# KERN

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**KERN** *eco*

# Instruction Manual
# Counting balance

# KERN CPB-N / CPB-DM

Version 2.4
08/2014
GB

# KERN CPB-N / CPB-DM

Version 2.4 08/2014

**Instruction Manual**

**Counting balance**

## Contents

English

# 1 Technical data

| KERN | CPB 6K0.1N | CPB 15K0.2N | CPB 30K0.5N |
|---|---|---|---|
| Readability (d) | 0.0001 kg | 0.0002 kg | 0.0005 kg |
| Weighing range (max) | 6 kg | 15 kg | 30 kg |
| Reproducibility | 0.0001 kg | 0.0002 kg | 0.0005 kg |
| Linearity | ± 0.0002 kg | ± 0.0004 kg | ± 0.002 kg |
| Recommended adjusting weight (not supplied) | 5 kg (F2) + 1 kg (F2) | 10 kg (F2) + 5 kg (F2) | 20 kg (F2) + 10 kg (F2) |
| Weighing Units | kg, lb | | |
| Stabilization time | 2 sec. | | |
| Warm-up time | 120 min. | | |
| Minimum piece weight | 100 mg | 250 mg | 500 mg |
| Reference quantity | freely selectable | | |
| Input Voltage | 220 V – 240 V AC 50 Hz | | |
| Mains adapter Secondary voltage | 12 V, 500 mA | | |
| Rechargeable battery (optional) Operating time | Background illumination on: 60 h Background illumination off: 70 h | | |
| Loading time of battery | 12 h | | |
| Auto-Off (battery) | Options: 3, 5, 15, 30 min. | | |
| Dimensions fully mounted (W x D x H) | 320 x 350 x 125 mm | | |
| Weighing surface | 294 x 225 mm | | |
| Permissible ambient condition | 0° C to + 40° C | | |
| Humidity of air | max. 80 % relative (not condensing) | | |
| Net weight (kg) | 3.8 kg | | |

| KERN | CPB 6K1DM | CPB 15K2DM | CPB 30K5DM |
|---|---|---|---|
| Readability (d) | 0.001 kg; 0.002 kg | 0.002 kg;0.005 kg; | 0.005 kg;0.01 kg; |
| Weighing range (max) | 3 kg; 6 kg | 6 kg; 15 kg | 15 kg; 30 kg |
| Minimum weight (min) | 20 g | 40 g | 100 g |
| Reproducibility | 0.001 kg; 0.002 kg | 0.002 kg; 0.005 kg | 0.005 kg; 0.01 kg |
| Linearity | ± 0.002 kg; ± 0.004 kg | ± 0.004 kg; ± 0.01 kg | ± 0.01 kg; ± 0.02 kg |
| Verification value (e) | 1 g | 2 g | 5 g |
| Accuracy class | III | | |
| Recommended adjusting weight (not supplied) | 5 kg (F2) 1 kg (F2) | 10 kg (F2) 5 kg (F2) | 20 kg (F2) 10 kg (F2) |
| Weighing Units | kg | | |
| Stabilization time | 2 sec. | | |
| Warm-up time | 10 min. | | |
| Minimum piece weight | 100 mg | 250 mg | 500 mg |
| Reference quantity | freely selectable | | |
| Input Voltage | 220 V – 240 V AC 50 Hz | | |
| Mains adapter Secondary voltage | 12 V, 500 mA | | |
| Rechargeable battery (optional) Operating time | Background illumination on: 60 h Background illumination off: 70 h | | |
| Loading time of battery | 14 h | | |
| Auto-Off (battery) | Options: 3, 5, 15, 30 min. | | |
| Dimensions fully mounted (W x D x H) mm | 320 x 350 x 125 mm | | |
| Weighing surface | 294 x 225 mm | | |
| Permissible ambient condition | -10° C to + 40° C | | |
| Humidity of air | max. 80 % relative (not condensing) | | |
| Net weight (kg) | 3.8 kg | | |

# 2 Appliance overview
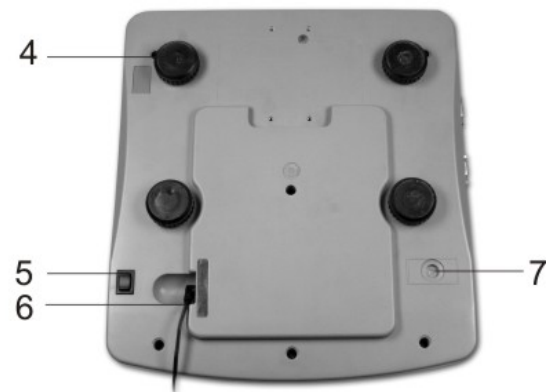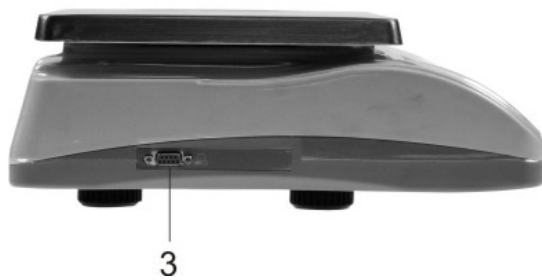
1. Weighing plate / rechargeable battery compartment (under weighing plate)
2. Bubble level
3. RS 232 interface
4. Footscrews
5. ON/OFF switch
6. Mains adapter connection
7. Adjustment switch

## 2.1 Overview of display



**Weight**  **Reference weight**  **Quantity**

**Battery   charge status display**
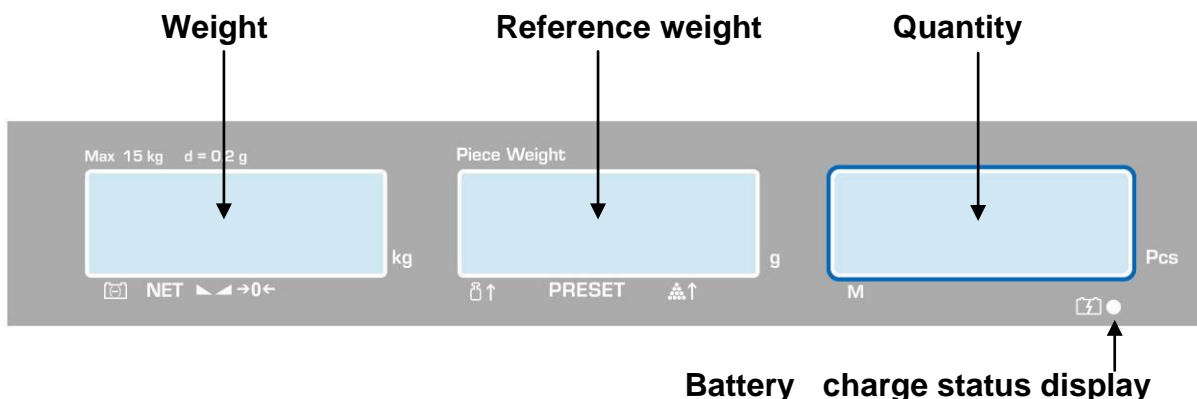
### 2.1.1 Display weight

Here the weight of the load is displayed in [kg].

**The arrows above the symbols show:**

| | |
|---|---|
| [-] | Battery very low |
| **NET** | Net weight |
| ◤◢ | Stability display |
| →0← | Zeroing display |

### 2.1.2 Display reference weight

Here, the reference weight of a sample is displayed in [g]. This value is either entered by user of calculated by balance.

**The arrows above the symbols show:**

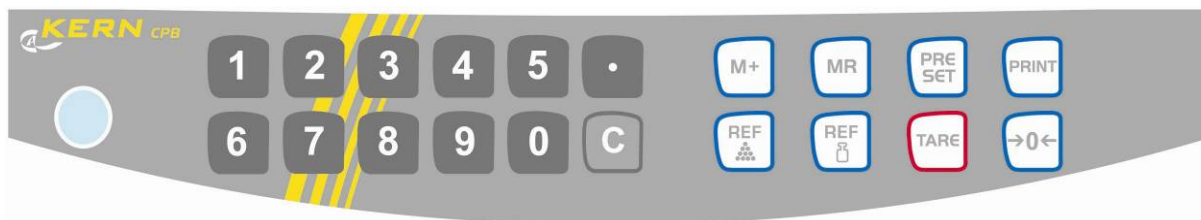| | |
|---|---|
| ⬆ | Reference weight placed on balance too small |
| **PRESET** | Stored target quantity / target weight |
| ⬆ | Number of pieces placed on balance too small |

### 2.1.3 Display quantity

Here, all the pieces placed on balance are immediately displayed by number.

**The arrows above the symbols show:**

| | |
|---|---|
| **M** | Data in the summation memory |

## 2.2 Keyboard overview



| Selection | Function |
|---|---|
| **1** | • Numeric keys |
| **C** | • Deleting key<br>• Call up target quantity and target weight mode |
| **M+** | • Addition in sum memory |
| **MR** | • Call up total memory |
| **PRE SET** | • Enter/display limit value for tolerance check<br>• Invoke display background illumination (press button long time) |
| **PRINT** | • Output to external device (printer) or PC |
| **REF** | • Enter reference weight through weighing |
| **REF** | • Numeric entry reference weight<br>• Function /parameter selection |
| **TARE** | • Taring key<br>• Save |
| **→0←** | • Zeroing key<br>• Back to weighing mode |

English

# 3 Basic Information (General)

## 3.1 Proper use

The balance you purchased is intended to determine the weighing value of material to be weighed. It is intended to be used as a "non-automatic balance", i.e. the material to be weighed is manually and carefully placed in the centre of the weighing plate.. As soon as a stable weighing value is reached the weighing value can be read.

