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# Instruction Manual
# Price computing scales

## KERN RPB_D

Version 2.5
05/2014
GB

RPB_D-BA-e-1425

GB

# KERN RPB_D

Version 2.5 05/2014

**Instruction Manual**

**Price computing scales**

English

## Contents

English

# 1 Technical data

**Models without vertical display:**

| KERN | RPB 6K1DM | RPB 15K2DM | RPB 30K5DM |
|---|---|---|---|
| Weighing range (max) | 3 kg / 6 kg | 6 kg / 15 kg | 15 kg / 30 kg |
| Readability (d) | 1 g / 2 g | 2 g / 5 g | 5 g / 10 g |
| Minimum load (Min) | 20 g | 40 g | 100 g |
| Verification value (e) | 1 g / 2 g | 2 g / 5 g | 5 g / 10 g |
| Verification class | III | III | III |
| Reproducibility | 1 g / 2 g | 2 g / 5 g | 5 g / 10 g |
| Linearity | ± 1 g / ±2 g | ± 2 g /± 5 g | ± 5 g / ±10 g |
| Recommended adjusting weight (not supplied) | 5 kg; 1 kg (F2) | 15 kg (M1) | 20 kg; 10 kg (M1) |
| Stabilization time | 2 s | | |
| Heating time (operating temperature) | 10 min | | |
| Net weight (kg) | 3.3 kg | | |
| Basic price, can be switched over | €/kg; €/100 g | | |
| Admissible ambient temperature | -10° C to 40° C | | |
| Allowable air humidity | 0 % - 80 % (non-condensing) | | |
| Electric Supply | Mains adapter 220 V – 240 V AC 50 Hz<br>balance 12 V, 500 mA | | |
| Rechargeable battery (Option) | 6 V, 4 Ah | | |
| | Operating time – background lighting on 40 hrs.<br>Operating time – background lighting off 80 hrs. | | |
| | Loading time approx. 14 hrs. | | |

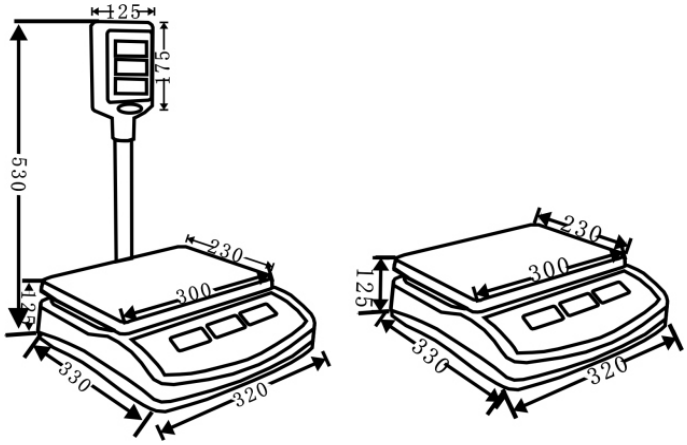
English

**Models with post-mounted display:**

| KERN | RPB 6K1DHM | RPB 15K2DHM | RPB 30K5DHM |
|---|---|---|---|
| Weighing range (max) | 3 kg / 6 kg | 6 kg / 15 kg | 15 kg / 30 kg |
| Readability (d) | 1 g / 2 g | 2 g / 5 g | 5 g / 10 g |
| Minimum load (Min) | 20 g | 40 g | 100 g |
| Verification value (e) | 1 g / 2 g | 2 g / 5 g | 5 g |
| Verification class | III | III | III |
| Reproducibility | 1 g/2 g | 2 g/5 g | 5 g/10 g |
| Linearity | ± 1 g / ±2 g | ± 2 g /± 5 g | ± 5 g / ±10 g |
| Recommended adjusting weight (not supplied) | 5 kg; 1 kg (F2) | 10 kg; 5 kg (M1) | 20 kg; 10 kg(M1) |
| Stabilization time | 2 s | | |
| Heating time (operating temperature) | 10 min | | |
| Net weight (kg) | 4.8 kg | | |
| Basic price, can be switched over | €/kg; €/100 g | | |
| Admissible ambient temperature | -10° C to 40° C | | |
| Allowable air humidity | 0 % - 80 % (non-condensing) | | |
| Electric Supply | Mains adapter 220 V – 240 V AC 50 Hz<br>balance 12 V, 500 mA | | |
| Rechargeable battery (Option) | 6 V, 4 Ah | | |
| | Operating time – background lighting on 40 hrs.<br>Operating time – background lighting off 80 hrs. | | |
| | Loading time approx. 14 hrs. | | |

