

# EU Type Examination Certificate

**No. 0200-NAWI-8725**

**IP30 / IP30-F / QP30 / PEA10 / PEA10a / PA10a / PA10b / PA10e /  
PA10s / PA15 / PA15-F / PA18 / LA8 / LA10 / LA15 / PH10 /  
PLA10 / JP30 / JP30b / AA7 / PCA10**

**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**        **Tscale Electronics Mfg. (Kunshan) Co., Ltd.**  
No. 99 Jingwei Road,  
Zhoushi, Kunshan, Jiangsu  
CHINA

**In respect of**   Non-automatic weighing instrument designated IP30 / IP30-F / QP30 / PEA10 /  
PEA10a / PA10a / PA10b / PA10e / PA10s / PA15 / PA15-F / PA18 / LA8 / LA10 /  
LA15 / PH10 / PLA10 / JP30 / JP30b / AA7 / PCA10 with variants of modules of load  
receptors and load cells.  
Accuracy class III single-interval or multi-interval  
Maximum capacity, Max: 6 kg to 30 kg  
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 OIML R76:2006

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

The annex comprises 35 pages.

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## Descriptive annex

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## 1. Name and type of instrument

The non-automatic weighing instruments designated IP30 / IP30-F / QP30 / PEA10 / PEA10a / PA10a / PA10b / PA10e / PA10s / PA15 / PA15-F / PA18 / LA8 / LA10 / LA15 / PH10 / PLA10 / JP30 / JP30b / AA7 / PCA10 are self-indicating desktop scales of class III with single-interval or dual-interval.

The scales are price-computing scales intended for direct sale to the public, except AA7 and PCA10 which are weighing scales.

The scales - except for PA10s, PA15-F, PA18, AA7 and PCA10 - have an additional rear display for customers. The vendor touch display and/or customer display may depend on model being placed on a pole. The customer display can optional be a touch display, but the touch function can only be used for non-legal application functions.

The scales - Except AA7 - has a built-in printer and QP30 and LA15 and have an optional barcode and RFID reader on the pole. LA10 and PLA10 have an optional barcode reader.

All models are power supplied either from 100 – 240 VAC, 50/60 Hz, or from an external 12 or 24 VDC mains adapter in which case they can be equipped with an optional internal 7.4 V rechargeable battery.

Each scale consists of analogue to digital conversion, microprocessor control, power supply, one or two displays – of which one or both are touch-screen - and non-volatile memory for storage of calibration and weight data contained within a single enclosure.

## 2. Description of the construction and function

### 2.1 Construction

The scales are housed in an enclosure made of ABS plastic except PH10 which in a stainless steel housing.

The front panel of the scales comprise of a 7", 8", 10.1", 15.6" or 18.5" touch-screen LCD display with backlight, incorporating all keys and appropriate state indicators. The front panel is placed in front of the enclosure or on a pole depending of model.

In addition to this the following scale models IP30 / IP30-F / QP30 / PEA10 / PEA10a / PA10a / PA10b / PA10e / PA15 / LA8 / LA10 / LA15 / PH10 / PLA10 / JP30 / JP30b have a 7, 8", 10.1" or 15.6" customer display on the rear or on a pole.

### Electronics

The instruments have the following printed circuit boards, a microprocessor controlled mainboard, a piggy-back for A/D conversion, and a piggy-back for battery charging circuits, which together contain all of the instrument circuitry. The metrological circuitries for the different models of scales are identical.

Besides different piggy-back boards may be used for the optional interfaces.

All instrument calibration and metrological setup data are contained in non-volatile memory. The scales use a load cell excitation voltage of 5 VDC.

## **2.2 Function**

The primary functions provided are detailed below.

### **2.2.1 Power-up**

On power-up, the scale will first perform a check of its integrity. After that the scales will establish the current weight as a new zero reference and then automatically start up in menu mode from where the mode for weighing can be selected.

### **2.2.2 Display range**

The scales will display weight from -Max (tare function) to Max (gross weight).

### **2.2.3 Zero-setting**

Zero-setting range:  $\leq 4\%$  of Max.

Automatic zero-tracking range:  $\leq 4\%$  of Max.

Initial zero-setting range:  $\leq 20\%$  of Max.

Zero-setting is only possible when the load receptor is not in motion.

#### **2.2.3.1 Semi-automatic zero-setting**

Pressing the “ZERO” key causes a new zero reference to be established and ZERO annunciator to turn on, indicating that the display is at the centre of zero.

#### **2.2.3.2 Zero-tracking**

The scales are equipped with a zero-tracking feature, which operates over a range of up to 4 % of Max and only when the scale is at gross zero and there is no motion in the weight display. The zero-tracking shall be set to 0.5 d per second.

### **2.2.4 Tare**

The instrument models are provided with a semi-automatic subtractive tare.

#### **2.2.4.1 Semi-automatic tare**

Pressing the “TARE” key will enter the current weight value as the new tare weight value, if the tare function is not already active or setup allows multi-tare operation. The later one is not allowed for price computing scales.

The weight display will automatically change to the net weight display mode and turn on the NET annunciator and the tare value will be displayed. This tare value can be cleared by pressing the TARE key, when there is no load on the load receptor. This tare entry cannot take place, if the load receptor is in motion.

#### **2.2.4.2 Preset tare**

The scales have a preset tare function.

### **2.2.5 Price Look Up (PLU)**

The price computing scales can store up to 99999 unit price values. These are accessed using the PLU keys with icons, the three product category keys, and the two arrow keys.

Access to editing them can be obtained using the menu key and selecting products.

### **2.2.6 Check weighing**

The scales AA7 and PCA10 can be set to check the actual weight against a high and/or a low limit set by the user or recalled from the look up table.

### **2.2.7 Check-weighing limits Look Up (PLU)**

The scales AA7 and PCA10 can store up to 99999 high and/or low limits for check-weighing. These are accessed using the PLU keys, the three product category keys and the two arrow keys.

Access to editing them can be obtained using the menu key and selecting products.

### **2.2.8 Counting**

The scales AA7 and PCA10 has a counting function. The number of samples on the load receptor can be keyed in using the “SAMPLES” key, or the unit weight of one piece can be keyed in using the “U.W.” key, or it can be recalled from the look-up table of unit weights using the “PRODUCT” key.