## 3.2 Improper Use

Do not use balance for dynamic weighing. In the event that small quantities are removed or added to the material to be weighed, incorrect weighing results can be displayed due to the "stability compensation". (Example: Slowly draining fluids from a container on the balance.)

Do not leave permanent load on the weighing plate. This may damage the measuring system.

Impacts and overloading exceeding the stated maximum load (max) of the balance, minus a possibly existing tare load, must be strictly avoided. Balance may be damage by this.

Never operate balance in explosive environment. The serial version is not explosion protected.

The structure of the balance may not be modified. This may lead to incorrect weighing results, safety-related faults and destruction of the balance.

The balance may only be used according to the described conditions. Other areas of use must be released by KERN in writing.

## 3.3 Warranty

Warranty claims shall be voided in case

- Our conditions in the operation manual are ignored

- The appliance is used outside the described uses

- The appliance is modified or opened

- Mechanical damage or damage by media, liquids, natural wear and tear

- The appliance is improperly set up or incorrectly electrically connected

- The measuring system is overloaded

### 3.4 Monitoring of Test Resources

In the framework of quality assurance the measuring-related properties of the balance and, if applicable, the testing weight, must be checked regularly. The responsible user must define a suitable interval as well as type and scope of this test. Information is available on KERN's home page (www.kern-sohn.com with regard to the monitoring of balance test substances and the test weights required for this. In KERN's accredited DKD calibration laboratory test weights and balances may be calibrated (return to the national standard) fast and at moderate cost.

## 4 Basic Safety Precautions

### 4.1 Pay attention to the instructions in the Operation Manual

Carefully read this operation manual before setup and commissioning, even if you are already familiar with KERN balances.
Versions in other languages are non-binding translations.
The only binding version is the original document in German.

### 4.2 Personnel training

The appliance may only be operated and maintained by trained personnel.

## 5 Transport and storage

### 5.1 Testing upon acceptance

When receiving the appliance, please check packaging immediately, and the appliance itself when unpacking for possible visible damage.

### 5.2 Packaging / return transport

| | |
|---|---|
| ⚠ | ⇨ Keep all parts of the original packaging for a possibly required return. |
| | ⇨ Only use original packaging for returning. |
| | ⇨ Prior to dispatch disconnect all cables and remove loose/mobile parts. |
| | ⇨ Reattach possibly supplied transport securing devices. |
| | ⇨ Secure all parts such as the glass wind screen, the weighing platform, power unit etc. against shifting and damage. |

# 6 Unpacking, Setup and Commissioning

## 6.1 Installation Site, Location of Use

The balances are designed in a way that reliable weighing results are achieved in common conditions of use.
You will work accurately and fast, if you select the right location for your balance.

**Therefore, observe the following for the installation site:**

- Place the balance on a firm, level surface;

- Avoid extreme heat as well as temperature fluctuation caused by installing next to a radiator or in the direct sunlight;

- Protect the balance against direct draughts due to open windows and doors;

- Avoid jarring during weighing;

- Protect the balance against high humidity, vapours and dust;

- Do not expose the device to extreme dampness for longer periods of time. Non-permitted condensation (condensation of air humidity on the appliance) may occur if a cold appliance is taken to a considerably warmer environment. In this case, acclimatize the disconnected appliance for ca. 2 hours at room temperature.

- Avoid static charge of goods to be weighed or weighing container.

If electro-magnetic fields or static charge occur, or if the power supply is unstable major deviations on the display (incorrect weighing results) are possible. In that case, the location must be changed.

## 6.2 Unpacking

Carefully remove the balance from the packaging, remove plastic cover and setup balance at the intended workstation.

### 6.2.1 Placing
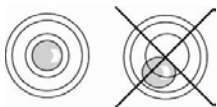


Level balance with foot screws until the air bubble of the water balance is in the prescribed circle.
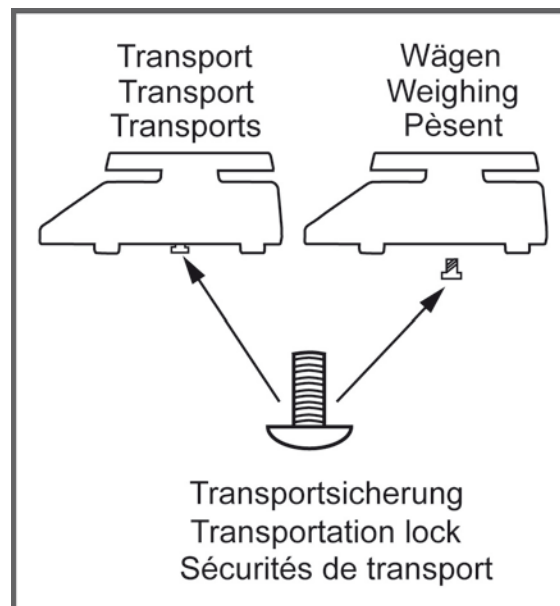
**⚠ Ensure that transport guard has been removed
(only existing in 6 kg models)**



To loosen the transport guard screw out transport screw [**1**] anticlockwise.

**For transportation** carefully screw-in transport screw clockwise till to the stopper and then fix it using locknut.

### 6.2.2 Scope of delivery

**Serial accessories:**

- Balance
- Weighing plate
- Power cable
- Protective cover
- Instruction Manual

### 6.3 Mains connection

Power is supplied via the external mains adapter. The stated voltage value must be the same as the local voltage.
Only use original KERN mains adapters. Using other makes requires consent by KERN.

### 6.4 Rechargeable battery operation (optional)

**The internal battery is charged with the supplied mains cable.**
Before the first use, the rechargeable battery should be charged by connecting it to the mains power cable for at least 12 hours. The operating time of the battery is about. 70h. Charging time until complete recharging ca. 12h.
AUTO-OFF function can be selected after 3, 5, 15, 30 min. to save the rechargeable battery (see chap.12).

If an arrow appears on the weight display [▼] above the battery symbol 
or "**bat lo**" when turning on the balance, this is an indication that the capacity of the rechargeable battery will soon be exhausted. The balance will be ready to operate for about another 10 hours, then it will switch off automatically. Connect the power cable as soon as possible to load the rechargeable battery.

The LED display under the piece number window informs you during charging about the charging status of the rechargeable battery.

       red:     Battery is almost discharged
       green: Battery is completely discharged

### 6.5 Connection of peripheral devices

Before connecting or disconnecting of additional devices (printer, PC) to the data interface, always disconnect the balance from the power supply.
With your balance, only use accessories and peripheral devices by KERN, as they are ideally tuned to your balance.

### 6.6 Initial Commissioning

A warming up time of 2 hours after switching on stabilizes the measuring values.
The accuracy of the balance depends on the local acceleration of gravity.
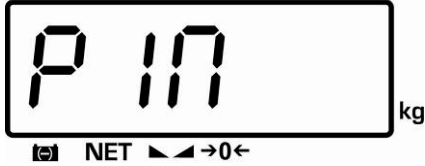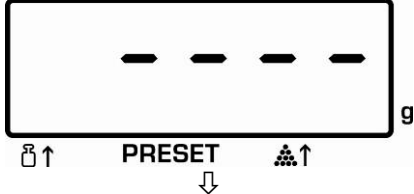Strictly observe hints in chapter Adjustment.

## 6.7 Adjustment

As the acceleration value due to gravity is not the same at every location on earth, each balance must be coordinated - in compliance with the underlying physical weighing principle - to the existing acceleration due to gravity at its place of location (only if the balance has not already been adjusted to the location in the factory). This adjustment process must be carried out for the first commissioning, after each change of location as well as in case of fluctuating environment temperature. To receive accurate measuring values it is also recommended to adjust the balance periodically in weighing operation.

**Procedure when adjusting:**

Observe stable environmental conditions. A warming up time (see chapter 1) is required for stabilization. Ensure that there are no objects on the weighing plate.

Provide calibration weight, for details, see chapter 1 "Technical Data. "
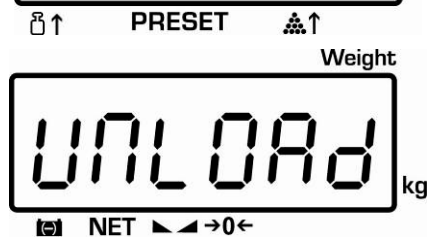
### 6.7.1 Models CPB-N (non verified models)

| Operation | Display |
|---|---|
| ⇨ Switch on balance and during self-check press the TARE key <br><br> [TARE] | Weight <br><br> $P~I\Pi$ <br><br> kg <br> NET →0← |
| ⇨ Use the numeric keys to enter password: <br><br> • Default password "0000" <br><br> Should this password entry not be possible, enter a personal password; (entry using function [$F\boldsymbol{6}~P\boldsymbol{I}~\cap$] see. chap.11.1). <br><br> Also possible to continue the adjustment process with [TARE] button. | Piece Weight <br><br> — — — — <br><br> g <br> ⟰ PRESET ⟰ <br> ⇩ <br><br> Weight <br><br> $F~IC\!RL$ <br><br> kg <br> NET →0← |