English

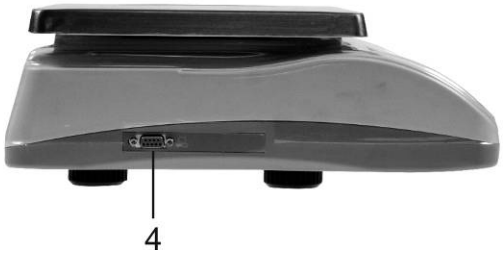
## 1.1 Dimensions

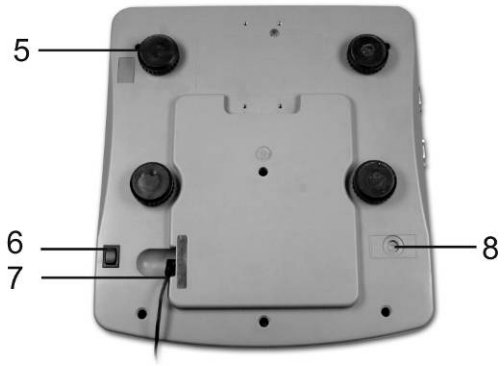


## 2 Appliance overview

Models without vertical display:


Models with post-mounted display:

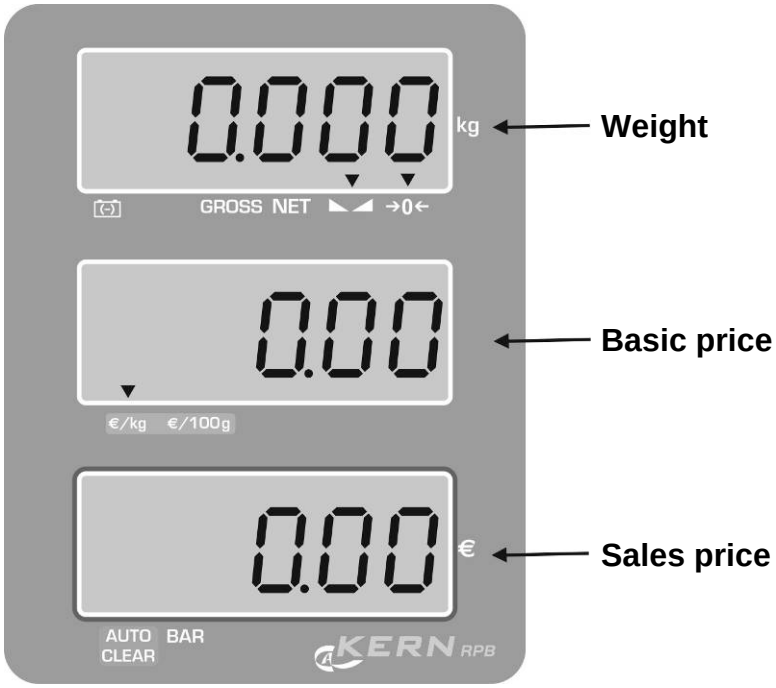




1. Weighing plate / rechargeable battery compartment (under weighing plate)
2. Bubble level
3. Post-mounted display
4. RS 232 interface
5. Foot screws
6. ON/OFF switch
7. Mains adapter connection
8. Adjustment switch

## 2.1 Overview of display

**Operator and secondary display (standard on the backside of models without post-mounted display):**


**Post-mounted display for models with tripod:**




English

**Display weight**
Here, the weight of your goods is displayed.

**Indicator ▼ next to symbol displays:**

| | |
|---|---|
|  | Battery very low |
| **GROSS** | Gross weight |
| **NET** | Net weight |
|  | Stability display |
| →0← | Zeroing display |

**Display basic price**
Basic price, can be switched over from € / kg or € / 100 g.

**Indicator ▼ next to symbol displays:**

| | |
|---|---|
| €/kg | Basic price in €/kg |
| €/100 g | Basic price in €/100 g |

