagram 2, drawing number 20YE002 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

Power supply: 9 V DC, supplied by AC/DC adapter or by internal battery.

### 1.3 Essential shapes

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

- AJ-220CE~620CE External View, drawing number 20YM001 rev. 3.1;
- AJ-820CE/1200CE External View, drawing number 20YM002;
- AJH-220CE~620CE External View, drawing number 20YM003 rev. 3.1;
- AJ(H)-2200~12KCE External View, drawing number 20YM011 rev. 2.1;
- AJ for carat (CT-CE) External View, drawing number 20YM008 rev. 2.1;
- AJ for carat (CT-TCE) External View, drawing number 20YM039;
- SJ(P)-220~820CE External View, drawing number 20YM040;
- SJ(P)-1200CE External View, drawing number 20YM041;
- SJ(P)-2200~12KCE External View, drawing number 20YM042.



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 drawings:

- AJ-220CE~620CE External View, drawing number 20YM001 rev. 3.1;
- AJ-820CE/1200CE External View, drawing number 20YM002;
- AJH-220CE~620CE External View, drawing number 20YM003 rev. 3.1;
- AJ(H)-2200~12KCE External View, drawing number 20YM011 rev. 2.1;
- AJ for carat (CT-CE) External View, drawing number 20YM008 rev. 2.1;
- AJ for carat (CT-TCE) External View, drawing number 20YM039;
- SJ(P)-220~820CE External View, drawing number 20YM040;
- SJ(P)-1200CE External View, drawing number 20YM041;
- SJ(P)-2200~12KCE External View, drawing number 20YM042.

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 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.

Windscreen over the load receptor (in case of type AJ(H)-220CE / -420CE / -620CE);  
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
AJDP PCB Parts Assignment	20YE004	1.1	
SJP-DP PCB Parts Assignment	21YE004	-	
Parts list AJ / AJH / SJ / SJP series	AJDP PCB	-	

#### 2.1.2 Essential characteristics

List of devices:

- 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 **II**);
- Semi-automatic span adjustment with internal or external calibration mass (only for class **I**);
- 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

Description	Drawing number	Rev.	Remarks
PCB lay out of Battery unit DJBT-1	20YE006	-	Including parts list

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.



## 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 weighing cell

### 2.2.1 Essential parts

Description	Drawing number	Rev.	Remarks
View of Components AJ / AJH / SJ / SJP	20YM007	-	
View of Components AJ / AJH / SJ / SJP	20YM013	-	
View of Components AJ for carat (CT)	20YM019	1.1	
Mechanical Unit	20YM004	-	
Mechanical Unit	20YM012	-	

### 2.2.2 Essential characteristics

Maximum capacity of the weighing cell in case of class **I**:

- 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

Description	Drawing number	Rev.	Remarks
Mechanical Unit	20YM004	-	
Mechanical Unit	20YM012	-	



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# Description

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### **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.