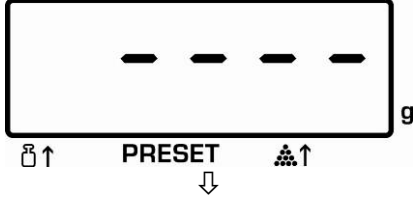| | |
|---|---|
| ⇨ Press the TARE button, the acceleration value due to gravity is displayed. | **Piece Weight**<br><br>9.8 1000 g<br><br>🔒↑   PRESET   ⛰↑ |
| ⇨ Press the TARE key anew.<br><br>[TARE]<br><br>„UnLoAd", followed by „LoAd" is displayed | **Weight**<br><br>UnLOAd kg<br><br>(⊟) NET ◣◢ →0←<br><br>⇩<br><br>**Weight**<br><br>LOAd kg<br><br>(⊟) NET ◣◢ →0← |
| ⇨ Put the adjustment weight (see chap. 1) carefully in the center of the weighing plate, „PASS" will be displayed.<br><br>⇨ While the balance carries out a self test, remove the adjustment weight.<br><br><br><br>After successful adjustment the balance automatically returns to weighing mode.<br><br><br>In case of an adjustment error or incorrect adjusting weight the display will show an error message; repeat adjustment process. | **Piece Weight**<br><br>PASS g<br><br>🔒↑   PRESET   ⛰↑<br>⇩<br><br>**Weight**<br><br>99999 kg<br><br>(⊟) NET ◣◢ →0←<br><br>⇩<br><br>**Weight**<br><br>0.0 kg<br><br>(⊟) NET ◣◢ →0← |
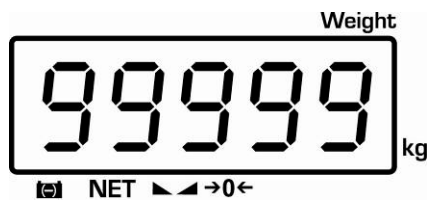
### 6.7.2 Models CPB-DM (verified models)

**i** The adjustment is locked for verified balances. Carrying out adjustment requires that the seal is destroyed and the adjusting switch is pressed when turning on the scale. For position of adjusting switch, see chap. 6.9.1.

**Attention**:
After destruction of the seal the balance must be re-verified by an authorised agency and a new verification wire/seal mark fitted before it can be reused for applications subject to verification.

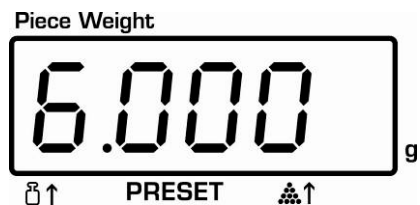| Operation | Indication |
|---|---|
| ⇨ Switch-on balance and during the selftest actuate the adjustment switch and press the TARE button <br><br> [TARE] | Weight <br> *P In* <br> kg <br> [●] NET ▶◀ →0← |
| ⇨ Use the number keys to enter password: <br> either <br><br> • Default password "0000" <br> or <br><br> • Personal password, enter under function [*F6 PI n* ] see chap.12 <br><br> ⇨ Confirm with TARE button | Piece Weight <br> — — — — <br> g <br> ⬚↑   PRESET   ♦↑ <br> ⇩ <br><br> Weight <br> *F 1CAL* <br> kg <br> [●] NET ▶◀ →0← |

| | |
|---|---|
| ⇨ TARE button, „UnLoAD" appears | |
| ⇨ Press the TARE key anew | **Weight** |
| [TARE button image] | $UnLOAd$ kg |
| | ⊡ NET ▶◢ →0← |
| „LoAd" as well as the currently set adjustment weight appear flashing | ⇩ |
| either | **Weight** |
| • Confirm with **TARE** | $LOAd$ kg |
| **or** | ⊡ NET ▶◢ →0← |
| • In order to change, enter the desired weight value of the adjustment weight by the numeric keyboard and confirm on the TARE button. | **+** |
| In order to achieve high-quality weighing results in the sense of the measuring technology, it is recommended to select the nominal value as high as possible. We recommend 80 % max. | **Piece Weight** $6.000$ g |
| | 🗄↑ **PRESET** 🔺↑ |
| | (Example) |
| ⇨ Carefully place adjusting weight in the centre of the weighing plate | |
| ⇨ Wait for stability display, then press the TARE button | |
| [TARE button image] | |
| ⇨ While the balance carries out a self test, remove the adjustment weight. | **Weight** $99999$ kg |
| | ⊡ NET ▶◢ →0← |
| | ⇩ |
| After successful adjustment the balance automatically returns to weighing mode. | **Weight** $0.0$ kg |
| In case of an adjustment error or incorrect adjusting weight the display will show an error message; repeat adjustment process. | ⊡ NET ▶◢ →0← |

English
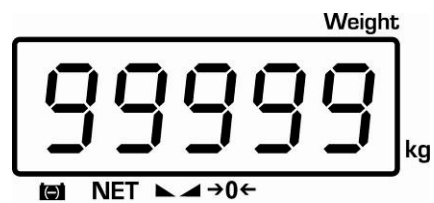
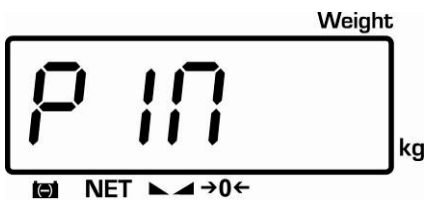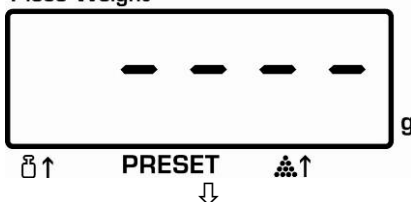## 6.8 Linearization (non-verified models only)

Linearity shows the greatest deviation of a weight display on the scale to the value of the respective test weight according to plus and minus over the entire weighing range.
If linearity deviation is discovered during a testing instrument control, you can improve this by means of linearization.

- Carrying out linearization is restricted to specialist staff possessing well acquainted with the workings of weighing scales.
- The test weights to be used must be adapted to the weighing scale's specifications; see chapter 3.4 "testing instruments control".
- Observe stable environmental conditions. Stabilisation requires a certain warm-up time.
- After successful linearization you will have to carry out calibration; see chapter 3.4 "Testing instruments control"

**Tab. 1: Adjustment points**

| Adjustment weight | CPB 6K0.1N | CPB 15K0.2N | CPB 30K0.5N |
|---|---|---|---|
| **1.** | 1 kg | 2.5 kg | 5 kg |
| **2.** | 2 kg | 5 kg | 10 kg |
| **3.** | 4 kg | 10 kg | 15 kg |
| **4.** | 6 kg | 15 kg | 30 kg |

| Operation | Display |
|---|---|
| **How to carry out linearization:**<br><br>⇨ Switch on balance and during self-check press the TARE key<br><br> | |
| ⇨ Use the numeric keys to enter password „9999"<br><br>⇨ Confirm with TARE button<br><br> | <br><br> |

⇨ Press TARE button, the acceleration value due to gravity is displayed.

⇨ Press the TARE key anew

**TARE**

Piece Weight

```
9.81000
```
g

☐↑    PRESET    ⚬↑

(Example)

Weight

```
LoAd 0
```
kg

☐ NET ▸◂ →0←

⇩

„LoAd 0" appears, after a short time a signal will sound and „LoAd 1" appears

Weight

```
LoAd 1
```
kg

☐ NET ▸◂ →0←

⇨ First adjustment weight (s. tab. 1) after a short time a signal will sound and „LoAd 2" appears

Weight

```
LoAd 2
```
kg

☐ NET ▸◂ →0←

⇨ Second adjustment weight after a short time again a signal will sound and „LoAd 3" appears.

Weight

```
LoAd 3
```
kg

☐ NET ▸◂ →0←

⇨ Third adjustment weight after a short time again a signal will sound and „LoAd 4" appears.

Weight

```
LoAd 4
```
kg

☐ NET ▸◂ →0←

⇨ Forth adjustment weight after a short time again a signal will sound and „LoAd 3" appears.

Weight

```
LoAd 3
```
kg

☐ NET ▸◂ →0←

⇨ Forth adjustment weight after a short time a signal will sound and „LoAd 2" appears.

Weight

```
LoAd 2
```
kg

☐ NET ▸◂ →0←

⇨ Third adjustment weight after a short time a signal will sound and „LoAd 1" appears

Weight

```
LoAd 1
```
kg

☐ NET ▸◂ →0←
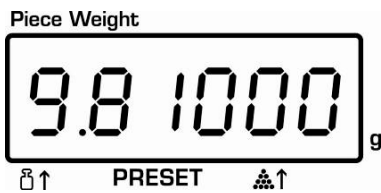
| ⇨ Second adjustment weight<br>after a short time a signal will sound and<br>„LoAd 0" appears.<br><br>⇨ First adjustment weight<br><br>⇨ After successful linearization the balance<br>automatically returns to weighing mode. | Weight<br><br>$LoAd\ 0$ kg<br><br>NET ►◄ →0←<br><br>Weight<br><br>$0.0$ kg<br><br>NET ►◄ →0← |
|---|---|

In case of an adjustment error or incorrect adjusting weight the display will show an error message; repeat linearization process.

English

## 6.9 Verification

General introduction:

According to EU directive 90/384/EEC balances must be verified if they are used as follows (legally controlled area):

a) For commercial transactions if the price of goods is determined by weighing.
b) For the production of medicines in pharmacies as well as for analyses in the medical and pharmaceutical laboratory.
c) For official purpose.
d) For manufacturing final packages.

In cases of doubt, please contact your local trade in standard.