The count shown in counting mode and the unit weight, however, are not to be regarded as approved weighing results.

### **2.2.9 Piece unit weight Look Up (PLU)**

The scales AA7 and PCA10 can store up to 99999 piece unit weight values. These are accessed using the PLU keys, the three product category keys, and the two arrow keys.

Access to editing them can be obtained using the menu key and selecting products.

### **2.2.10 Totalisation**

The scales - except AA7 and PCA10 - have a totalization function for accumulating transactions. All transactions and total are printed on the built-in printer.

The scales AA7 and PCA10 have a totalization function for accumulating weighing results. Totalised weight value is a calculated value and shall be marked as such when printed.

### **2.2.11 Facilitated weighing operations**

The scales AA7 and PCA10 have a number of functions facilitating weighing operations. These are,

- |                    |  |
|--------------------|--|
| Class operation    | for sorting items into 5 different grades based on weight.                                   |
| Take out operation | for display of removed weight during down weighing and also accumulating the removed weight. |
| Target operation   | for comparing the accumulated weight of a number of separate weighings against a target      |
| Recipe operation   | assisted weighing of components for a recipe.  |

### **2.2.12 Extended resolution ( $\times 10$ )**

The scales AA7 and PC10 have an extended resolution function, pressing the key will show the weight with  $d = 0.1e$  for 5 seconds.

### **2.2.13 Gravity compensation**

The scales have a gravity compensation function making it possible to perform the verification at a place with another gravity constant than the place of use. This function is sealed.

### **2.2.14 Printing**

The scales – except AA7 - have a built-in printer, and printing takes place automatically or when the user press ‘Print’ depending on the model.

The AA7 has the possibility of connecting a printer to an interface port

The printing will not take place if the load receptor is not stable, if the gross weight is less than zero, or if the weight exceeds Max.

### 2.2.15 Operator information messages

The weight display can show a number of general and diagnostic messages, which are described in detail in the User's Manual.

### 2.2.16 Software version

The software is separated in weighing software, application software, screen keyboard software, and printing software.

The software version of the different softwares are shown under system settings in the menu.

The application software version is also displayed in the top line of the T-Touch screen.

The approved software versions are,

OS version \*): VC1.xxx

weighing software \*): S1.02.xx

application software: A2.xx.(z) for models PEA10, PEA10a, PA10a, PA10b, PA10e, PA10s, PA15, PA15-F, PA18, PLA10, IP30, IP30-F, PH10  
A3.xx.(z) for models LA8, LA10, LA15, QP30, JP30, JP30b  
A4.xx.(z) for models PCA10, AA7

screen keyboard: K1.xx.yy

printing software \*): P1.06.xx

Network node info: V1.x.xx

\*) part of legal relevant software.

Where xx and yy can be 00 to 99, while z can be not present or a to z.

### 2.2.17 Battery operation

The scale models supplied with 12 or 24 VDC from an external AC/DC adapter can be operated from an optional internal 7.4V rechargeable battery. The scales with battery contain the circuitry necessary to recharge the battery when the scale is connected to the mains power.

### 3. Technical data

The scales have the following characteristics:

Accuracy class:	III
Weighing range:	Single-interval or multi-interval (2 intervals)
Maximum number of Verification Scale Intervals:	$\leq 3000$ or $2 \times 3000$
Maximum capacity (Max):	6 kg to 30 kg
Minimum capacity (Min):	20 e
Verification Scale Interval (e):	$\geq 1$ g
Maximum tare effect:	$\leq -\text{Max}$
Mains power supply:	100-240 VAC or 12 or 24 VDC using external AC/DC adapter for 100 - 240 VAC, 50/60 Hz 7.4 V battery (optional)
Operational temperature:	-10°C to 40°C
Peripheral interface:	Set out in Section 4

#### 3.1 Load cell for scale

Tscale load cell type BX6 C3 or Zemic load cell type L6D C3 with  $v_{\min} \leq e$  and  $0.6 \times E_{\max} \leq \text{Max} \leq 0.9 \times E_{\max}$ .

Other load cells with certified specification equal to or better than the load cells above may be used.

#### 3.2 Documents

The documents filed at FORCE (reference No. 120-27147) are valid for the weighing instruments described here.

## 4. Interfaces and peripheral equipment

### 4.1 Interfaces

The interfaces are characterised “Protective interfaces” according to paragraph 8.4 in the Directive.

#### 4.1.1 RS-232 interface

The scale is equipped with two RS-232 interfaces for connection to a computer or printer.

#### 4.1.2 USB interface

The scale is equipped with one or up to six USB interfaces for connection to peripheral equipment. The length of the USB cables is specified to be less than 3 meter.

In addition, the scale is equipment a third USB interface for a storage device.

#### 4.1.3 Ethernet interface

The scale may be equipped with a RJ45 connector for connection of the scale to a Local Area Network.

#### 4.1.4 Cash drawer interface

The scale is equipped with a RJ11 connector with digital output signals for connection to a cash drawer. (Models L Axx, QPxx and JPxx only)

**4.1.5 HDMI interface (optional)**

The scale is equipped with a HDMI interface. The connected cable shall be < 3 m.

**4.1.6 Wi-Fi interface (optional)**

The scale can be equipped with a Wi-Fi interface.

**4.1.7 Slot for a SIM card**

The scale can be equipped with a slot for a SIM interface. (Some models only)

**4.1.8 Slot for a memory card**

The scale can be equipped with a slot for a flash memory card. (Some models only)

**4.1.9 Digital output**

Some models have a digital output for 3-color light tower

**4.2 Peripheral equipment**

The instruments may be connected to any simple peripheral with a CE mark of conformity using a screened cable.

**4.3 Electronic Point of Sale (EPOS), Electronic Cash Register (ECR), Electronic Fund Transfer (EFT/ECU)**

The instruments may be connected to an Electronic Point of Sale (EPOS) or Electronic Cash Register (ECR) if the following conditions are met,

- The EPOS or ECR have a Part Certificate or Evaluation certificate issued by a Notified Body appointed to certify instruments according to module B of Annex II of the Directive 2014/31/EU.
- If the EPOS or ECR have a preset tare function, they shall carry out this function autonomously and this function shall be in conformity with EN45501.
- The connection shall be made in such a way that the weight indication, the unit price and price-to-pay are positioned adjacent to each other.