**Display sale price**
Here the sales price is displayed in Euro [€].

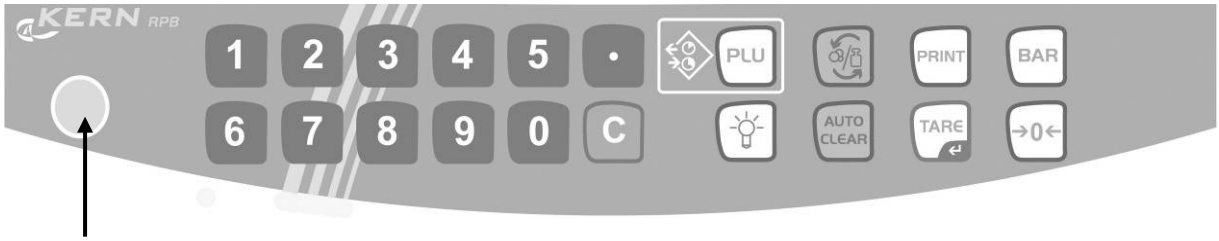
**Indicator ▼ next to symbol displays:**

| | |
|---|---|
| **AUTO CLEAR** | Set basic price is deleted automatically when balance is unloaded |
| **BAR** | Calculating the change (see chap. 8.2) |

**Storage battery status display**

| | |
|---|---|
| **red** | Charging storage battery |
| **green** | Battery is completely discharged |

## 2.2 Keyboard overview




**Bubble level**

| Selection | Function |
|---|---|
| 0 ~ 9 | 3 Numerical keys, PLU-keys |
| C | • Delete |
| PLU | • Save basic price (press and hold key for a long time) see chap. 8.2<br>• Call-up basic price (press and hold key for a short time), see chap. 8.2 |
| | • Switch-over unit € / kg ⇆ € / 100g |
| PRINT | • Issue to external device<br>• Parameter selection |
| BAR | • Calculating the change, see chap. 8.2 |
| TARE | • Taring, see chap. 7.3<br>• Storing settings |
| | • Background illumination of the display, see chap. 9.2 |
| AUTO CLEAR | • If function is activated, the set basic price is automatically deleted when the balance is unloaded, see chap. 9.1 |
| →0← | • Zeroing<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 weighings. 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.

English

# 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.

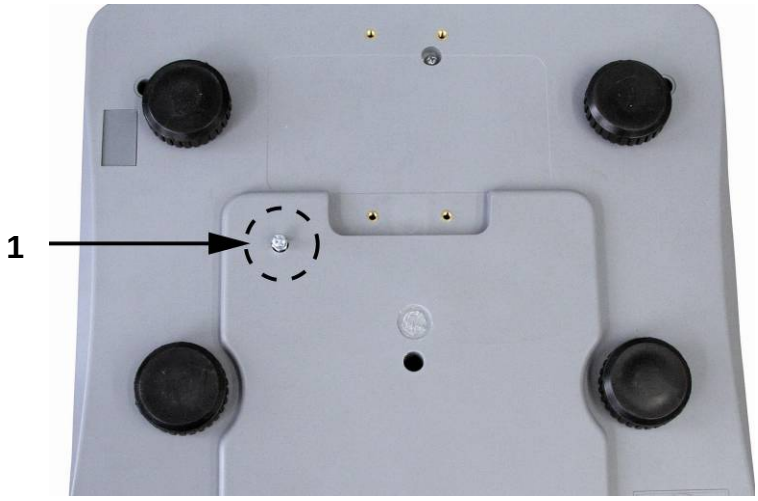
If electro-magnetic fields or static charge occur, or if the power supply is unstable major deviations on the display (incorrect weighing results) are possible. In that case, the location must be changed.

## 6.2 Unpacking

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

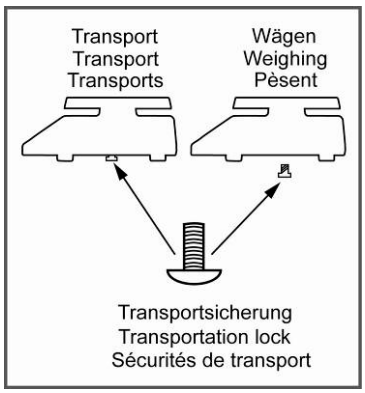
## 6.3 Transport screw

**Remove the transport screw essential (available only at 6 kg model)**

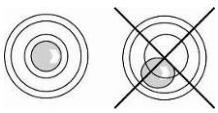



To loosen the transportation lock, unscrew transportation screw [1] anti-clockwise.