After verification the balance is sealed at the indicated positions.
**Verification of the balance is invalid without the "seal".**

Verification notes:

An EU type approval exists for balances described in their technical data as verifiable. If a balance is used where obligation to verify exists as described above, it must verified and re-verified in regular intervals.
Re-verification of a balance is carried out according to the respective national regulations. The validity for verification of balances in Germany is e.g. 2 years.
The legal regulation of the country where the balance is used must be observed!

**Balances with obligation to verify must be taken out of operation if:**

- The **weighing result** of the balance is outside the **error limit.** Therefore, in regular intervals load balance with known test weight (ca. 1/3 of the max. load) and compare with displayed value.
- The **reverification deadline** has been exceeded**.**

### 6.9.1 Adjustment switch and seals

Possible seals: **B** enforced, and **A** or **C**
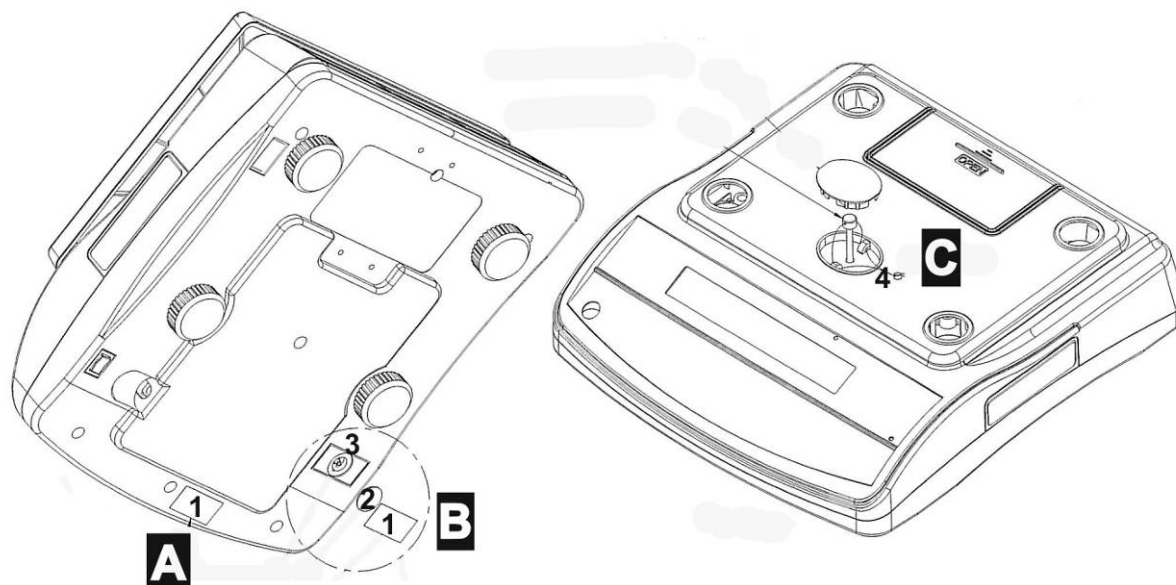


1. Seal mark 1
2. Cover
3. Verification switch
4. Verification wire

### 6.10 Checking the balance verification settings

For the adjustment, the balance must be switched over to service mode.

ⓘ In the service mode the parameters of the balance can be modified. The service parameters may not be modified, as this could damage the balance settings.

In calibrated scales the service mode is locked individually for each switch. To disable the access lock, destroy the seal and actuate the switch. For position of switch see chap. 6.9.1.

**Attention**:

After destruction of the seal the balance must be re-verified by an authorised agency and a new verification wire/seal mark fitted before it can be reused for applications subject to verification.

### 6.11 Service mode (verified models)

This overview of the service parameters is merely for checking the parameters set by the appropriate Bureau of Standards. No changes may be made.

**Access to menu:**

⇨ Switch-on balance and during the selftest press the TARE button
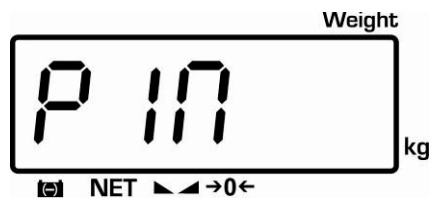
⇨ Use the number keys to enter password:

either

- Default password "0000"

or

- Personal password, enter under function [$F6$ $PI$ $n$ ] see chap.12
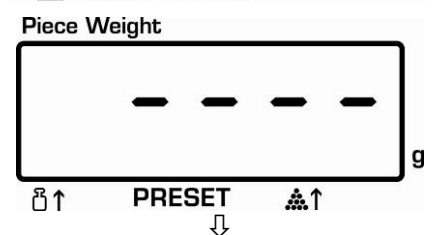
⇨ Confirm with TARE button

**Select function:**

⇨ Press [REF] to select the individual functions showing the current settings one by one.

**Change / save settings:**

⇨ Confirm selected function by pressing [TARE]. Select desired setting by pressing [REF] and confirm by pressing [TARE] or cancel by pressing [→0←].

**Exit menu:**

⇨ Using [→0←] the balance returns into the weighing mode.

## Overview for service parameter:

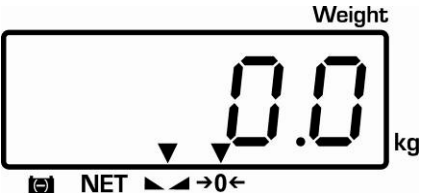**\*** = Factory settings
$\diamond$ = The menu item is blocked; to modify press the justification button.

| Menu block Main menu | Menu item Submenu | Available settings / explanation | | | | |
|---|---|---|---|---|---|---|
| F1 CAL$^\diamond$ | | Adjustment | | | | |
| | | | | | | |
| F2 rES$^\diamond$ | 6000d \* | Resolution | | | | |
| | duAL | **Always use this setting** | | | | |
| | 30000 d | | | | | |
| | 3000 d | | | | | |
| | | | | | | |
| F3 Cnt | | A/D - value | | | | |
| | | | | | | |
| F4 AU **Add-up mode and data output** | AU on\* Automatic summation mode | b9600\*, b600, b1200, b2400, b4800 | LP 50 | EnG | CHi | Not documented |
| | | | tP | Standard printer setting | | |
| | P ASt | b9600\*, b600, b1200, b2400, b4800 | EnG | CHi | | Remote control instructions |
| | P Cont | b9600\*, b600, b1200, b2400, b4800 | Sd0 on | Send zero on | | Continuous data output |
| | | | Sd0 off | Send zero off | | |
| | AU off Manual summation mode | b9600\*, b600, b1200, b2400, b4800 | LP 50 | EnG | CHi | Not documented |
| | | | tP | Standard printer setting | | |
| | | | | | | |
| F5 tAr $^\diamond$ **Pre-Tare** | Pt oFF\* | Pretaring value off: **Always use this setting** | | | | |
| | Pt on | Pretaring value on | | | | |
| | | | | | | |
| F6 Pin $^\diamond$ **Password** | Pin 1\* | Enter the new password | | | | |
| | Pin 2 | Confirm the new password | | | | |
| | | | | | | |
| F7 SPd $^\diamond$ **Display speed** | SPd 7.5\* | not documented | | | | |
| | SPd 15 | | | | | |
| | SPd 30 | | | | | |
| | SPd 60 | | | | | |
| | | | | | | |
| F8 oFF **Auto Off** | oF 0\* | Automatic shutdown off | | | | |
| | oF 3 | Automatic shutdown after 3 min | | | | |
| | oF 5 | Automatic shutdown after 5 min | | | | |
| | oF 15 | Automatic shutdown after 15 min | | | | |
| | oF 30 | Automatic shutdown after 30 min | | | | |

| F9  Grv ◇ **Gravity** | | not documented |
|---|---|---|
| | | |
| F10  bEP **Audio signal** | ok* | Signal sound, when the load is within the set range |
| | Low | Signal sound, when the load is below the lower limit value |
| | nG | Signal sound, when the load is beyond the set range |
| | HiGH | Signal sound, when the load is above the upper limit value |
| | | |
| F11  t n ◇ | P-tArE | **Always use this setting** |
| | o-tArE | |
| | | |
| F12  rSt | Reset to default setting | |
| | | |
| F13 bEE | off | Acoustic signal when pressing button |
| | on | |
| | | |
| F14 AUW | off | Automatic correction of reference weight |
| | on | |
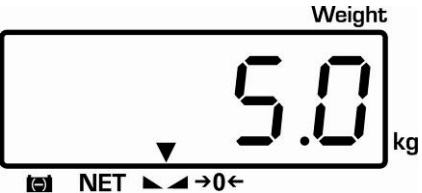
English

## 7   Operation Mode

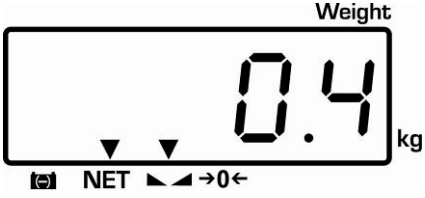### 7.1   Switch on/off and set zero
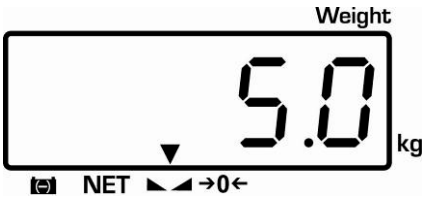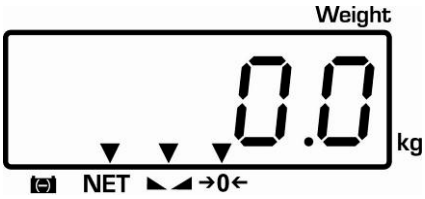
| Operation | Indication |
|---|---|
| 1.  Switch on balance<br><br>Press ON/OFF switch and hold briefly (at the bottom right side of the balance)<br><br>The balance will carry out a self-test | As soon as the weight display shows "**0**" in all the three display windows your balance is ready to weigh.<br><br><br>*Weight*<br><br>**0.0** kg<br><br>NET  →0← |
| 2.  Set on zero<br><br>→0← | *Weight*<br><br>**0.0** kg<br><br>NET  →0←<br><br>The zero display and the arrow above the „→**0**←" symbol are displayed. |

