



# EC type-approval certificate

Number **T6676** revision 4  
Project number 10200656  
Page 1 of 7

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

In accordance with The Council Directive 2009/23/EC on non-automatic weighing instruments.

Manufacturer Shinko Denshi Co., Ltd.  
3-9-11 Yushima, Bunkyo-ku  
Tokyo 113-0034  
Japan

In respect of An electronic, single-interval, single-range **non-automatic weighing instrument**.  
Manufacturer mark/name: Shinko Denshi  
Type : HJ(R)-..K.., HJ(R)-CE and LN..(R) series  
"R" = model with internal calibration mass

## Characteristics

|                   |                    |                   |
|-------------------|--------------------|-------------------|
| Type              | HJ(R)-..K..        |                   |
| Accuracy class    | II                 |                   |
| Max               | 17 ~ 62 kg         | 85000 ~ 310000 ct |
| e ≥               | 1 g                | 5 ct              |
| d ≥               | d = e or d = 0.1 e |                   |
| n                 | ≤ 62000            |                   |
| Tare              | ≤ 100% of Max      |                   |
| Temperature range | 5 °C / 35 °C       |                   |

|                   |                      |                |                 |
|-------------------|----------------------|----------------|-----------------|
| Type              | HJ(R)-CE & LN..(R).. |                |                 |
| Accuracy class    | I                    | II             |                 |
| Max               | 6200 g               | 1.2 kg ~ 15 kg | 6000 ~ 75000 ct |
| e ≥               | 0.1 g                | 0.1 g          | 1 ct            |
| d ≥               | d = e or d = 0.1 e   |                |                 |
| n                 | ≤ 62000              | ≤ 42000        | ≤ 31000         |
| Tare              | ≤ 100% of Max        |                |                 |
| Temperature range | 10 °C / 30 °C        |                |                 |

**NMI Certin B.V.**  
Hugo de Grootplein 1  
3314 EG Dordrecht  
The Netherlands  
T +31 78 6332332  
certin@nmi.nl  
www.nmi.nl

This document is issued under the provision that no liability is accepted and that the applicant shall indemnify third-party liability.

The designation of NMI Certin BV. as Notified Body can be verified at <http://ec.europa.eu/enterprise/newapproach/nando/>

Parties concerned can lodge objection against this decision, within six weeks after the date of submission, to the general manager of NMI (see "Regulation objection and appeal against decisions of NMI" [www.nmi.nl](http://www.nmi.nl))

Reproduction of the complete document only is permitted





# EC type-approval certificate

Number **T6676** revision 4  
Project number 10200656  
Page 2 of 7

|                   |                      |               |                |
|-------------------|----------------------|---------------|----------------|
| Type              | HJ(R)-CE & LN..(R).. |               |                |
| Accuracy class    | I                    | II            |                |
| Max               | 620 g                | 220 g ~ 420 g | 1100 ~ 3100 ct |
| e ≥               | 0.01 g               |               | 0.1 ct         |
| d ≥               | d = e or d = 0.1 e   |               |                |
| n                 | ≤ 62000              | ≤ 42000       | ≤ 31000        |
| Tare              | ≤ 100% of Max        |               |                |
| Temperature range | 10 °C / 30 °C        |               |                |

|                   |   |                    |
|-------------------|---|--------------------|
| Type              | HJ-21 KCE & HJ-31 KCE & LN21001.. & LN31001 |                    |
| Accuracy class    | II  |                    |
| Max               | 21 kg ~ 31 kg                               | 100000 ~ 150000 ct |
| e ≥               | 1 g   | 5 ct               |
| d ≥               | 0.1 g                                       | d = e              |
| n                 | ≤ 31000                                     | ≤ 30000            |
| Tare              | ≤ 100% of Max                               |                    |
| Temperature range | 10°C / 30°C                                 |                    |

In the description number T6676 revision 4 further characteristics are described.

Valid until 23 December 2014

Description and documentation The instrument is described in the description number T6676 revision 4 and documented in the documentation folder T6676-5, appertaining to this EC type-approval certificate.

Remarks This revision EC type-approval certificate replaces the earlier versions, including its documentation folder.

The Notified Body no. 0122  
NMI Certin, 10 August 2010

  
C. Oosterman  
Head Certification Board



# Description

Number **T6676** revision 4  
Project number 10200656  
Page 3 of 7

## 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 load cell.

EMC protection measures:

- The A/D board is shielded with a metal cover;
- The scale is completely made of metal;
- HJ(R)-..K..: See block diagram 2, drawing number 22YE002;
- HJ(R)-CE & LN..(R)..: See block diagram 2, drawing number 22YE014;

Other protection measures:

- HJ(R)-..K..:IP65 water- and dust-proof.

### 1.2 Essential characteristics

Power supply:

- By external power supply: 12 V DC or;
- By internal battery: 7.2 V.

### 1.3 Essential shapes

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

- HJ(R)-..K..: External view (with pole), drawing number 22YM001;
- HJ(R)-..K..: External view, drawing number 22YM002;
- HJ(R)-CE & LN..(R)..: External view, drawing number 20YM066;
- HJ(R)-CE & LN..(R)..: External view, drawing number 22YM070;
- HJ-CE & LN..(R)..: External view, drawing number 22YM077;
- HJ(R)-..K..: View of components, drawing number 22YM004;
- HJ(R)-..K..: View of components, drawing number 20YM052;
- HJ(R)-CE & LN..(R)..: View of components, drawing number 22YM072;
- HJ(R)-CE & LN..(R)..: View of components, drawing number 20YM059.
- HJ-CE & LN..(R)..: View of components, drawing number 22YM078.