**For transport**, transport screw gently until it stops turning clockwise and then secure with lock nut.




### 6.3.1 Placing



Level balance with foot screws until the air bubble of the water balance is in the prescribed circle.

English

### 6.3.2 Scope of delivery / serial accessories:

- Balance, see chap. 2
- Mains adapter
- Protective cover
- Instruction Manual

## 6.4 Mains connection

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

## 6.5 Battery power supply (option)

**The rechargeable battery is charged via the delivered power supply.**
Before the first use, the battery should be charged by connecting it to the mains power supply for at least 15 hours.



- If an arrow appears on the weight display [▼] above the battery symbol  , 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. Charge the battery with the help of the supplied power pack.
- If in the weight display appears „**bat Lo**“ followed by a flickering display, the capacity of the rechargeable battery is below the prescribed minimum. The balance will be ready to operate for about another 5 minutes, then it will switch off automatically. Charge the battery with the help of the supplied power pack.

The LED display informs you during loading about the loading status of the rechargeable battery.

**red:** Battery is almost discharged

**green:** Battery is completely discharged

## 6.6 Initial Commissioning

In order to obtain exact results with the electronic balances, your balance must have reached the operating temperature (see warming up time chap. During this warming up time the balance must be connected to the power supply (mains, accumulator or battery).

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.

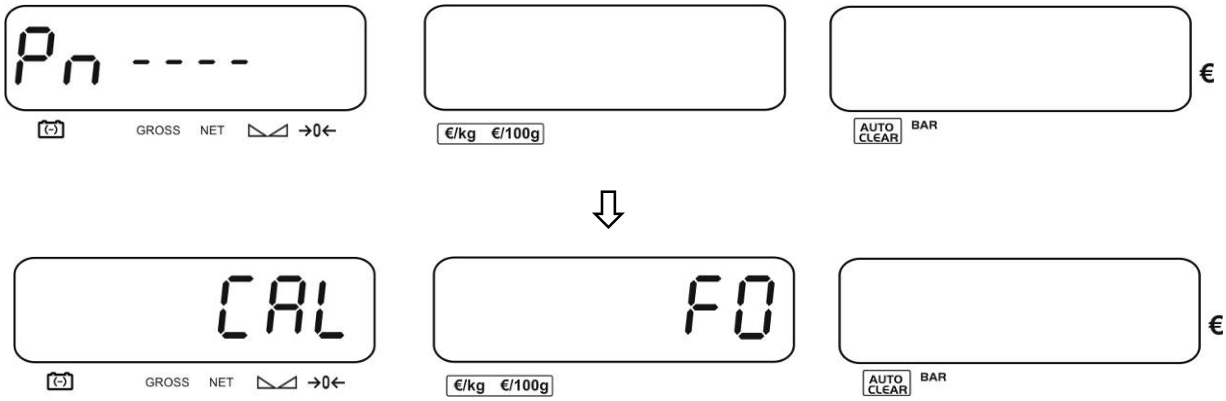
The adjustment is locked for verified balances. Carrying out adjustment requires that the seal is destroyed and the adjusting switch is confirmed in step 3 when turning on the scale. For position of adjusting switch, see chpt. 6.8.1

**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.

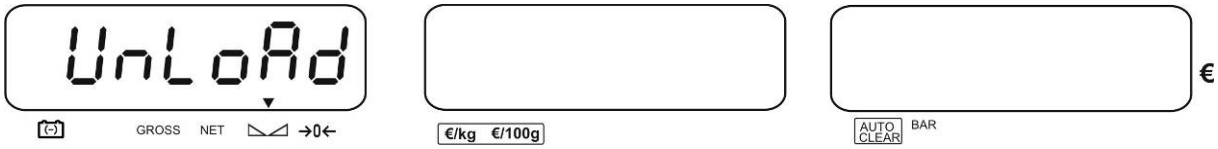
**Procedure when adjusting:**
Observe stable environmental conditions. A warming up time (see chapter 1) is required for stabilization. Ensure that there are no objects on the weighing plate. Arrange adjustment weight, details see chap.1 „Technical data“