### 7.2   Simple weighing

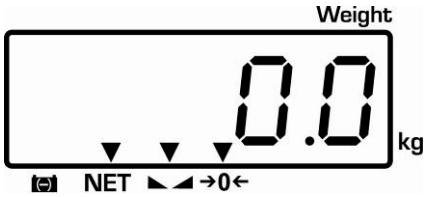| Operation | Display |
|---|---|
| Place load onto weighing plate | Read weighing result<br><br>*Weight*<br><br>**5.0** kg<br><br>NET  →0←<br><br>If weighing values are stable the arrow will be displayed above the ►◄ - symbol. |
| If the goods are heavier than the weighing range, the display will show "o𝐿" (=Overload), and a whistle is sounded. |  |

### 7.3 Weighing with taring

The dead weight of any weighing container may be tared away by pressing a button, so that the following weighings show the net weight of the goods to be weighed.

| Operation | Indication |
|---|---|
| Place empty tare container on the weighing plate. The total weight of the container is displayed. | **Weight**<br>**5.0** kg<br>▼<br>NET ▶◀ →0←<br>(Example) |
| Reset display to "0":<br><br>TARE | **Weight**<br>**0.0** kg<br>▼ ▼ ▼<br>NET ▶◀ →0←<br><br>The weight of the container is now internally saved. The zero display and the arrows above the symbols **NET** - ▶◀ - **→0←** will appear. |
| Place the goods to be weighed into the tare container. | Read the weight of the goods on the display.<br>**Weight**<br>**0.4** kg<br>▼ ▼<br>NET ▶◀ →0← |

| | |
|---|---|
| **i** | • The taring process can be repeated any number of times, e.g. when adding several components for a mixture (adding). The limit is reached when the whole weighing range is exhausted.<br><br>• The tare value will be rounded off according to the readability of the weighing scales. |

| Reset display to "0":<br><br>TARE | Weight<br>**0.0** kg<br>NET →0←<br><br>The total weight of the container is tared away. |
|---|---|
| Add more components into the weighing container (adding). | Now read off the weight of the added item to be weighed on the display.<br><br>Weight<br>**2.4** kg<br>NET →0← |

**Delete tare value:**

⇨ Unload the weighing platform and press ⬚TARE.

## 7.4 Display background illumination
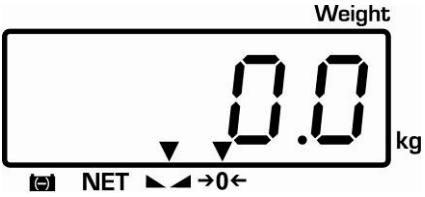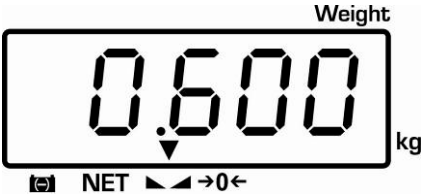
The balance has the following possibilities of setting for the display background illumination:

| | |
|---|---|
| Keep [PRE SET] pressed in weighing mode.<br><br>The last selected setting will be shown.<br><br>Press [REF] to select the following settings: | |
| • Display background illumination off | **Weight**<br>$EL_{\,}oFF$   kg<br>⬛ NET ►◢→0← |
| • Display background illumination on | **Weight**<br>$EL_{\,}on$   kg<br>⬛ NET ►◢→0← |
| • Display background illumination automatically off | **Weight**<br>$EL_{\,}AU$   kg<br>⬛ NET ►◢→0← |
| Select desired setting by [TARE] .<br><br>The setting is taken over and the balance changes into weighing mode. | |

# 8 Piece counting

With pieces counting you can either count parts into a container or remove parts from a container. To count a greater number of parts the average weight per part has to be determined with a small quantity (reference quantity). The larger the reference quantity, the higher the counting exactness. High reference must be selected for small parts or parts with considerably different sizes.

## 8.1 Determination of the reference weight by weighing

| Operation | Display |
|---|---|
| ⇨ Reset balance to zero or tare the empty weighing container if necessary. | Weight<br><br>0.0 kg<br>▼ ▼<br>⊡ NET ▶◢ →0← |
| **Set reference:**<br><br>⇨ Place a known number of pieces on the balance as reference<br><br>⇨ Wait for the stability display, than enter the number of individual items via the numeric keypad. Confirm within 5 sec:<br><br>REF<br>👆<br><br>„SAMP" is shortly displayed;<br><br><br>The reference weight will be determined and displayed. | Weight<br><br>0.600 kg<br>▼<br>⊡ NET ▶◢ →0←<br><br>Piece Weight<br><br>SAMP g<br>🗂↑ PRESET ⚏↑<br>⇩<br>Piece Weight<br><br>100.003 g<br>🗂↑ PRESET ⚏↑ |

**Count the items:**

Tare if necessary, place weighing good and read off the number of items.

| Weight placed on balance: | Reference weight: | Quantity placed on balance: |
|---|---|---|
| Weight<br>**0.300** kg<br>⊡ NET ▶◢ →0← | Piece Weight<br>**100.003** g<br>🗄↑ PRESET ⚖↑ | **3** Pcs<br>M |
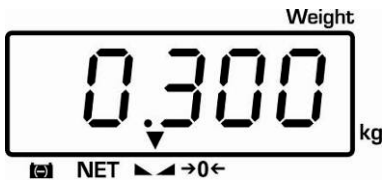
The display value can be printed out by connecting an optional printer and pressing    .

**Printout example KERN YKB-01N:**

| | |
|---|---|
| Item counter | NO.          0 |
| Weight placed on balance | GS          0.300   kg |
| Reference weight | U.W.   100.0000    g |
| Quantity placed on balance | PCS          3   pcs |

**Notes:**

- If necessary, the reference weight will be calculated anew when more pieces are placed whose quantity is less than the placed reference material. This reference optimisation will be indicated by a signal sound.
- The reference weight is only determined with stable weighing values
- If weighing values are under zero, the piece counter display shows a negative number of items.

**Delete reference**

Press 🔲 C , the reference weight will be deleted.

English

## 8.2 Numeric entering of the reference weight
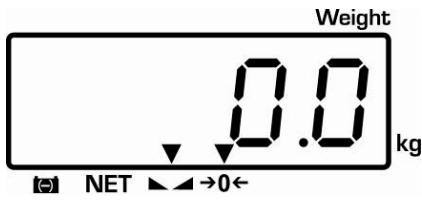
If you know the reference weight/piece you can enter this via numeric keys.

| | |
|---|---|
| **Set reference:**<br><br>Enter reference weight via number keys<br><br>Confirm within 5 sec:<br><br>REF | Piece Weight<br><br>**100** g<br><br>PRESET |

**Count the items:**

Tare if necessary, place weighing good and read off the number of items.

| Weight placed on balance: | Reference weight: | Quantity placed on balance: |
|---|---|---|
| Weight<br><br>**0.500** kg<br><br>NET →0← | Piece Weight<br><br>**100** g<br><br>PRESET | **5** Pcs<br><br>M |

The display value can be printed out by connecting an optional printer and pressing    .

**Printout example KERN YKB-01N:**

| | | | |
|---|---|---|---|
| Item counter | NO. | 0 | |
| Weight placed on balance | GS | 0.500 | kg |
| Reference weight | U.W. | 100 | g |
| Quantity placed on balance | PCS | 5 | pcs |

English

## 8.3 Automatic correction of the reference weight (verifiable models only)

The balance has the possibility to correct the deviation automatically if the reference weight differs from the previously adjusted value of the reference weight.

> **ℹ** • Menu setting: **[F 14   Ao   on]**, see chap. 6.11 Service mode

| Operation | Display |
|---|---|
| ⇨ Reset balance to zero or tare the empty weighing container if necessary. | Weight<br>*0.0* kg<br>NET →0← |
| **Set reference:**<br><br>⇨ Place a known number of pieces on the balance as reference<br><br>⇨ Wait for the stability display, than enter the number of individual items via the numeric keypad. Confirm within 5 sec:<br><br>REF<br><br>„SAMP" is shortly displayed;<br><br><br><br>The reference weight will be determined and displayed. | Weight<br>*0.600* kg<br>NET →0←<br><br>Piece Weight<br>*SAMP* g<br>PRESET<br>⇩<br>Piece Weight<br>*100.003* g<br>PRESET |
| ⇨ Put on more items to be weighed, the balance will correct the reference weight and an acoustic signal sounds, if it has been activated under menu item „F13 bee" | Piece Weight<br>*100.340* g<br>PRESET<br>(example) |

English

# 9 Totalization

This function allows you to execute several weighing procedure. After that, the total items number, the total weight and the number of weighing procedures will be displayed.

