

Nederlands Meetinstituut

# EC type-approval certificate

Number **T2487** revision 5

Project number 408670

Page 1 of 5

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  
CAS Building, #440-1 Sungnae-Dong  
Kangdong-Ku, Seoul  
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  
Type : LP, LP-1, LP-1.6, LP-T and XP

Characteristics  $6 \text{ kg} \leq \text{Max} \leq 30 \text{ kg}$   
 $e \geq 2 \text{ g}$   
 $n \leq 3000$  divisions  
 $T \leq -50\%$  of Max

In the description number T2487 revision 5 further characteristics are described.

Valid until 19 December 2014

Description and documentation The instrument is described in the description number T2487 revision 5 and documented in the documentation folder T2487-3, appertaining to this EC type-approval certificate.

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

Delft, 19 December 2004  
NMI Certin B.V.

  
Ing. C. Oosterman  
Manager Product Certification

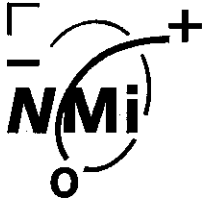
**Nederlands Meetinstituut**  
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**NMI B.V.**  
(Chamber of Commerce no.27.228.701)

**Subsidiary companies:**  
NMI Van Swinden Laboratorium B.V. (27228703)  
NMI Certin B.V. (27.233.418)  
Verispect B.V. (27.228.700)

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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, may not be in conflict with the legislation.

### 1.1 Essential parts

See drawings:

- "Connection diagram", drawing number 6054-LP0-0030;
- "Connection diagram", drawing number page 4;

The electronics;

The mechanical assembly with load cell.

EMC protection measures for instruments according to drawing "Connection diagram", drawing number page 4:

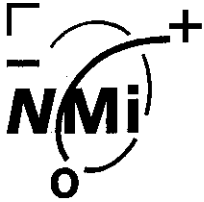
- The A/D board is shielded by a metal cover;
- Noise filter (Type SN-M3H-CM).
- Ferrites:
  - On cable between Power PCB and Printer controller;
  - On cable between Power PCB and Transformer (2 turns);
  - On cable between load cell and A/D-converter;
  - On cable between Main board and rear display (2 turns);
  - On cable between Main board and CN5;
  - On cable from power supply PCB towards keyboard (2 turns);
  - On cable from power supply PCB towards main PCB (3 turns);
  - On cable from main PCB towards keyboard (Type ZCAT3035-1330, 1 turn);
  - On cable from keyboard towards tower junction PCB (Type ZCAT3035-1330, 1 turn);
  - On cable from tower junction PCB towards tower displays (Type ZCAT3035-1330, 1 turn).
- Earth cables:
  - The keyboard is connected to the base of the instrument;
  - The base of the instrument is connected to ground.

### 1.2 Essential characteristics

Power supply:

- 220-240 V AC, 50/60 Hz, or;
- 110-120 V AC, 50/60 Hz.

The instrument can be used in a master/slave configuration, as a master or as a slave.



### 1.3 Essential shapes

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

- "Standard", drawing number 2-1);
- "R-Type", drawing number 2-2).

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 6064-LP0-0010.

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 an other party to the EEA agreement.

Inside the cabinet is a calibration lock, located behind the sealing plastic cover under the load receptor of the NAWI.

### 1.4 Conditional parts

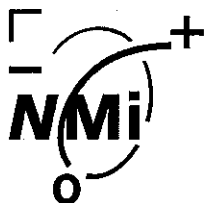
The non-automatic weighing instrument may be equipped with peripheral equipment which is used for the applications listed in article 1(2)(a) of the EC Directive (90/384/EEC), if the peripheral equipment is certified to be connected to an EC type-approved non-automatic weighing instrument by a Notified 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 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.

The NAWI may be equipped with an internal printer to produce a sticker or a ticket.