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:

- HJ(R)-..K..: Sealing, drawing number 22YM007;
- HJ(R)-CE & LN..(R)..: External view, drawing number 20YM066;
- HJ(R)-CE & LN..(R)..: External view, drawing number 22YM070;
- HJ-CE & LN..(R)..: External view, drawing number 22YM077

Inside the cabinet is a calibration lock, located on the main board.



# Description

Number **T6676** revision 4  
Project number 10200656  
Page 4 of 7

## 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, if 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.

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.

Battery;  
AC/DC-adapter;  
External power supply.



# Description

Number **T6676** revision 4  
 Project number 10200656  
 Page 5 of 7

## 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                 |
|--|--------------------|-----------------------|-------------------------|
| HJ(R)-...K...: Block diagram 1<br>HJ(R)-...K...: Block diagram 2                 | 22YE001<br>22YE002 | 04.10.7<br>04.10.7    |                         |
| HJ(R)-CE & LN..(R)...: Block diagram 1<br>HJ(R)-CE & LN..(R)...: Block diagram 2 | 22YE013<br>22YE014 | 05.04.26<br>05.04.29  |                         |
| HJ(R)-...K...: Main board  | 22YE003            | 04.6.15               | Incl. IC list (2 pages) |
| HJ(R)-CE & LN..(R)...: Main board  | 22YE015            | 05.04.29              | Incl. IC list (2 pages) |
| HJ(R)-...K...: Viba-2A PCB   | 22YE013            | 04.10.13              | Incl. IC list (2 pages) |
| HJ(R)-...K...: RS232C & Power board  | 22YE005<br>22YE005 | 04.6.15<br>2004.10.13 | Drawing<br>IC list      |
| HJ(R)-CE & LN..(R)...: RS232C & Power board                                      | 22YE017            | 05.04.29              | Incl. IC list (2 pages) |

#### 2.1.2 Essential characteristics

List of devices:

- Determination stability of equilibrium;
- Zero indicator;
- Initial zero-setting;
- Zero-tracking;
- 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 (optional);
- Semi-automatic span adjustment with internal calibration mass (optional);
- Acting upon significant faults;
- Checking the display;
- Memory storage;
- Weight unit selection (kg, g, ct).
- Changing from Net to Gross;
- Auxiliary indicating device with differentiated scale interval;
- Totalization (Accumulation function);
- Statistical function.



# Description

Number **T6676** revision 4  
 Project number 10200656  
 Page 6 of 7

## 2.1.3 Conditional parts

| Description                      | Drawing number | Rev.    | Remarks                 |
|----------------------------------|----------------|---------|-------------------------|
| HJK-BT PCB Battery circuit board | 22YE011        | 04.6.15 | Incl. IC list (2 pages) |
| HJK-LM PCB Limit output board    | 22YE009        | 04.6.15 |                         |

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;
- RS422A (optional);
- Limit outputs (optional).

## 2.1.4 Non-essential parts

Display;  
 Keyboard;  
 Internal printer;  
 Label printer.

## 2.1.5 Non-essential characteristics

Counting device (Parts counting);  
 Percentage indication (%);  
 Check weighing mode (Limit function).

## 2.2 The mechanical assembly with load cell

### 2.2.1 Essential parts

| Description                              | Drawing number | Rev.       | Remarks |
|--|----------------|------------|---------|
| HJ(R)-..K...: Mechanical Unit            | 22YM005        | 2004/06/08 |         |
| HJ(R)-CE & LN..(R)..: Mechanical Unit    | 20YM012        | 2005/02/01 |         |
| HJ(R)-CE & LN..(R)..: Mechanical Unit    | 22YM071        | 2006/08/02 |         |
| HJ(R)-CE & LN..(R)..: Mechanical Unit    | 22YM075        | 2007/01/31 |         |
| HJ(R)-CE & LN..(R)..: Tuning-Fork sensor | 20YM058        | 2005/04/21 |         |
| HJ(R)-CE & LN..(R)..: Tuning-Fork sensor | 22YM076        | 2007/02/01 |         |

## 2.2.2 Essential characteristics

The maximum capacity of the weighing cell is identical to the maximum capacity of the non-automatic weighing instrument.

- For HJ(R)-..K...:  $e \geq 1$  g;
- For HJ(R)-CE & LN..(R)...:  $e \geq 0.01$  g.

The voltage applied to the weighing sensor is 5 V DC.

## 2.2.3 Essential shapes

| Description                               | Drawing number | Rev.       | Remarks |
|---|----------------|------------|---------|
| HJ(R)-..K...: View of components          | 22YM004        | 2004/06/08 |         |
| HJ(R)-..K...: View of components          | 20YM052        | 2005/04/20 |         |
| HJ(R)-CE & LN..(R)...: View of components | 22YM072        | 2006/08/02 |         |
| HJ(R)-CE & LN..(R)...: View of components | 20YM059        | 2005/04/22 |         |
| HJ-CE & LN..(R)...: View of components    | 22YM078        | 2007/01/31 |         |

## 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 of Directive 2009/23/EC.