

# EU Type Examination Certificate

**No. 0200-NAWI-08071**

## **PBII Series**

### **NON-AUTOMATIC WEIGHING INSTRUMENT**

**Issued by**        **FORCE Certification**  
EU - Notified Body No. 0200

In accordance with the requirements in Directive 2014/31/EU of the European Parliament and Council.

**Issued to**        CAS Corporation  
#262, Geurugogae-ro, Gwangjeok-myeon,  
Yangju-si, Gyeonggi-do  
REPUBLIC OF KOREA

**In respect of**    Non-automatic weighing instrument designated PBII with variants of modules of load receptors and load cells.  
Accuracy class III, multi-interval  
Maximum capacity, Max: 30 kg to 150 kg  
Verification scale interval:  $e \geq 5$  g  
Verification scale intervals:  $n \leq 3000$  or  $n_i \leq 2 \times 3000$   
Variants of models are set out in the annex.

The conformity with the essential requirements in annex 1 of the Directive is met by the application of the European Standard EN 45501:2015 and of OIML R76:2006.

The principal characteristics and approval conditions are set out in the descriptive annex to this certificate.

The annex comprises 9 pages.

**Issued on**        **2020-05-06**  
**Valid until**     **2030-05-06**

## Descriptive annex

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## 1. Name and type of instrument

This non-automatic weighing instrument is designated the PBII (Portable Bench Series). The instrument is a Class III, self-indicating, multi-interval, weighing scale operated by 6 VDC from an external power supply.

The instrument may be used for direct sales to the public.

The name of the instruments may be followed by alphanumeric characters for technical, legally or commercial characterisation of the instrument.

## 2. Description of the construction and function

### 2.1 Construction

The main features of the instruments are,

- Stainless steel frame
- Indicator comprising LCD display and keypad
- ABS plastic load receptor
- Level indicator and adjustable feet
- Construction variant: wall mounted indicator (Figure 2)

### 2.2 Devices

- Initial zero setting device ( $\leq 20\%$  of Max)
- Semi-automatic zero setting device ( $\leq 4\%$  of Max)
- Zero tracking device ( $\leq 4\%$  of Max)
- Zero indicator
- Net indicator
- Stable weight indicator
- Semi-automatic subtractive tare balancing device
- Gravity compensation
- Weighing unstable samples
- Low battery indicator
- Calibration / set-up mode via sealed internal switch

### 2.3 Operation

#### 2.3.1 Switch-on

At switch-on, a display test is performed to ensure that the displays have no defect.

#### 2.3.2 Zero-tracking

Zero tracking operates provided that the instrument is within range of not more than 4% of its capacity.

#### 2.3.3 Semi-automatic zero setting

The zero button operates provided that the instrument is within range of not more than 4% of its capacity.

### 2.3.4 Over-range and under-range

If the load is less than gross zero, then the display shows a "-" sign before the value.

The instrument may be set to display weight up to nine divisions above Max. At greater loads the display shows "ERR 3".

### 2.3.5 Semi-automatic Tare

Subtractive tare balancing can be performed. The net indicator is on, when a tare is active.

### 2.3.6 Software version

The software is designated yy1.xx,

yy is an optional county specific code.

xx is for non-legal minor changes in the software.

This information is displayed at power up.

## 3. Technical data

### 3.1 Scales

#### 3.1.1 Metrological characteristics

| Model            | PBII       |            |            |
|------------------|------------|------------|------------|
| Max              | 15/30 kg   | 30/60 kg   | 60/150 kg  |
| Min              | 100 g      | 200 g      | 400 g      |
| e =              | 5/10 g     | 10/20 g    | 20/50 g    |
| T ≤              | -14.995 kg | -29.990 kg | -59.980 kg |
| E <sub>max</sub> | 50 kg      | 100 kg     | 250 kg     |

#### 3.1.2 Rated operating conditions

The instrument operates on 6 VDC from an external adapter for 100 - 240 Vac (50/60 Hz) mains power supply.