## 9.1 Manual totalizing

| ℹ | • Menu setting: **[F4  AU  oFF]**, see chap. 12.2.1 |
|---|---|

⇨ Determine the average piece weight (see chap. 8.1) or enter manually (see chap. 8. 2).

| | |
|---|---|
| ⇨ Place weighing goods **A**. | Piece Weight<br>**100** g<br>🔒↑ PRESET ⛰↑<br><br>Weight<br>**2.000** kg<br>▼<br>◉ NET ▶◀ →0←<br>**Currently placed weight** |
| ⇨ Wait for stability display, then press [M+]. The displayed values are added into the summation memory and edited, when an optional printer is connected. Weight, number of weighing procedures (ACC 1) as well as the quantity of items are displayed for 2 sec.. | Piece Weight<br>**100** g<br>🔒↑ PRESET ⛰↑<br>**Selected item weight**<br><br>**20** Pcs<br>M<br>**Currently placed quantity of items** |

**Printout example KERN YKB-01N:**

| | | |
|---|---|---|
| Number weighing processes | NO. | 1 |
| Weight placed on balance | GS | 2.000 kg |
| Reference weight | U.W. | 100 g |
| Quantity placed on balance | PCS | 20 pcs |

⇨ Remove the weighed good. More weighed goods can only be added when the display ≤ zero.

⇨ Place goods to be weighed **B**.
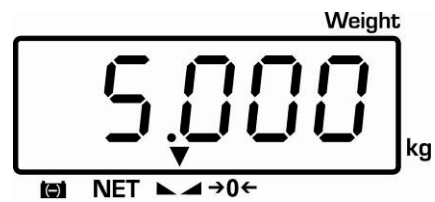
Weight

**5.000** kg

⌷ NET ▶◢ →0←

Piece Weight

**100** g

🗑↑ PRESET ♨↑

⇨ Wait for stability display, then press

[M+]. The displayed values are added into the summation memory and edited, when an optional printer is connected. Total weight, number of weighing procedures (ACC 2) as well as total items number appear for 2 sec.

**50** Pcs

M

**Printout example KERN YKB-01N:**

| | | |
|---|---|---|
| Number weighing processes | NO. | 2 |
| Weight placed on balance | GS | 5.000 kg |
| Reference weight | U.W. | 100 g |
| Quantity placed on balance | PCS | 50 pcs |

English

⇨ Add more weighed goods as described before.
Please note that the weighing system must be unloaded between the individual weighing procedures.

⇨ You can repeat this process until the capacity of the weighing system is exhausted.

---

**Display sum total:**

⇨ Press [MR], total weight, number of weighing procedures and total number of items will be displayed shortly.

Press [PRINT] during this display for data output.

Weight

**7.000** kg

⊡ NET ▲◢ →0←

**Total weight**

**Number of weighing procedures**

**70** Pcs

M
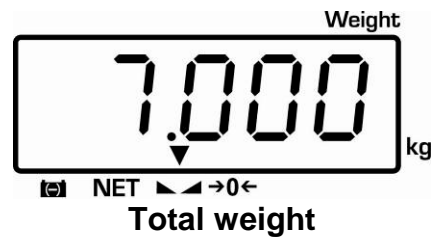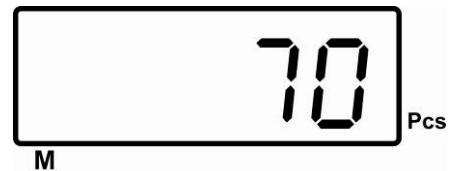
**Current total number of items**

---

**Printout example KERN YKB-01N:**

| | | |
|---|---|---|
| End total | Total | |
| Number weighing processes | NO. | 2 |
| Total weight | wgt | 5.000 kg |
| Total number of pieces | PCS | 50 pcs |
| | *********************************** | |

---

**Delete total added memory**

⇨ Press [MR], the total weight, number of weighing procedures as well as total number of items are displayed. During this display press [C]. The data in the summation memory are deleted.

## 9.2 Automatic adding-up

With this function the individual weighing values are automatically added into the

summation memory when the balance is unloaded without pressing [M+] and edited, when an optional printer is connected.

**i** Menu settings: [ F4   AU   oM ]

**Add up:**

⇨ Place weighing goods A.
After the standstill control sounds a signal tone. Unload the weighing good, the weighing value is added into the summation memory (ACC1) and printed out.

⇨ Place goods to be weighed B.
After the standstill control sounds a signal tone. Unload the weighing good, the weighing value is added into the summation memory (ACC2) and printed out.

⇨ Add more weighed goods as described before.
Please note that the balance must be unloaded between the individual weighing procedures.

⇨ This process can be repeated 99 times or until the weighing range of the balance is exhausted.

**i** For how to display and delete the total sum, as well as a printout example, see chap. 9.1.

## 10 Weighing to target quantity or target weight and tolerance check

An acoustic signal is sounded as soon as the number of items placed or a certain weight value reaches or exceeds/drops below a pre-set limit (depending on the settings in menu F10)
Options:

- **OK**   Signal sound, when the load is within the set range
- **Low**  Signal sound, when the load is below the lower limit value
- **NG**   Signal sound, when the load is beyond the set range
- **High** Signal sound, when the load is above the upper limit value

### 10.1 Tolerance check for target quantity

| Select target number mode:<br><br>Keep [C] pressed, the set mode will appear | Piece Weight<br><br>**PCS** g<br><br>⊟↑  **PRESET**  ▲↑<br><br>**Check psc** - Tolerance check for target item number<br><br>Press [C]<br><br>Piece Weight<br><br>**oFF** g<br><br>⊟↑  **PRESET**  ▲↑<br><br>**Check off** – Tolerance check switched off<br><br>Press [C]<br><br>Piece Weight<br><br>**nEt** g<br><br>⊟↑  **PRESET**  ▲↑<br><br>**Check net** -: Tolerance check for target weight |
|---|---|

English

**Set limit values:**
**Determine upper limit value for target item number:**

⇨ Press [PRE SET] , „Hi Cnt" will appear:

⇨ Enter the upper limit value via the numeric keyboard, e.g.: 70 Pcs

⇨ Press [TARE]

„Lo Cnt" appears:

**Determine lower limit value for target item number:**

⇨ Enter the lower limit value via the numeric keyboard, e.g.: 60 Pcs

⇨ Press [TARE]

⇨ Press [TARE] repeatedly until the balance is in weighing mode

Weight

**HI Cnt** kg

▼ ▼

[●] NET ►◢ →0←

Piece Weight

**70** g

🗂↑ PRESET 🔺↑

Weight

**Lo Cnt** kg

▼ ▼

[●] NET ►◢ →0←

Piece Weight

**60** g

🗂↑ PRESET 🔺↑

English
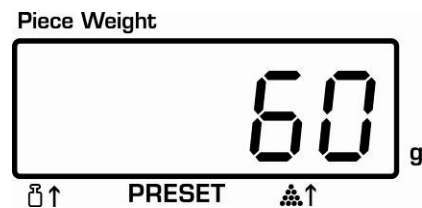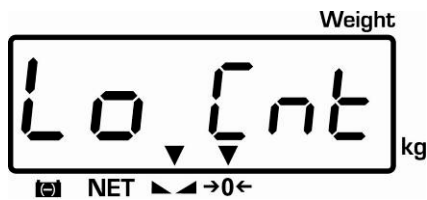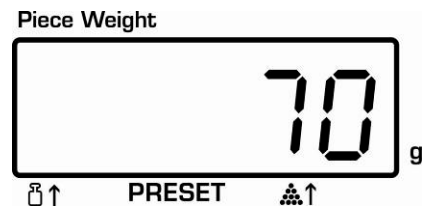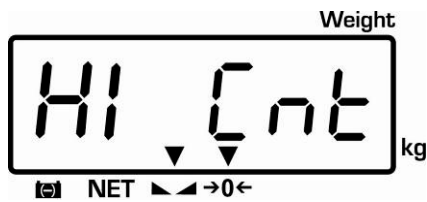
**Start tolerance check**

⇨ Determine the average piece weight (see chap. 8.1) or enter manually (see chap. 8. 2).

⇨ Place the load, wait until the acoustic signal sounds, depending on the settings in the menu „F10" (see chap. 11.2, only for non-verified models).

**Delete limit values:**

⇨ For all limit values enter „0" and confirm using the TARE button.

