



EC type-approval Certificate

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Project number 15200340
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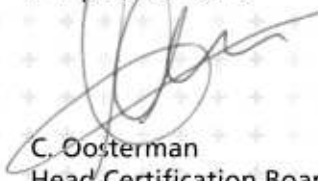
Manufacturer Shinko Denshi Co., Ltd.
3-9-11 Yushima, Bunkyo-ku,
Tokyo, 113-0034
Japan

Measuring instrument **A Non-automatic weighing instrument**
Type : FS, FZ series

Further properties are described in the annexes:
– Description T8736 revision 0;
– Documentation folder T8736-1.

Valid until 7 September 2025

Issuing Authority **NMI Certin B.V., Notified Body number 0122**
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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

The display unit;
 The load platform.

1.2 Essential characteristics

Accuracy class	Ⓜ
Maximum capacity	$620 \text{ g} \leq \text{Max} \leq 300 \text{ kg}$
Verification scale interval	$e \geq 0,01 \text{ g}$
Actual scale interval	$e = 10 \text{ d}, 5 \text{ d}, 2 \text{ d}$ or 1 d
Weighing range(s)	Single interval
Maximum number of scale intervals (one weighing range)	$n \leq 62000$ divisions
Tare	$T \leq -\text{Max}$
Temperature range	$+5 \text{ °C} / +40 \text{ °C}$
Power supply voltage	100 – 240 V AC 50/60 Hz, or; 6 V DC battery, or; 6 V AC / DC adapter.
Software checksum display unit	7EEE
Software checksum load platform	57D8 (single weighing cell) BB85 (dual weighing cells)

Software:

- The checksum will be displayed at start-up, or after pressing the key sequence:
 - Press the [Shift] and [Function F] keys to enter the execution menu from weighing mode;
 - Shift to "7.ProG.no" using the [Direction] keys "↑" and "↓";
 - Press [Enter] key 3 times to display the display unit checksum;
 - Press [Enter] key one more time to display the load platform checksum;
 - Press [Enter] key one more time to return to the state of weighing.
- The non-automatic weighing instrument has embedded software.

List of legally relevant functions:

- Determination stability of equilibrium;
- Indication of stable equilibrium;
- Zero indicator;
- Semi-automatic zero-setting;
- Initial zero-setting;
- Zero-tracking (optional);
- Semi-automatic subtractive tare weighing or tare balancing;
- Preset tare;
- Adjustment / set-up mode via a switch in the load platform;
- Acting upon significant faults;
- Checking the display;
- Check weighing mode (optional);
- Percentage weighing mode (optional);
- Totalisation (optional);
- Weight unit selection (g, kg) (for $e \geq 10$ g only);
- Linearity compensation: the linearity can be compensated to a maximum of 5 points;
- Temperature compensation;
- Auxiliary indicating, resolution selectable by the user;
- Approximate indicating device (optional);
- Indications other than primary indications.

1.3 Essential shapes

Number	Pages	Description	Remarks
8736/0-01	1	Exploded view FZ, FS	-
8736/0-02	1	Exploded view FZ-KP, FS-KP	-
8736/0-03	1	Exploded view FZ-K, FS-K	-
8736/0-04	1	Exploded view FZ-KF, FS-KF	-

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

The adjustment lock is located in the load platform.

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 a 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 complies with the requirements of WELMEC 2.5 Issue 2, 2.2.



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The non-automatic weighing instrument is fitted with a levelling device and a level indicator. A ring on the level indicator indicates when the maximum tilt is 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 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.

Other non-essential parts:

- Battery;
- Windscreen (windshield) over the load receptor (for FZ-620, FS-620).

2 Information about the main constituent parts of the non-automatic weighing instrument

2.1 The display unit

2.1.1 Conditional parts

Display unit:

Number	Pages	Description	Remarks
8736/0-05	1	Block diagram indicator IND	FS series
8736/0-06	2	H2-DSP Main board display unit	
8736/0-07	2	YG2-PS Power circuit board	
8736/0-08	1	Block diagram indicator INDx	FZ series
8736/0-09	2	YG-DSP Main board display unit	
8736/0-10	2	YG-SB Intrinsic safety board	

External power supply / interface unit (FZ series only):

Component	Manufacturer	Type	Remarks
Power module	TDK-Lambda	ZWS10B-24	24 V DC, 0,5 A
Safety barrier	Measurement Technology	MTL5051	Serial data communications isolator

EMI protection measures:

- Ferrite on the cable from the main display board (CN6) to the sub-display board (CN5) (for display units equipped with sub displays);
- Ferrite on the cable from the main display board to the load platform connector;
- The power board is covered by a metal housing (for INDx version only);
- Ferrite on the earth wire from the mains connector to the power board (for INDx version only);
- Ferrite on the AC/DC adapter cable (for IND version only).

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

- RS232;
- RS422;
- Digital I/O;
- IrDA (Infrared communication).

2.1.2 Non-essential parts

Display;
 Keyboard.

2.2 The load platform

2.2.1 Essential parts

Number	Pages	Description	Remarks
8736/0-11	1	Block diagram load platform FZ, FS	-
8736/0-12	1	Block diagram load platform FZ-KP, FS-KP	-
8736/0-13	1	Block diagram load platform FZ-K, FS-K	-
8736/0-14	1	Block diagram load platform FZ-KF, FS-KF	-
8736/0-15	2	YG-M Weighing cell microprocessor board	-
8736/0-16	2	YG-OSC Weighing cell oscillation board	-

Number	Pages	Description	Remarks
8736/0-17	5	Weighing sensor box	-
8736/0-18	5	Weighing detector	-

EMI protection measures:

- The electronics in the weighing module are covered by a metal cover (only for models FZ-KP, FS-KP);
- Ferrite on the cable to the display unit;
- 4 Ferrites on the cable from the oscillator board to the weighing detector (only for models FZ-K, FS-K and FZ-KF, FS-KF);
- Ferrite on the cable from the microprocessor board to the oscillator board (only for models FZ-KP, FS-KP);
- 2 Ferrites on the cable from the oscillator board to the weighing detector (only for models FZ-KP, FS-KP).

2.2.2 Essential characteristics

The instrument is equipped with a tuning fork weighing cell (frequency sensing method).

2.2.3 Essential shapes

See chapters 1.3 and 2.2.1.

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:

Number	Pages	Description	Remarks
8736/0-19	1	Sealing FZ, FS	-
8736/0-20	1	Sealing FZ-KP, FS-KP	-
8736/0-21	1	Sealing FZ-K, FS-K	-
8736/0-22	1	Sealing FZ-KF, FS-KF	-
8736/0-23	1	Sealing display unit	FS series
8736/0-24	1	Sealing display unit	FZ series



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The display unit is electronically sealed to the load platform. Exchange of the display unit is not possible.

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.