The instruments may be equipped with Electronic Funds Transfer equipment (EFT/ECU) on the provision that the ECR/ECU shall only display the total price for a transaction.

**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.

**6. Special conditions for verification**

None.



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

### **7.1 Securing and sealing**

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

#### **7.1.1 Scale**

Access to the configuration and calibration facility is achieved by pressing a calibration switch accessed through a hole in the bottom of the enclosure of the scale or by removing parts of the enclosure. Sealing of the access to the calibration switch, electronics and connection of the load cell is accomplished by:

Either. Wire and seal which at the same time seal the access to the calibration switch and the inside of the enclosure.

Or: A tamperproof sticker covering the hole through which the switch is accessed, and an additional sticker covering one of the assembling screws of the enclosure.

## **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**

In the top line of the display:

- Max, Min, e = , application software version

On the inscription plate:

- Manufacturer's name and/or trademark
- Postal address of manufacturer
- Type designation
- Serial number
- Max, Min, e =
- Tare
- Temperature range (optional)
- Type examination certificate number.
- Accuracy class
- Electrical data and other inscriptions

## 9. Pictures



**Figure 1** Scale model IP30.



**Figure 2** Scale model QP30



**Figure 3** Scale model PEA10



**Figure 4** Scale model PEA10a





**Figure 5** Scale model PA10a



**Figure 6** Scale model PA10b



**Figure 7** Scale model PA10e





**Figure 8** Scale model PA10s



**Figure 9** Scale model PA15



**Figure 10** Scale model PA15-F



**Figure 11** Scale model PA18



**Figure 12** Scale model LA8



**Figure 13** Scale model LA10





**Figure 14** Scale model LA15



**Figure 15** Scale model PH10





**Figure 16** Scale model PLA10



**Figure 17** Scale model JP30



**Figure 18** Scale model JP30b



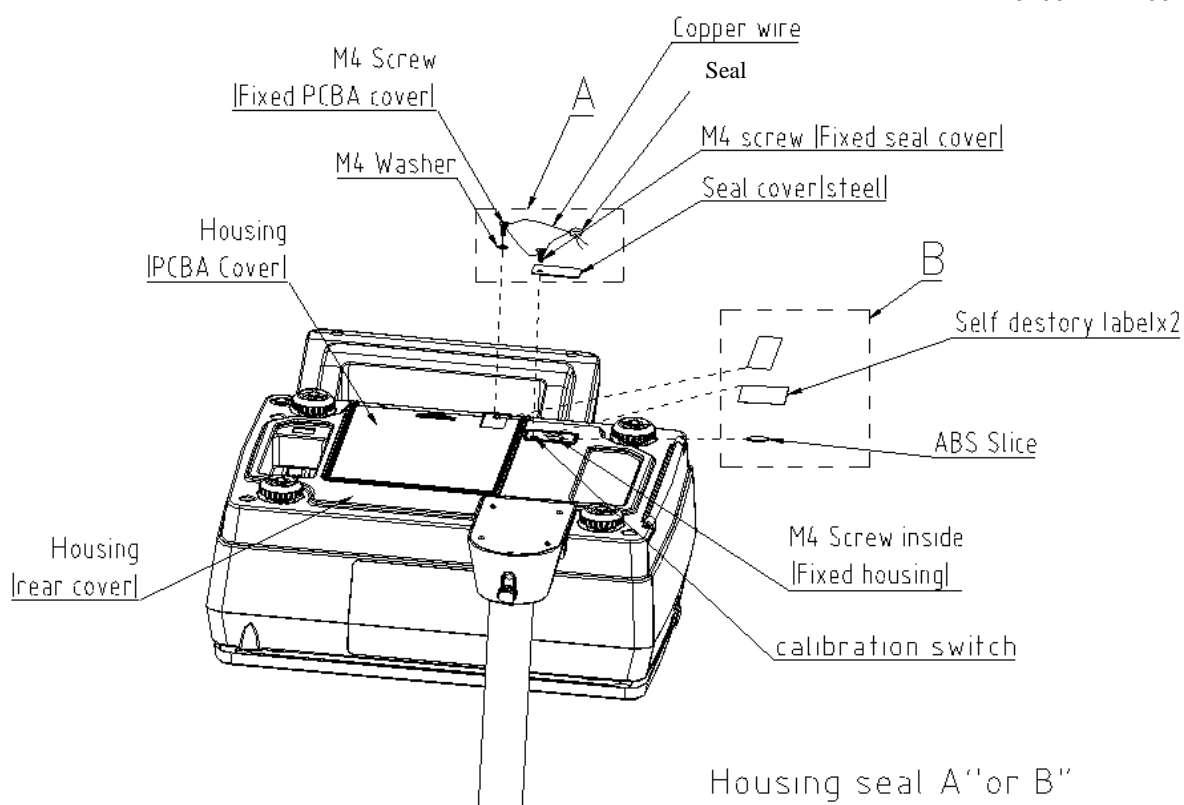
