

## EC Type-Approval Certificate UK 2882 Revision 2

Issued by:

**The National Measurement Office**  
**Notified Body Number 0126**

In accordance with the requirements of the Non-automatic Weighing Instruments Regulations 2000 (SI 2000/3236) which implement, in the United Kingdom, Council Directive 2009/23/EC, this EC type-approval certificate has been issued to:

**CAS Corporation**  
**#262, Geurugogae-ro**  
**Gwangjeok-myeon**  
**Yangju-si**  
**Gyeonggi-do**  
**Republic of Korea**

In respect of a dual-interval, Class III non-automatic weighing instrument designated the PB Model and having the following characteristics:

15/30 kg ≤ Maximum capacity ≤ 100/200 kg

e ≥ 5/10 g

n = 3000 for Class III instruments per partial weighing range, with two partial weighing ranges

The necessary data (principal characteristics, alterations, securing, functioning etc) for identification purposes and conditions (when applicable) are set out in the descriptive annex to this certificate.

This revision replaces earlier versions of this certificate.

**Issue Date:** 11 December 2013  
**Valid Until:** 10 February 2020  
**Reference No:** TS1201/0035



**Signatory:** P R Dixon  
**for** Chief Executive

# Descriptive Annex

## 1 NAME AND TYPE OF INSTRUMENT

This instrument is a PB Series, PB (Portable Bench) Model, Class III, mains-operated, self-indicating, dual-interval, non-automatic weighing instrument and may be used for direct sales to the public (Figure 1).

## 2 DESCRIPTION

### 2.1 Construction

#### 2.1.1 Mechanical

Main features:

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

#### 2.1.2 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
- Semi-automatic subtractive tare balancing device
- Net indicator
- Gravity compensation
- Totalisation
- Hold function
- Low battery indicator

#### 2.1.3 Load cell

The load cell is a CAS load cell, model BCS, capacity according to table 3.2.

### 2.2 Operation

#### 2.2.1 Switch-on

At switch-on, a display test is performed to ensure that all segments are active.

#### 2.2.2 Zero-tracking

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

### 2.2.3 Semi-automatic zero setting

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

### 2.2.4 Over-range and under-range

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

The instrument is set to display weights up to nine divisions above Max. At greater loads the display shows “ERR 3”.

### 2.2.5 Tare

Subtractive tare balancing can be performed.

## 3 TECHNICAL DATA

### 3.1 Power supply

The instrument may operate on a 12 VDC / 1.25 AH power supply via a mains adaptor; any CE-mark adaptor may be used.

A rechargeable 6 V DC / 1.3 AH battery may also be fitted to the instrument, or 4 x 1.5 V (type C) standard non-rechargeable batteries.

### 3.2 Metrological characteristics

Model	PB			
Max	15/30 kg	30/60 kg	60/150 kg	100/200 kg
Min	100 g	200 g	400 g	1 kg
e =	5/10 g	10/20 g	20/50 g	50/100 g
T	-14.995 g	-29.990 g	-59.980 g	-99.950 g
E <sub>max</sub>	50 kg	100 kg	250 kg	250 kg

## 4 PERIPHERAL DEVICES AND INTERFACES

### 4.1 Interfaces

The instrument may have the following interface type:

- RS232

### 4.2 Peripheral devices

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

- Peripheral devices that have been issued with a test certificate by a Notified Body responsible for type approval under Directive 2009/23/EC; or

- Peripheral devices without a test certificate under the following conditions:
  - it bears the CE marking for conformity to the EMC Directive;
  - 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;
  - it prints weighing results and other data as received from the weighing instrument without any modification or further processing;
  - 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**

This certificate is issued subject to the following conditions:

### **5.1 Legends and inscriptions**

**5.1.1** The remote display bears the following legends on or near the display:

Max  
Min  
e =

**5.1.2** The instrument shall bear the following legends:

Class III  
CE marking  
Green M  
Serial number  
Manufacturer's mark or name  
Certificate number  
T =

The markings and inscriptions shall fulfil the requirements of Paragraph 1 of Annex IV of the Directive 2009/23/EC.

## **6 SECURING AND VERIFICATION MARKS**

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

**6.2** Components that may not be dismantled or adjusted by the user must be secured by a wire and seal solution or by a suitable mark placed over the securing screws of the housing. The securing mark may be either:

- a mark of the manufacturer and/or manufacturer's representative, or
- an official mark of a verification officer.

Figure 3 shows the sealing of the calibration switch.

**6.3** Verification marks, and the CE-marking, are located on, or adjacent to, the data plate situated at the back of the display.