A rechargeable 6 V DC / 1.3 Ah battery of the type Li-ion, Pb or Mh may also be fitted to the instrument. Alternate can 4 x 1.5 V (type C) standard non-rechargeable batteries be used.

The temperature range for the instruments is -10 °C / +40 °C.

#### 3.1.3 Load cell

The load cell fitted in the instrument is a CAS load cell, model BCS-XXPB (350 Ohm, 2mV/V), according to the tables in section 3.1.1.

## 3.2 Documents

The documents filed at FORCE (reference No. 120-22358) are valid for the weighing instruments described here.

## **4. Interfaces and peripheral equipment**

### **4.1 Interfaces**

The instrument may have the following interface type:

- RS232C
- Bluetooth
- USB

### **4.2 Peripheral devices**

The following peripheral devices may be connected to the interfaces provided:

- The instrument may be connected to any peripheral device that has been issued with a Test, Part or Evaluation Certificate by a Notified Body responsible for Module B under Directive 2014/31/EU and bears the CE marking of conformity to the relevant directives; or
- A peripheral device without a Test, Part or Evaluation Certificate may be connected under the following conditions:
  - o it bears the CE marking for conformity to the EMC Directive;
  - o it is not capable of transmitting any data or instruction into the weighing instrument, other than to release a printout, checking for correct data transmission or validation;
  - o it prints weighing results and other data as received from the weighing instrument without any modification or further processing; and
- it complies with the applicable requirements of EN45501, i.e. 4.2, 4.4, 4.6 and 4.7.

A printing device may print additional information such as date or number to identify the printed weighing result(s) or sets of weighing results.

## **5. Approval conditions**

### **5.1 Measurement functions other than non-automatic functions**

Measurement functions that will enable the use of the instrument as an automatic weighing instrument are not covered by this type approval.

### **5.2 Alternative manufacturers**

The instruments can alternatively be manufactured by the following companies,

Shanghai CAS Electronics Co., Ltd,  
Maixinroad 448, Xinqiaozhen, Songjiangqu,  
Shanghai,  
China

CAS Elektronik San. Tic. A.S.  
Yukari Dudulu, Bostanci Cad. Mevdudi Sokak No: 34  
Umraniye-Istanbul  
Turkey

CAS (Zhejiang) Electronics Co., Ltd  
99# Changjiang Road  
Jiashan County, Zhejiang Province  
China

CAS Deutschland AG  
Brackestraße 1  
38159 Vechelde  
Germany

## **6. Special conditions for verification**

None.

## **7. Securing and location of seals and verification marks**

### **7.1 Securing and sealing**

Seals shall bear the mark of the manufacturer or alternative verification mark of a notified body according to ANNEX II, module D or F of Directive 2014/31/EU.

#### **7.1.1 Scale**

The data plate is secured, either by sealing or by being of a form such that it is destroyed when removed.

Access to the electronics, load cell and its calibration switch is prevented by a plate covering the switch and one of the assembly screws. The plate is secured by wire and seal. The sealing method is shown in Figure 3.

## **8. Location of CE mark of conformity and inscriptions**

### **8.1 Scale**

#### **8.1.1 CE mark**

CE mark and supplementary metrological marking shall be applied to the scale according to article 16 of Directive 2014/31/EU.

#### **8.1.2 Inscriptions**

Located near or shown in the display(s):  $Max_i$ , Min,  $e_i =$

On a data plate located visible on the scale enclosure:

- Manufacturer's trademark and/or name
- Manufacturers postal address
- Model / type designation
- Serial number
- Accuracy class
- $Max_i$ , Min,  $e_i =$
- Maximum tare ( $T =$ )
- Temperature range (optional)
- Type examination certificate number
- Electrical data and other inscriptions.