**Figure 19** Scale model IP30-F



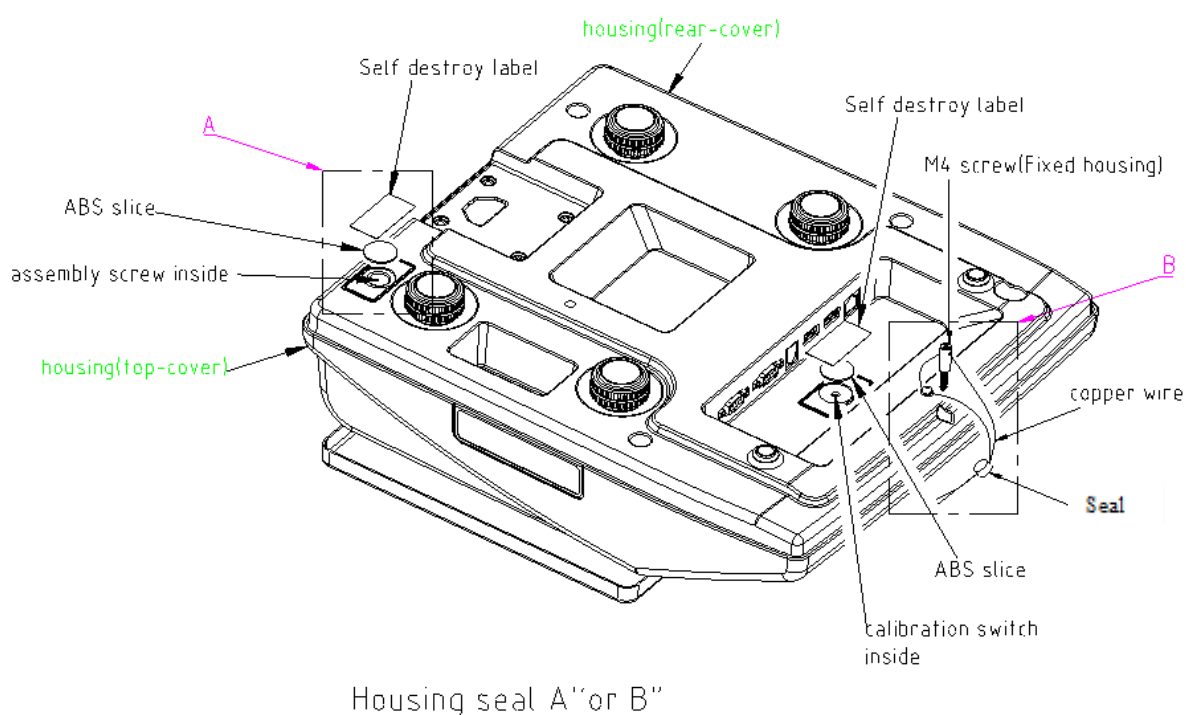
**Figure 20** Scale model AA7



**Figure 21** Scale model PCA10

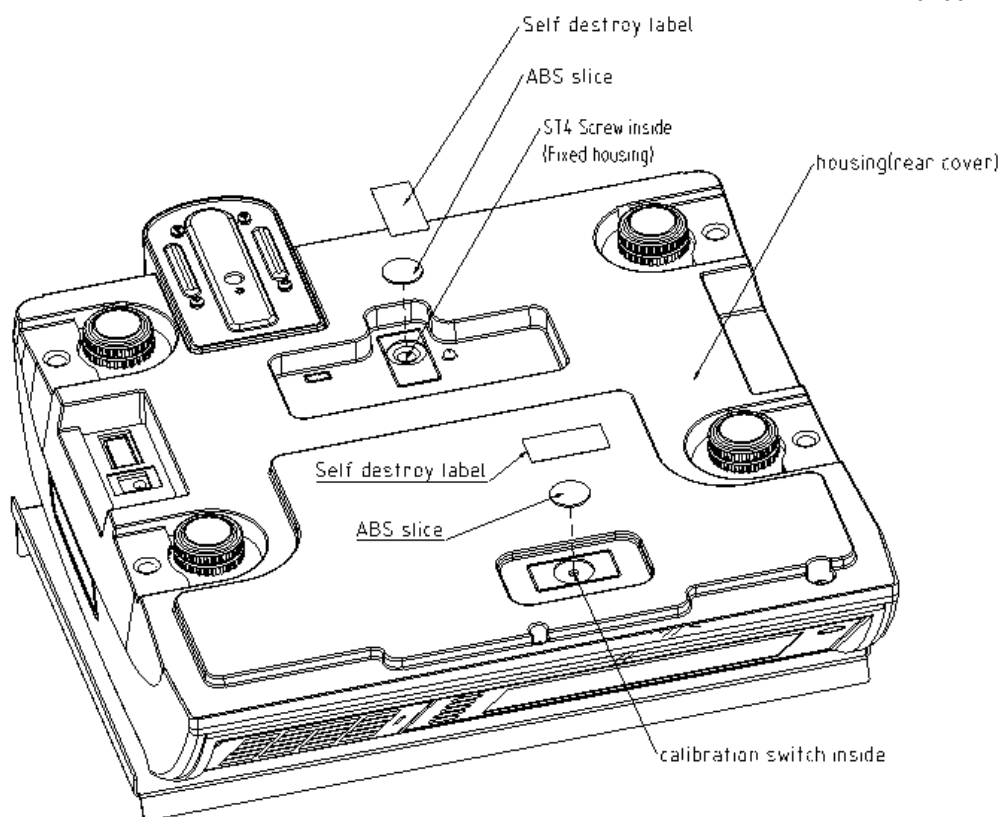


**Figure 22** Sealing IP30 / IP30-F

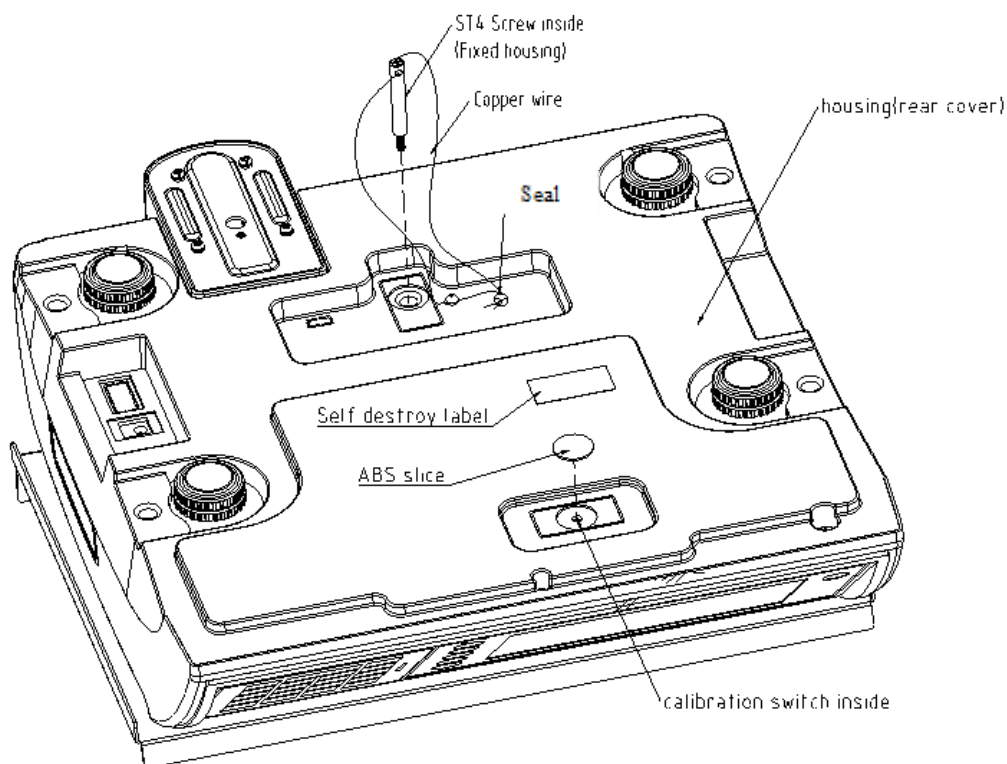


**Figure 23** Sealing AA7



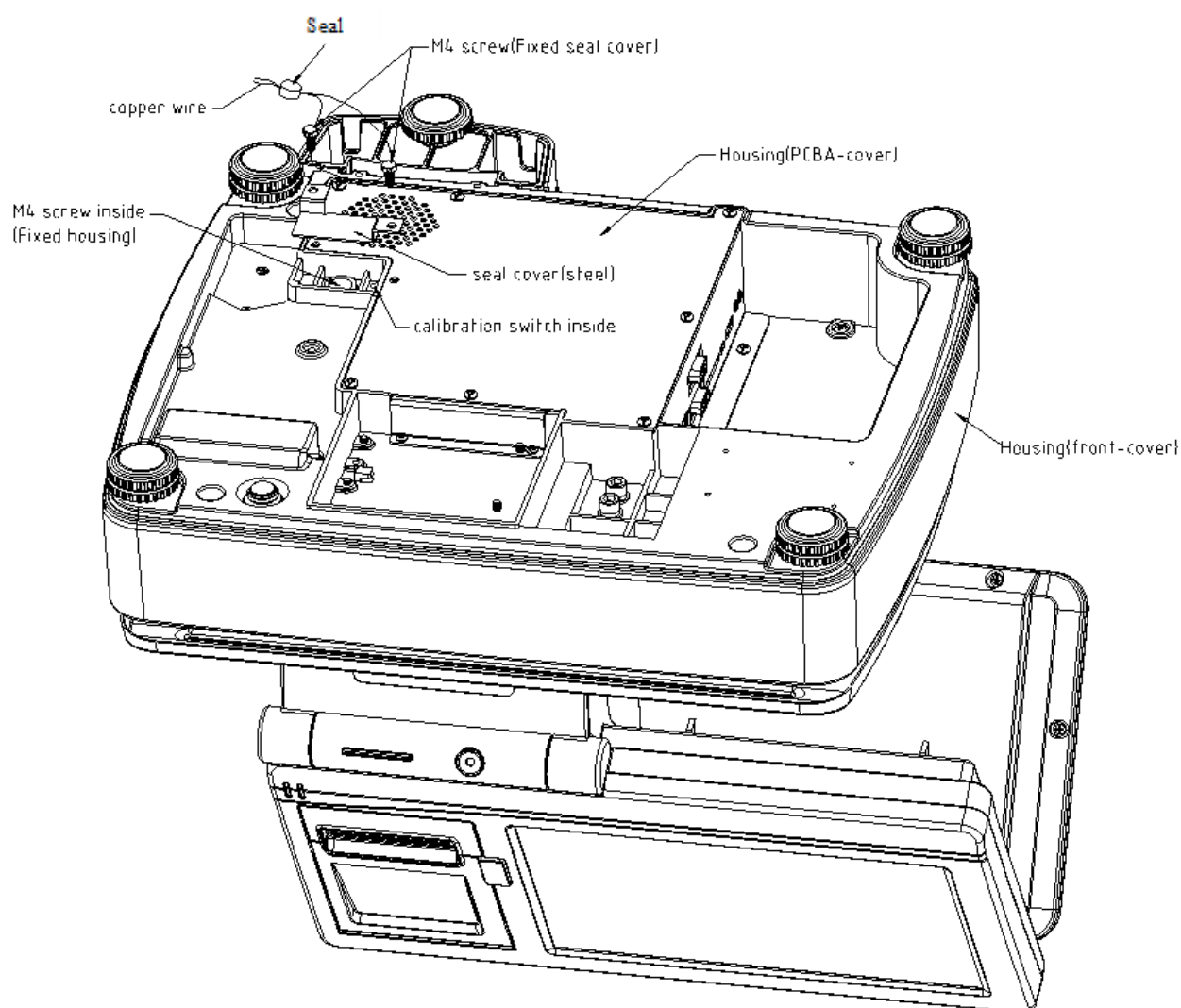


#### Sealing method A



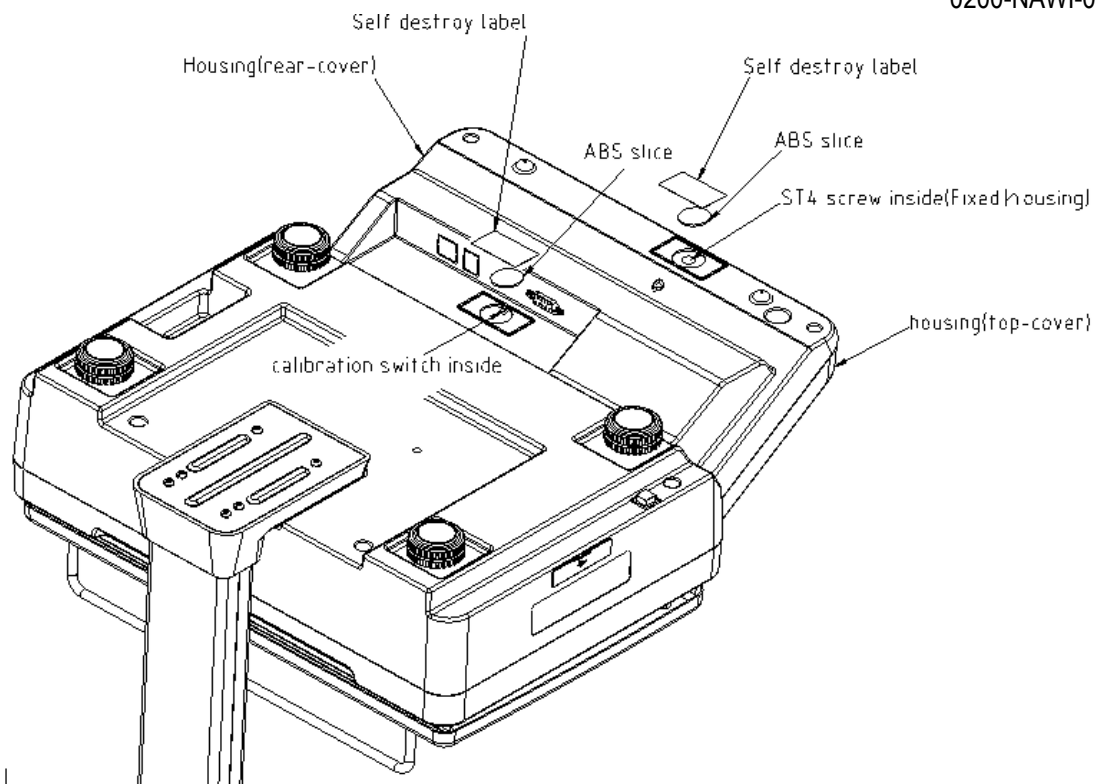
#### Sealing method B

**Figure 24** Sealing JP30 / JP30b

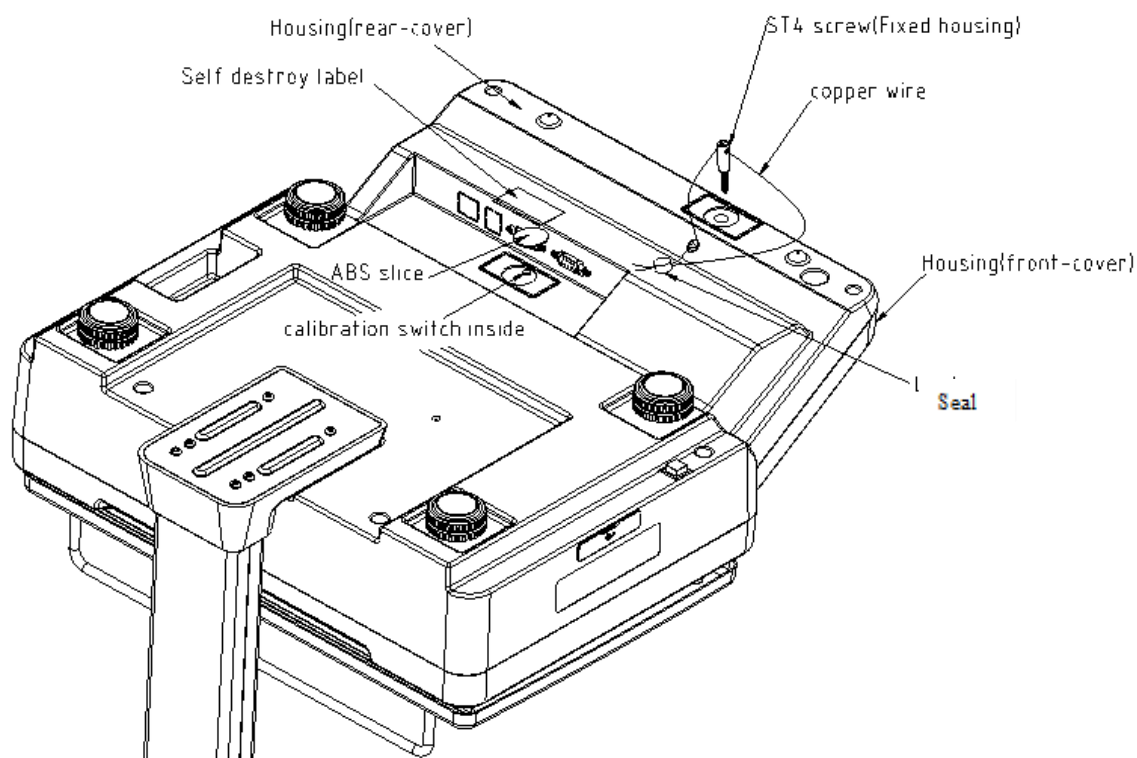