## 10.2 Tolerance check for target weight
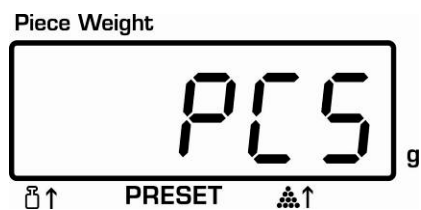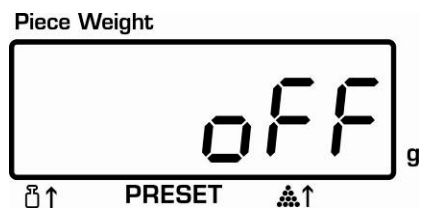
| Select target weight mode: | Piece Weight |
|---|---|
| Keep [C] pressed, the set mode will appear | **PCS** g <br> ₈↑ PRESET ▲↑ <br> **Check psc** - Tolerance check for target item number <br><br> Press [C] <br> Piece Weight <br> **oFF** g <br> ₈↑ PRESET ▲↑ <br> **Check off** – Tolerance check switched off <br><br> Press [C] <br> Piece Weight <br> **nEt** g <br> ₈↑ PRESET ▲↑ <br> **Check net** -: Tolerance check for target weight |

| | |
|---|---|
| **Select target weight mode:**<br><br>By keeping pressed $\boxed{C}$ the desired tolerance weighing mode can be selected:<br><br>• **Check off** – Tolerance check switched off<br><br>• **Check psc** - Tolerance check for target item number<br><br>• **Check net** -: Tolerance check for target weight | Piece Weight<br><br>$PL5$  g<br><br>🗄↑　PRESET　📶↑ |
| **Set limit values:**<br>**Determine upper limit value for target weight:**<br><br>$\boxed{\text{PRE SET}}$<br><br>⇨ Press 👆 repeatedly and confirm via the **TARE** button until „Hi nEt" appears:<br><br><br><br>⇨ Enter the upper limit value via the numeric keyboard, e.g. 100 g<br><br>⇨ Confirm within 5 sec:<br><br>$\boxed{\text{TARE}}$<br>👆<br><br>⇨ „Lo nEt" appears: | Weight<br><br>$HI \ \, nEt$  kg<br>▼ ▼<br>(◖) NET ▶◢ →0←<br><br><br>Piece Weight<br><br>$100$  g<br><br>🗄↑　PRESET　📶↑ |

| Determine lower limit value for target weight:<br><br>⇨ Enter the lower limit value via the numeric keyboard, e.g.: 90 g<br><br>⇨ Confirm within 5 sec:<br><br>TARE<br><br><br>TARE<br><br>Press 👆 repeatedly until the balance is in weighing mode | Weight<br><br>Lo nEt<br>kg<br><br>▼ ▼<br>[◦] NET ▶◢ →0←<br><br><br>Piece Weight<br><br>90<br>g<br><br>🗋↑ PRESET ⛰↑ |
|---|---|
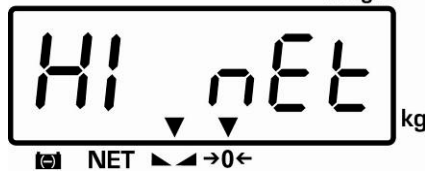
**Start tolerance check**

⇨ Place the load, wait until the acoustic signal sounds, depending on the settings in the menu „F10" (see chap. 11.2, only for non-verified models).

**Delete limit values:**

⇨ For all limit values enter „0" and confirm using the TARE button.

# 11 Change readability (only models CPB-M)

TARE

In order to change the readability, keep 👆 pressed. The last decimal point flashes for approx. 3 sec. Within this period the value can be read-off in another resolution.

**ℹ This value is not verified!**

## 12 Menu (non verifiable models)

### Access to menu:

⇨ Switch-on balance and during the selftest press the **TARE** button.

Weight

$P$ $\mathit{In}$

kg

NET →0←

Piece Weight

— — — —

g

⇨ Use the number keys to enter password:

either

- Default password "0000"

or

- Personal password, enter under function [$F5$ $PI$ $n$ ] see chap.12

PRESET

⇨ Confirm with **TARE** button

Weight

$F$ $\mathit{ICAL}$

kg

NET →0←
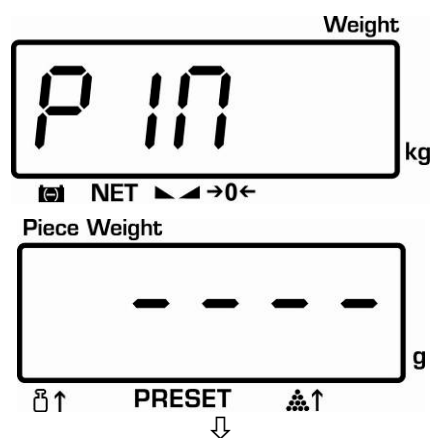
### Select function:

⇨ Press [REF] to select the individual menu items showing the current settings one by one.

### Change / save settings:

⇨ Confirm selected function by pressing [TARE]. Select desired setting by pressing [REF] and confirm by pressing [TARE] or cancel by pressing [→0←].

### Exit menu:

⇨ Using [→0←] the balance returns into the weighing mode.

## 12.1 Menu overview

| Menu block Main menu | Menu item Submenu | Available settings / explanation | | | | |
|---|---|---|---|---|---|---|
| F1 CAL | | Adjustment | | | | |
| | | | | | | |
| F2 di | d 6000* | Resolution | | | | |
| | d 3000 | | | | | |
| | d 60000 | | | | | |
| | d 30000 | | | | | |
| | d 15000 | | | | | |
| | | | | | | |
| F3 Cnt | | A/D - value | | | | |
| | | | | | | |
| F4 AU **Add-up mode and data output** | AU on* Automatic summation mode | b9600*, b600, b1200, b2400, b4800 | LP 50 | EnG | CHi | not documented |
| | | | tP | Standard printer setting | | |
| | P ASt | b9600*, b600, b1200, b2400, b4800 | EnG | CHi | | Remote control instructions |
| | P Cont | b9600*, b600, b1200, b2400, b4800 | EnG | CHi | | Continuous data output |
| | AU off Manual summation mode | b9600*, b600, b1200, b2400, b4800 | LP 50 | EnG | CHi | not documented |
| | | | tP | Standard printer setting | | |
| | | | | | | |
| F5 AZn **Zeroing range** | 2d* | Automatic zero-setting, selectable between 0.5d, 1d, 2d and 4d | | | | |
| | 4d | | | | | |
| | 0.5d | | | | | |
| | 1d | | | | | |
| | | | | | | |
| F6 Pin **Password** | Pin 1* | Enter the new password | | | | |
| | Pin 2 | Confirm the new password | | | | |
| | | | | | | |
| F7 SPd **Display speed** | SPd 7.5* | not documented | | | | |
| | SPd 15 | | | | | |
| | SPd 30 | | | | | |
| | SPd 60 | | | | | |
| | | | | | | |
| F8 oFF **Auto Off** | oF 0* | Automatic shutdown off | | | | |
| | oF 3 | Automatic shutdown after 3 min | | | | |
| | oF 5 | Automatic shutdown after 5 min | | | | |
| | oF 15 | Automatic shutdown after 15 min | | | | |
| | oF 30 | Automatic shutdown after 30 min | | | | |

English

| F9 Gru<br>**Gravity** | | not documented |
| --- | --- | --- |
| | | |
| F10 bEP<br>**Audio signal** | ok* | Signal sound, when the load is within the set range |
| | Low | Signal sound, when the load is below the lower limit value |
| | nG | Signal sound, when the load is beyond the set range |
| | HiGH | Signal sound, when the load is above the upper limit value |
| | | |
| F11 rSt | Reset to default setting | |

* default setting

# 13 Data output RS 232 C

The balance is typically equipped with a RS 232C interface. Weighing data can be edited according to menu setting or automatically or by pressing   via the interface. This data exchange is asynchronous using ASCII - Code.
The following conditions must be met to provide successful communication between the weighing balance and the printer.

- Use a suitable cable to connect the weighing balance to the interface of the printer. Faultless operation requires an adequate KERN interface cable.

- Communication parameters (baud rate, bits and parity) of weighing balance and printer have to match, see chap. 11.2, Menu block „F4 AU".

## 13.1 Technical data

| | |
|---|---|
| Connection | D-Sub 9 poles jack |
| | Pin 2 output |
| | Pin 3 input |
| | Pin 7 signal earth |
| Baud rate | Selectable 600/1200/2400/**4800**/9600 |
| Parity | 8 bits, no parity |

**bold printed** = factory setting

## 13.2 Remote control instructions

The remote control commands are sent from the remote control unit to the balance as ASCII code. After the balance having received the commands, it will send the following data.

Take into account that the following remote control commands must be sent without a subsequent CR LF.

| | |
|---|---|
| T | Tare placed weighing vessel |
| Z | Zeroing |
| C | Delete |
| P | Pieces to send |
| S | Send stable value |
| W | Send instable value |

## 14 Service, maintenance, disposal

### 14.1 Cleaning

Before cleaning, please disconnect the appliance from the operating voltage.

Please do not use aggressive cleaning agents (solvents or similar agents), but a cloth dampened with mild soap suds. Ensure that no liquid penetrates into the device and wipe with a dry soft cloth.
Loose residue sample/powder can be removed carefully with a brush or manual vacuum cleaner.

**Spilled weighing goods must be removed immediately.**

### 14.2 Service, maintenance

The appliance may only be opened by trained service technicians who are authorized by KERN.
Before opening, disconnect from power supply.

### 14.3 Disposal

Disposal of packaging and appliance must be carried out by operator according to valid national or regional law of the location where the appliance is used.

### 14.4 Error messages

| Error message | Description |
|---|---|
| **Err 4** | Zero range exceeded |
| **Err 5** | Invalid entry |
| **Err 6** | Damaged electronics |
| **Err 9** | Weighing result unstable |

Should other error messages occur, switch balance off and then on again. If the error message remains inform manufacturer.