## 9. Pictures

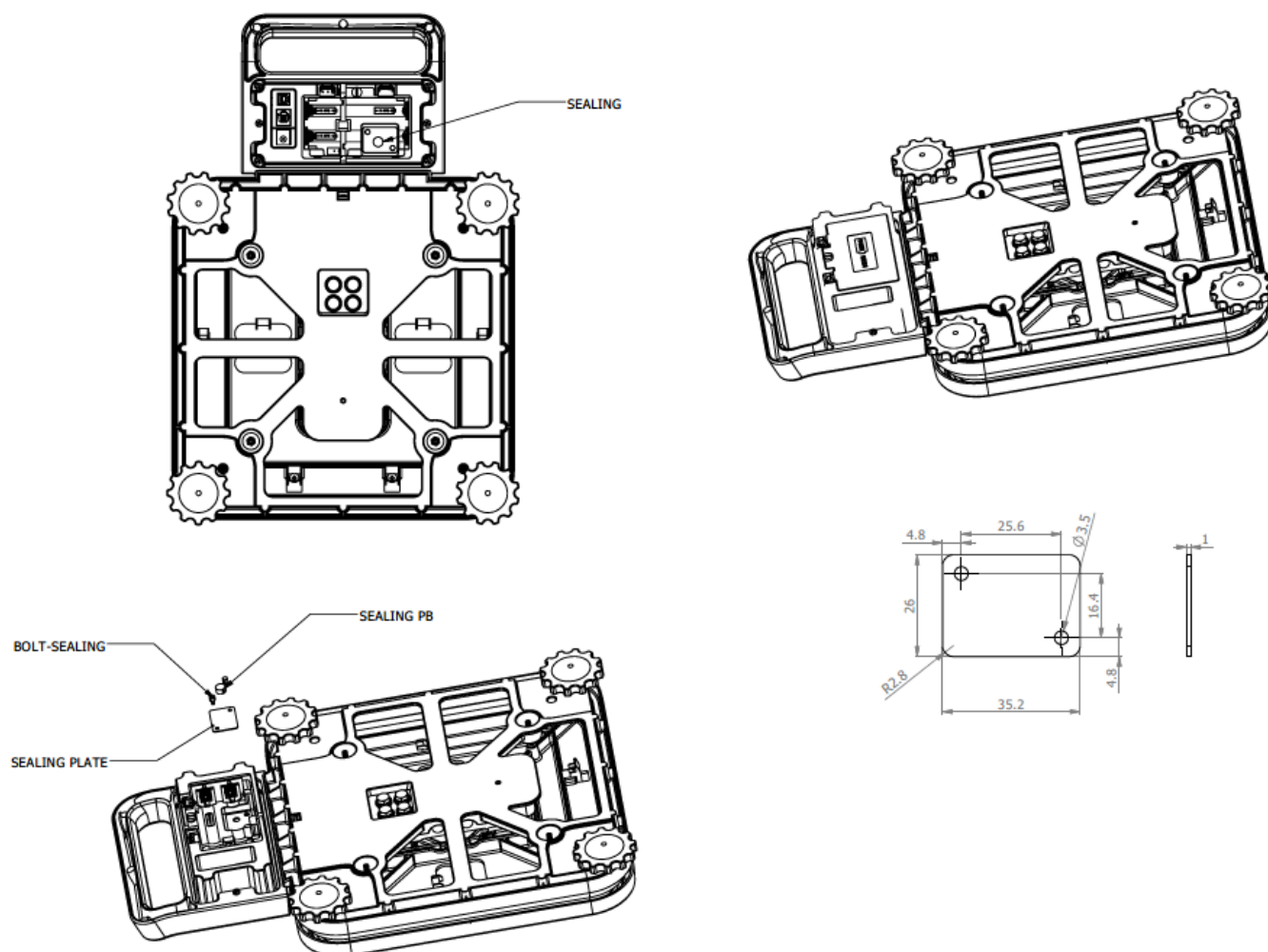


**Figure 1** PBII scale





**Figure 2** PBII scale with wall mount option.



**Figure 3** Sealing method – wire and seal