## 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.

## 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
Main PCB location	6014-A00-0564	0	3 pages, incl. part list.
	6114-A00-0566	-	3 pages, incl. part list.
	9000-L16-0003-0	-	2 pages, incl. parts list.
Power PCB location	6034-A00-0112	0	3 pages, incl. part list.
	6114-A01-0115	0	2 pages, incl. part list.
Analog PCB location	6144-A00-0065	0	2 pages, incl. part list.

#### 2.1.2 Essential characteristics

List of devices:

- Indicating device;
- Indicating component;
- Device to determine stability of equilibrium;
- Zero indicating device;
- Semi-automatic zero-setting device;
- Initial zero-setting device;
- Zero-tracking device;
- Semi-automatic subtractive tare balancing device;
- Semi-automatic calibration device;
- Device that acts upon significant faults;
- Device to check the display;
- Price calculation device.

When equipped with a printer the following devices may be present:

- Memory storage device;
- Non-weight articles function;
- PLU's;
- Master / slave configuration.

### 2.1.3 Conditional parts

The interface section is located on the main board / 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;
- RS485.

### 2.1.4 Non-essential parts

- Display;
- Keyboard;
- Pinter control board.

## 2.2 The mechanical assembly with load cell

### 2.2.1 Essential parts

Description	Drawing number	Rev.	Remarks
Body & display assy	6004-LP0-0010	0	Mechanical assembly with load cell

### 2.2.2 Essential characteristics

- $e \geq E_{max}/5000$ ;
- Utilization of the load cell  $\geq 60$  %;
- Excitation power supply 12 V DC.

## 3 Approval conditions

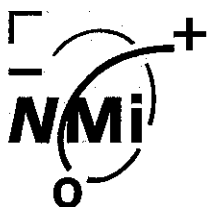
See chapter 1.3, essential shapes.

## 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.



Nederlands Meetinstituut

**OIML Member State**  
The Netherlands

**OIML Certificate N° R76/1992-NL1-04.37**

Project number 408670

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## OIML CERTIFICATE OF CONFORMITY

### Issuing Authority

Name: NMI Certin B.V.  
Address: Hugo de Grootplein 1, Dordrecht  
Person responsible: Ing. C. Oosterman

### Applicant

Name: CAS Corporation  
Address: CAS Building, #440-1 Sungnae-Dong  
Kangdong-Ku, Seoul  
Korea

### Manufacturer of the certified type

Name: CAS Corporation  
Address: CAS Building, #440-1 Sungnae-Dong  
Kangdong-Ku, Seoul  
Korea

### Identification of the certified type

Type : LP, LP-1, LP-1.6, LP-T and XP

$6 \text{ kg} \leq \text{Max} \leq 30 \text{ kg}$

$e \geq 2 \text{ g}$

$n \leq 3000 \text{ divisions}$

$T \leq - 50\% \text{ of Max}$

Temperature range  $-10^{\circ}\text{C} / 40^{\circ}\text{C}$

This Certificate attests the conformity of the above identified type (represented by the sample or samples identified in the associated Test Report, the type-approval certificate and the description with number T2487 and the appertaining documentation folder), with the requirements of the following Recommendation of the International Organization of Legal Metrology (OIML):

R76

Edition 1992

for accuracy class **III**

This Certificate relates only to the metrological and technical characteristics of the type of the instrument covered by the relevant OIML International Recommendation identified above.

This Certificate does not bestow any form of legal international approval.

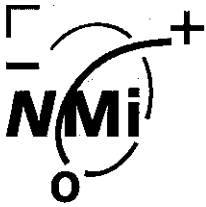
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The Netherlands

**OIML Certificate N° R76/1992-NL1-04.37**  
Project number 408670  
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The conformity was established by the results of tests and examinations provided in the associated Test Report:

N° R76/1992-NL-94.12 that includes 57 pages;  
10066940 that includes 14 pages;  
N° R76/1992-NL1-04.37 that includes 28 pages.

The Issuing Authority  
Ing. C. Oosterman  
Manager Product Certification

  
19 December 2004

The OIML Member  
Dr. ir. C.J. van Mullem

  
19 December 2004

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