## **7 ALTERNATIVES**

**7.1** Having the instruments 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

**7.2** Having the “U-SEND” and/or “C-SEND” modes enabled on the instrument, which allows unstable weights to be printed (Continuous and Change weight modes respectively). Weights values printed in these modes are identified as stable (legal for trade) or unstable (non-legal for trade) values by S or U respectively. This shall be documented in the User Manual, an example is shown in Figure 4.

## **8 ILLUSTRATIONS**

- Figure 1 PB Series, PB Model  
Figure 2 Wall-mounted construction  
Figure 3 Calibration switch sealing methods  
Figure 4 U-SEND/C-SEND User Manual sections

## **CERTIFICATE HISTORY**

<b>ISSUE NO.</b>	<b>DATE</b>	<b>DESCRIPTION</b>
UK 2882	11 February 2010	Type approval first issued.
UK 2882 Revision 1	17 November 2011	Direct sales to the public added to certificate.
UK 2882 Revision 2	11December 2013	Applicant’s address on the front page changed from: 19 Ganap-Ri, Gwangjuk-Myoun, Yangji-Si, Gyeonggi-Do 482-841, Republic of Korea  CAS (Zhejiang) Electronics Co., Ltd added to section 7.1.  Section 7.2 added.



**Figure 1 PB Series, PB Model**



**Figure 2 Wall-mounted construction**

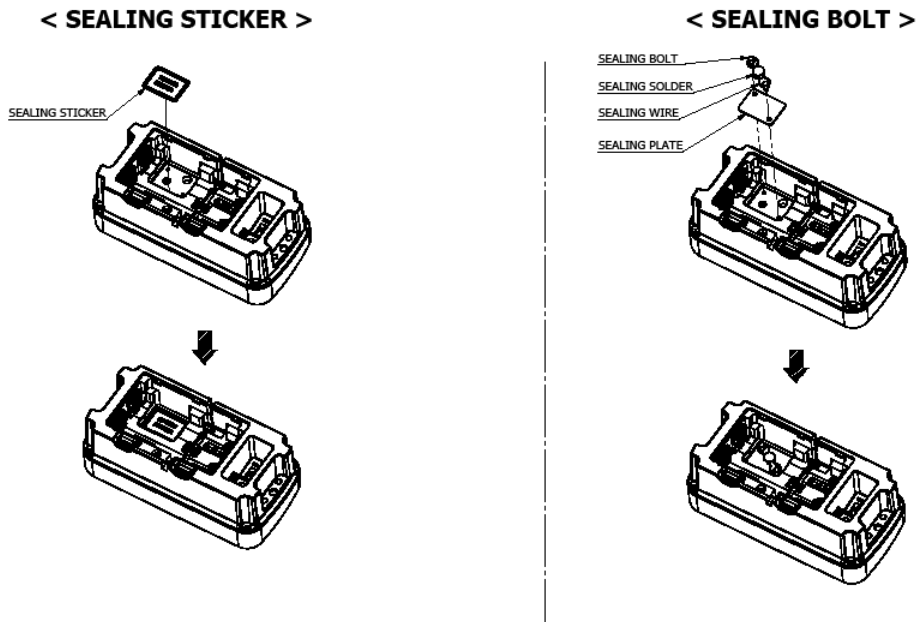


Figure 3 Calibration switch sealing methods

<p><b>5-4. U-Send</b></p> <p><b>1) Mode Setting</b> - This Mode is 'Continuous Mode'.</p> <p><b>2) Operation</b> ...</p> <p><b>3) Send Data</b></p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><b>U-SEND MODE</b> =&gt; <b>Continuous Mode</b></p> <p>S 0.00 kg</p> <p>S 0.00 kg</p> <p>U 0.56 kg</p> <p>U 1.21 kg</p> <p>U 2.80 kg</p> <p>U 3.74 kg</p> <p>S 4.00 kg</p> <p>S 4.00 kg</p> </div> <p>'S': Stable Status 'U': Unstable Status ※ 'U' Mark means the weight cannot be used for legal purposes.</p>	<p><b>5-5. C-Send</b></p> <p><b>1) Mode Setting</b> - This Mode is 'Change weight Mode'.</p> <p><b>2) Operation</b> ...</p> <p><b>3) Send Data</b></p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><b>C-SEND MODE</b> =&gt; <b>Change weight Mode</b></p> <p>U 2.15 kg</p> <p>U 7.32 kg</p> <p>U 16.25 kg</p> <p>S 25.80 kg</p> <p>U 19.95 kg</p> <p>U 9.92 kg</p> <p>U 3.15 kg</p> </div> <p>'S': Stable Status 'U': Unstable Status ※ 'U' Mark means the weight cannot be used for legal purposes.</p>
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Figure 4 U-SEND/C-SEND User Manual sections