Nederlands Meetinstituut

EC type-approval certificate

Number **T6588** revision 1
Project number 403766

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	CAS Corporation #19 Kanap-ri, Kwangjuk-Myun Yangju-Gun, KyungKi-Do South Korea
In respect of	A class (III), electronic, single- interval, **non-automatic weighing instrument**, intended to be used for direct sales to the public. Manufacturer : CAS Corporation Type : ER-series
Characteristics	6 kg ≤ Max ≤ 30 kg e ≥ 2 g n ≤ 3000 divisions In the description number T6588 revision 1 further characteristics are described.
Valid until	6 September 2014
Description and documentation	The instrument is described in the description number T6588 revision 1 and documented in the documentation folder T6588-1, appertaining to this EC type-approval certificate.
Remarks	This revision replaces the earlier version, except for its documentation folder.

Delft, 13 September 2004
NMi Certin B.V.

Ing. C. Oosterman
Manager Product Certification

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Verispect B.V. (27.228.700)

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:
- Wiring Scheme ER LCD version, drawing number 9000-ER0-0000;
- Wiring Scheme ER VFD version, drawing number 9000-ER0-0001;

The electronics;
The mechanical assembly with load cell.

EMC protection measures:
- Ferrite bead on the cable from main PCB to A/D PCB (4 turns);
- Ferrite bead on the cable from main PCB to power switch (3 turns);
- Ferrite bead on the cable from main PCB and keyboard (2 turns);
- Ferrite bead on the cable between main PCB and RS232 PCB (3 turns);
- Ground cable between AC ground of power socket and bottom platform of load cell;
- Ground cable between RS232 connector and bottom platform of load cell.

1.2 Essential characteristics

Power supply:
- 230 V AC, 50/60 Hz;
- 6.3 V (internal rechargeable battery).

1.3 Essential shapes

The non-automatic weighing instrument is built according to the drawings:
- ER (Exploded view), drawing number 3000-ER0-0000;
- ER-R (Exploded view), drawing number 3000-ERR-0001.

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 drawing:
- Sealing Method, drawing number 3000-ER0-0001.

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 may be equipped with an Electronic Point of Sale (EPoS) or an Electronic Cash Register (ECR), if these EPOS and ECR are 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 equipped with Electronic Funds Transfer equipment (EFT/ECU), if these EFT/ECU represent only the price total on the display.
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 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.

Rechargeable battery.

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
ER LCD Main PCB	9000-ER0-0006	00	Component layout Parts list, 1 page
ER VFD Main PCB	9000-ER1-0006	00	Component layout Parts list, 1 page
ER Analog PCB Top	9000-ERS-0004	00	Component layout Parts list, 1 page

2.1.2 Essential characteristics

List of devices:
- Determination stability of equilibrium;
- Zero indicator;
- Semi-automatic zero-setting;
- Initial zero-setting;
- Zero-tracking;
- Semi-automatic subtractive tare balancing;
- Gravity compensation;
- Calibration / set-up mode via a switch on the main board;
- Acting upon significant faults;
- Checking the display;
- Price calculation;

When equipped with a printer the following devices may be present:
- Indication of additional information;
- Memory storage;
- Non-weighed articles;
- Totalization;
- PLU function.

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:
- RS232.

2.1.4 Non-essential parts

Display;
Keyboard.

2.2 The mechanical assembly with load cell

2.2.1 Essential parts

Description	Drawing number	Rev.	Remarks
TP-6, 15, 30L (Specification)	104030600	00	

2.2.2 Essential characteristics

$e \geq E_{max}/3000$;
Excitation power supply 5 V DC.

2.2.3 Essential shapes

Description	Drawing number	Rev.	Remarks
ER (Exploded view)	3000-ER0-0000	00	
ER-R (Exploded view)	3000-ERR-0001	00	
TP-6, 15, 30L (Specification)	104030600	00	

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 fulfil the requirements of article 1 of Annex IV.