# 15 Instant help

In case of an error in the program process, briefly turn off the balance and disconnect from power supply. The weighing process must then be restarted from the beginning.

| Fault | Possible cause |
|---|---|
| The displayed weight does not glow. | • The balance is not switched on. |
| | • The mains supply connection has been interrupted (mains cable not plugged in/faulty). |
| | • Power supply interrupted. |
| | • Batteries are inserted incorrectly or empty |
| | • No batteries inserted. |
| The displayed weight is permanently changing | • Draught/air movement |
| | • Table/floor vibrations |
| | • Weighing plate has contact with other objects. |
| | • Electromagnetic fields / static charging (choose different location/switch off interfering device if possible) |
| The weighing result is obviously incorrect | • The display of the balance is not at zero |
| | • Adjustment is no longer correct. |
| | • Great fluctuations in temperature. |
| | • Electromagnetic fields / static charging (choose different location/switch off interfering device if possible) |

## 16 Declaration of conformity

**KERN & Sohn GmbH**

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# Declaration of conformity

| EG-Konformitätserklärung | EC-Declaration of -Conformity |
|---|---|
| EC- Déclaration de conformité | EC-Declaración de Conformidad |
| EC-Dichiarazione di conformità | EC-Conformiteitverklaring |
| EC- Declaração de conformidade | EC- Prohlášení o shode |
| EC-Deklaracja zgodności | EC-Заявление о соответствии |

| | | |
|---|---|---|
| **D** | Konformitäts-erklärung | Wir erklären hiermit, dass das Produkt, auf das sich diese Erklärung bezieht, mit den nachstehenden Normen übereinstimmt. |
| **GB** | Declaration of conformity | We hereby declare that the product to which this declaration refers conforms with the following standards. |
| **CZ** | Prohlášení o shode | Tímto prohlašujeme, že výrobek, kterého se toto prohlášení týká, je v souladu s níže uvedenými normami. |
| **E** | Declaración de conformidad | Manifestamos en la presente que el producto al que se refiere esta declaración está de acuerdo con las normas siguientes |
| **F** | Déclaration de conformité | Nous déclarons avec cela responsabilité que le produit, auquel se rapporte la présente déclaration, est conforme aux normes citées ci-après. |
| **I** | Dichiarazione di conformitá | Dichiariamo con ciò che il prodotto al quale la presente dichiarazione si riferisce è conforme alle norme di seguito citate. |
| **NL** | Conformiteit-verklaring | Wij verklaren hiermede dat het product, waarop deze verklaring betrekking heeft, met de hierna vermelde normen overeenstemt. |
| **P** | Declaração de conformidade | Declaramos por meio da presente que o produto no qual se refere esta declaração, corresponde às normas seguintes. |
| **PL** | Deklaracja zgodności | Niniejszym oświadczamy, że produkt, którego niniejsze oświadczenie dotyczy, jest zgodny z poniższymi normami. |
| **RUS** | Заявление о соответствии | Мы заявляем, что продукт, к которому относится данная декларация, соответствует перечисленным ниже нормам. |

# Electronic Balance:  KERN CPB-N

| EU Directive | Standards |
|---|---|
| 2004/108/EC | EN55022: 2006 A1:2007<br>EN61000-3-3:1995+A1:2001+A2:2005<br>EN55024: 1998+A1:2001+A2:2003 |
| 2006/95/EC | EN 60950-1:2006<br>EN 60065:2002+A1:2006 |

**Datum**   08.04.2013
*Date*

**Signatur**
*Signature*

**Ort der Ausstellung**   72336 Balingen
*Place of issue*

Albert Sauter
KERN & Sohn GmbH
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| | |
|---|---|
| EG-Konformitätserklärung | EC-Declaration of -Conformity |
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| EC-Dichiarazione di conformità | EC-Conformiteitverklaring |
| EC- Declaração de conformidade | EC- Prohlášení o shode |
| EC-Deklaracja zgodności | |

| **D** | Wir erklären hiermit unter alleiniger Verantwortung, dass das Produkt, auf das sich diese Erklärung bezieht, mit den nachstehenden Richtlinien übereinstimmt. Für die Waage liegt eine EG-Bauartzulassung vor. Das Jahr der EG-Eichung ist neben der CE Konformitätskennzeichnung aufgeführt. Solche Waagen sind ab Werk EG-geeicht und tragen die Kennzeichnung „M" auf dem Gerät selbst und auf der Verpackung. Sie dürfen im eichpflichtigen Verkehr verwendet werden. Die Fallbeschleunigung gibt bei EG-geeichten Waagen an, für welchen Aufstellungsort die Waage EG-geeicht ist. |
|---|---|
| **GB** | We hereby declare and assume sole responsibility for the declaration that the product complies with the standards hereinafter. The scale was issued with an EC Type Approval Certificate. The year of EC verification can be found next to the CE mark of conformity. Such scales are EC verified ex factory and bear the mark "M", on the device itself as well as on the packaging. They can be used for weighing with obligation to verify. For EC verified scales, gravity acceleration indicates for which place of installation the scale is EC verified. |
| **CZ** | Prohlašujeme tímto na svou výhradní odpovědnost, že výrobek, jehož se toto prohlášení týká, je v souladu s níže uvedenými směrnicemi. Pro váhu je k dispozici schválení konstrukce podle předpisů EU. Rok cejchování podle předpisů EU je uveden vedle značky CE. Tyto váhy jsou cejchovány podle předpisů EU ve výrobním závodě a jsou označeny písmenem M, jak na samotném zařízení, tak i na obalu. Mohou být uváděny do oběhu tam, kde se povinně vyžaduje cejchování. Gravitační zrychlení uváděné na vahách cejchovaných podle předpisů EU znamená, pro které místo instalace je váha cejchována. |
| **E** | Manifestamos bajo sola responsabilidad en la presente que el producto al que se refiere esta declaración está de acuerdo con las normas siguientes. Para la balanza hay una autorización CE del tipo constructivo. El año de la primera verificación CE se ve al lado del símbolo CE. Estas balanzas han sido verificadas CE en fábrica y llevan la identificación „M" en el equipo mismo y en el embalaje. Ellas se pueden usar en transacciones con obligación de verificación. La acceleración de gravedad en las balanzas verificadas CE indica para cual lugar de emplazamiento la balanza ha sido verificada. |
| **F** | Nous déclarons par la présente que le produit auquel se réfère cette déclaration est conforme aux normes ci-après. Un certificat d`approbation a été établi par la CE pour la balance. L`an de l`homologation selon CE est indiqué à côté de la marque CE. De telles balances sont homologuées au départ de l'usine et portent la marque „M" sur l'appareil-même et sur l'emballage. Elles peuvent être utilisées dans des actions soumises à l'obligation d'étalonnage. L'accélération due à la pesanteur indique sur les balances homologuées selon CE, le site d'implantation pour lequel elles ont été homologuées. |
| **I** | Dichiariamo con ciò in responsabilità unica che il prodotto al quale la presente dichiarazione si riferisce è conforme alle norme di seguito citate. Per la bilancia esiste un permesso di costruzione UE. L'anno della taratura CE viene indicato vicino al simbolo CE. Queste bilance sono state tarate in fabbrica e portano il contrassegno „M" sullo stesso apparecchio e sull'imballaggio. Possono utilizzarsi in negozi soggetti ad obbligo di taratura. L'accelerazione di caduta delle bilance CE tarate indica per quale luogo di impiego la bilancia è stata tarata. |

**NL** Wij verklaren hiermede op exclusieve verantwoordelijkheid dat het product, waarop deze verklaring betrekking heeft, met de hierna volgende richtlijnen overeenstemt. Voor de weegschaal ligt er een EG-modelgoedkeuring ter inzage. Het jaar van de EG- ijking staat naast het CE-conformiteitsmerkteken vermeld. Dergelijke weegschalen werden in de fabriek EG-geijkt en dragen het identificatielabel „M" op het apparaat zelf en op de verpakking. Deze weegschalen mogen voor toepassingen, die een ijking vereisen, gebruikt worden. De valversnelling geeft bij EG-geijkte weegschalen aan, voor welke plaats van installatie de weegschaal EG-geijkt is.

**P** Declaramos por meio da presente sob a nossa sola responsabilidade que o produto no que se refere esta declaração, corresponde às normas seguintes. Para a balança éxiste uma homologação CE do tipo construtivo. O ano da primeira aferição CE fica ao lado do símbolo CE. Estas balanças foram aferidas CE em oficina e levam a identificação „M" no aparelho mesmo e na embalagem. Elas podem usar-se no tratamento comercial com aferição obrigatória. aceleração de queda indica nas balanças aferidas CE para qual sítio de colocação a balança foi aferida.

**PL** Świadomi ponoszonej przez nas odpowiedzialności oświadczamy, że produkt, którego dotyczy to oświadczenie, jest zgodny z poniższymi normami. Waga posiada zatwierdzenie typu WE. Rok legalizacji WE jest umieszczony obok oznaczenia CE. Tego typu wagi są legalizowane w zakładzie producenta i mogą być wykorzystywane do wszystkich celów wymagających legalizacji wagi, odpowiednie oznaczenie „M" znajduje się na urządzeniu oraz na opakowaniu. Wartość siły grawitacji u wag legalizowanych podaje miejsce użytkowania wagi, dla jakiego została legalizowana.

| **Scale Series:** RPB-DM, CPB-DM, GAB-DNM | **Serial Number:** XXXXXXXXXX |
|---|---|

| Mark applied | EU Directive | Approval/Test-certificate N° |
|---|---|---|
| $CE$ **year 0103** M | 2009/23/EC Non-automatic Weighing Instruments Directive | T7681 |
| | 2004/108/EC EMV | |
| | 2006/95/EC Low voltage | |
| | 2011/65/EU RoHS | |

**g =**

**Ort oder Zone**
*Location or zone*
**Datum** 24.07.2014
*Date*
**Ort der Ausstellung** 72336 Balingen
*Place of issue*

**Signatur**
*Signature* KERN & Sohn GmbH
**Eichbevollmächtigter**
*Verification officer*

Albert Sauter
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*Managing director*

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