**Figure 25** Sealing LA10 / LA15



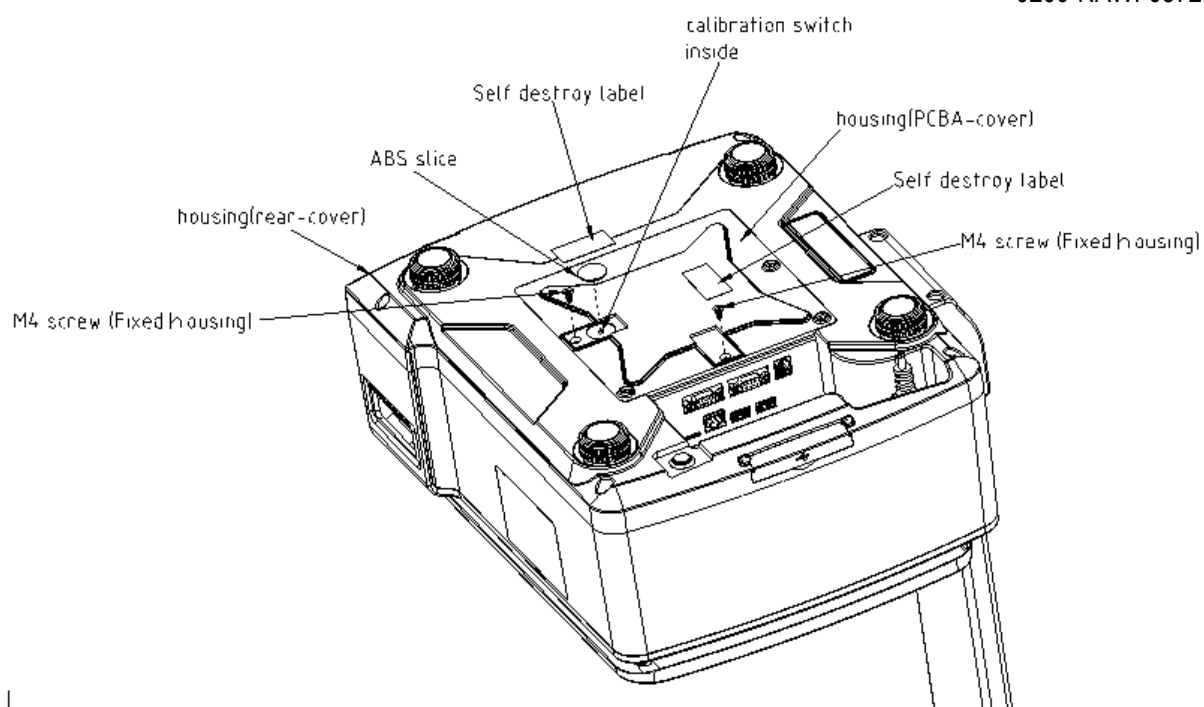


Sealing method A

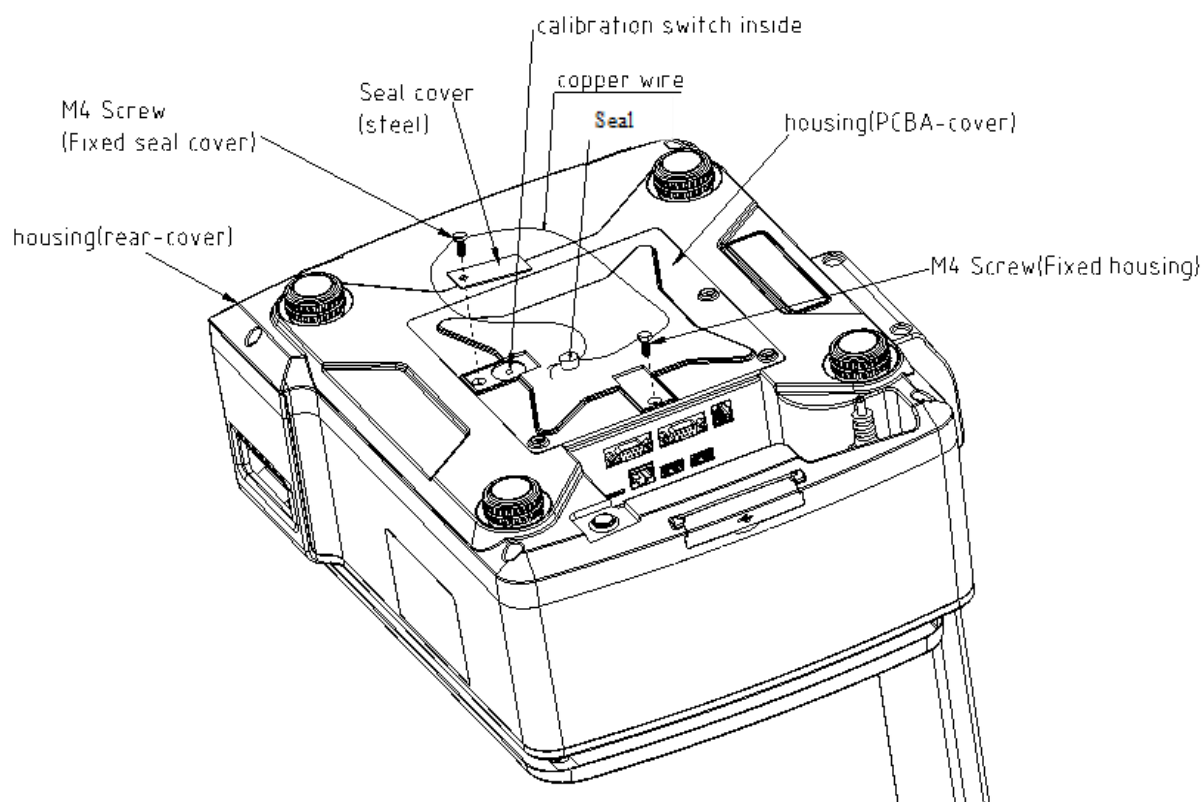


Sealing method B

**Figure 26** Sealing LA8

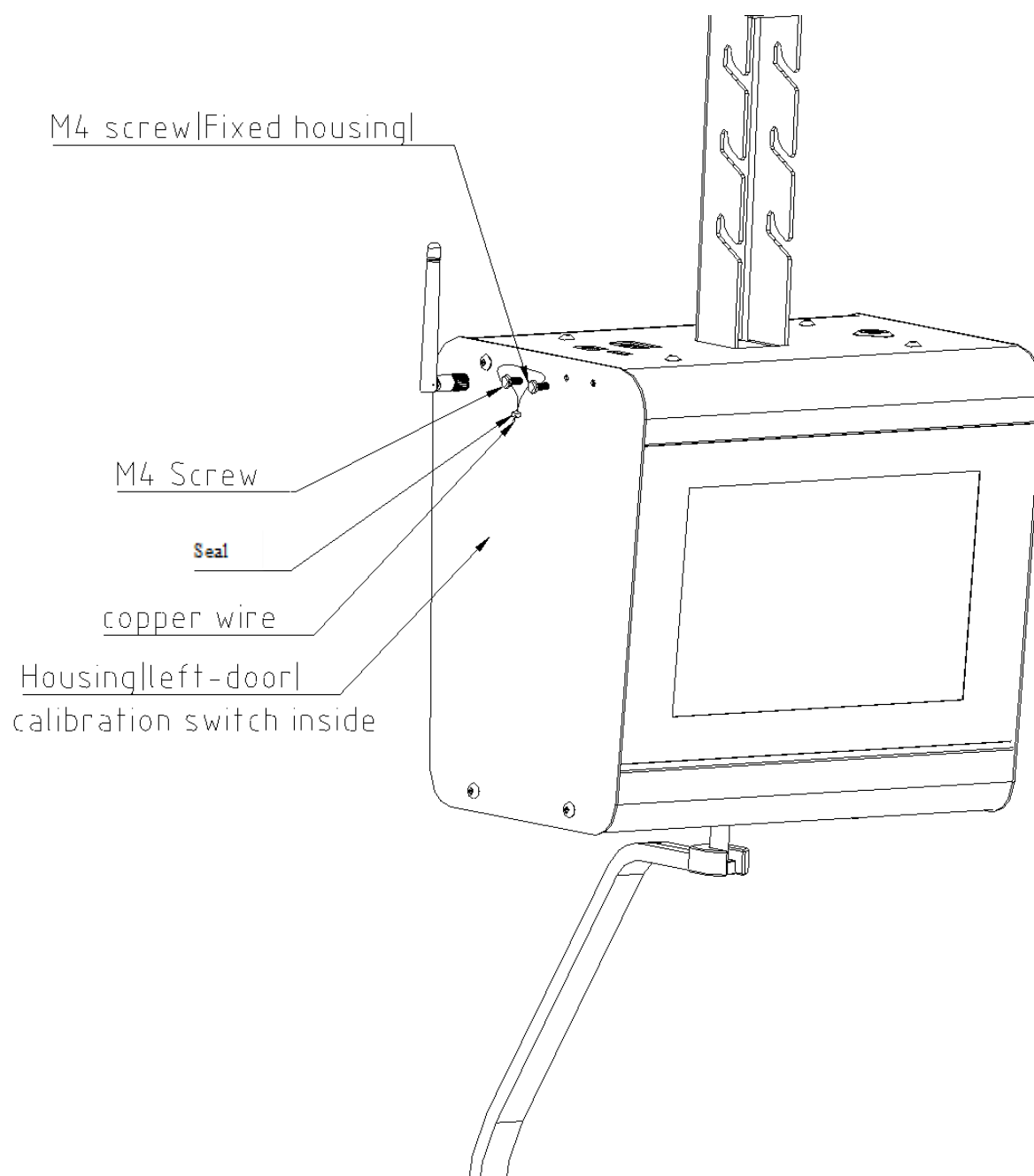


Sealing method A

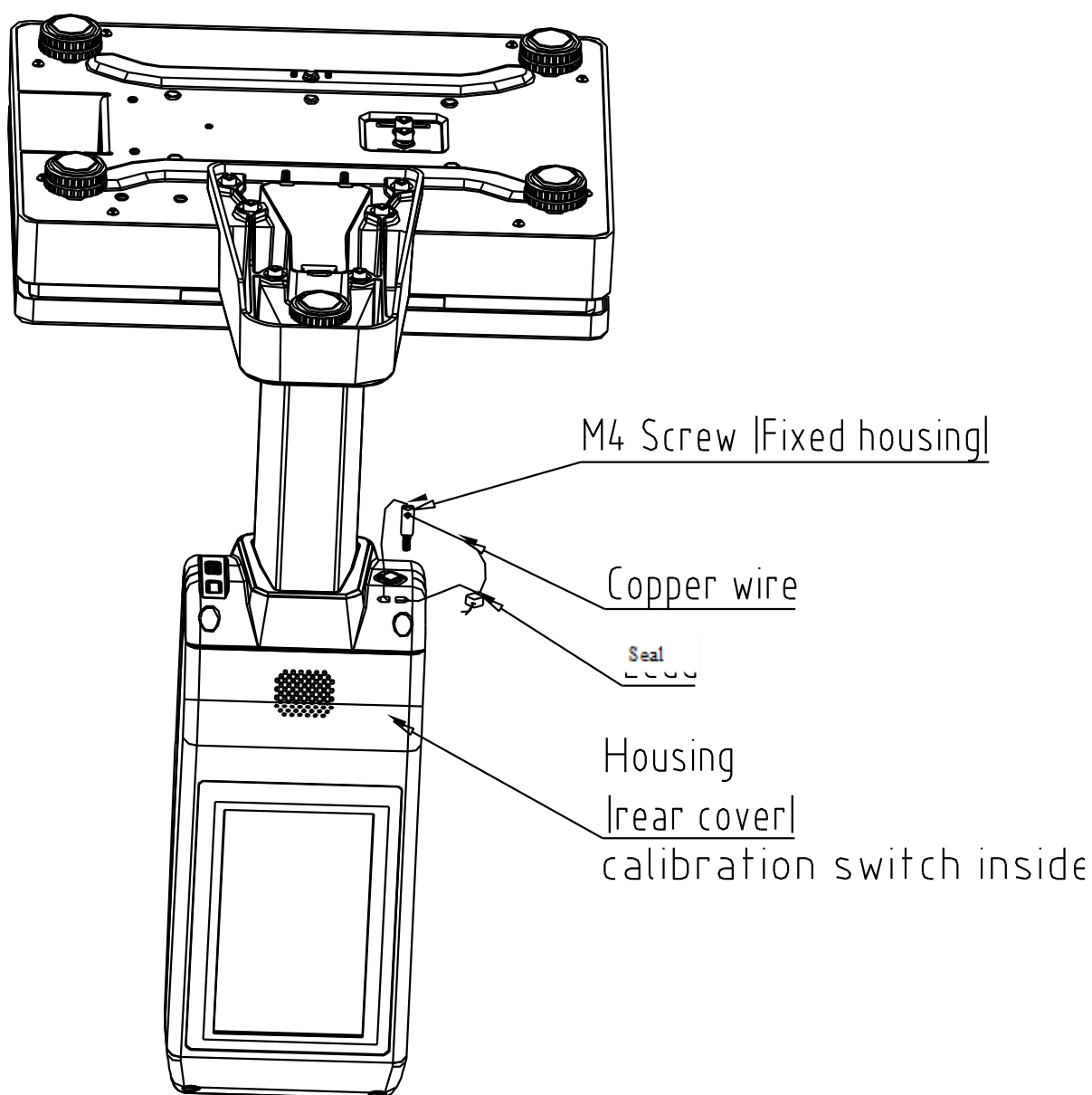


Sealing method B

**Figure 27** Sealing PEA10 / PEA10a / PA10a / PA10b / PA10e / PA10s / PA15 / PA15-F / PA18 / PLA10 / PCA10



**Figure 28** Sealing PH10



**Figure 29** Sealing QP30