1. Switch-on balance and during the selftest press TARE.

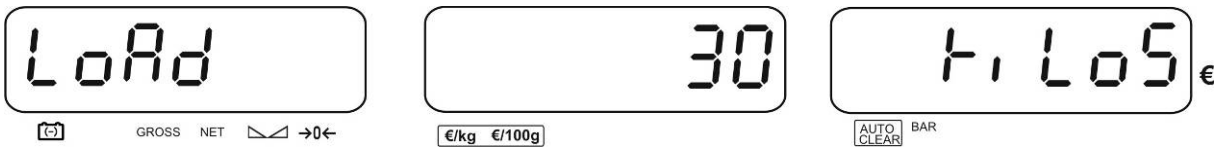

2. Use the numeric keys to enter „0000“ for a password and confirm by pressing TARE.



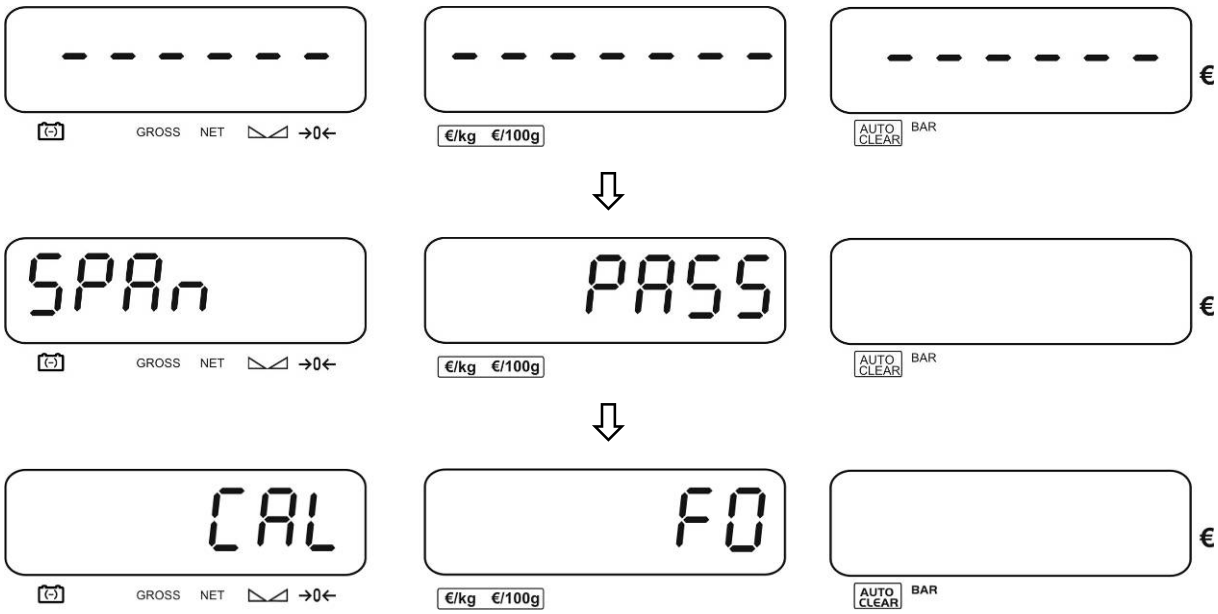

3. The adjustment function „CAL F0“ is displayed. Press the adjusting switch and confirm by pressing TARE.




4. Ensure that there are no objects on the weighing plate. Wait for stability display, then press TARE. The required adjustment weight is shown.




5. Place the adjustment weight carefully in the centre of the weighing pan, press TARE and the adjusting process will be started.




6. The adjustment process has been successfully completed. Take away adjustment weight.

7. Press →0← and the scales will return to weighing mode.

In case of an adjustment error or incorrect adjusting weight the display will show an error message (SPAN / FAIL), repeat adjustment process.

## 6.8 Verification

General:

According to EU directive 90/384/EEC balances must be officially 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:

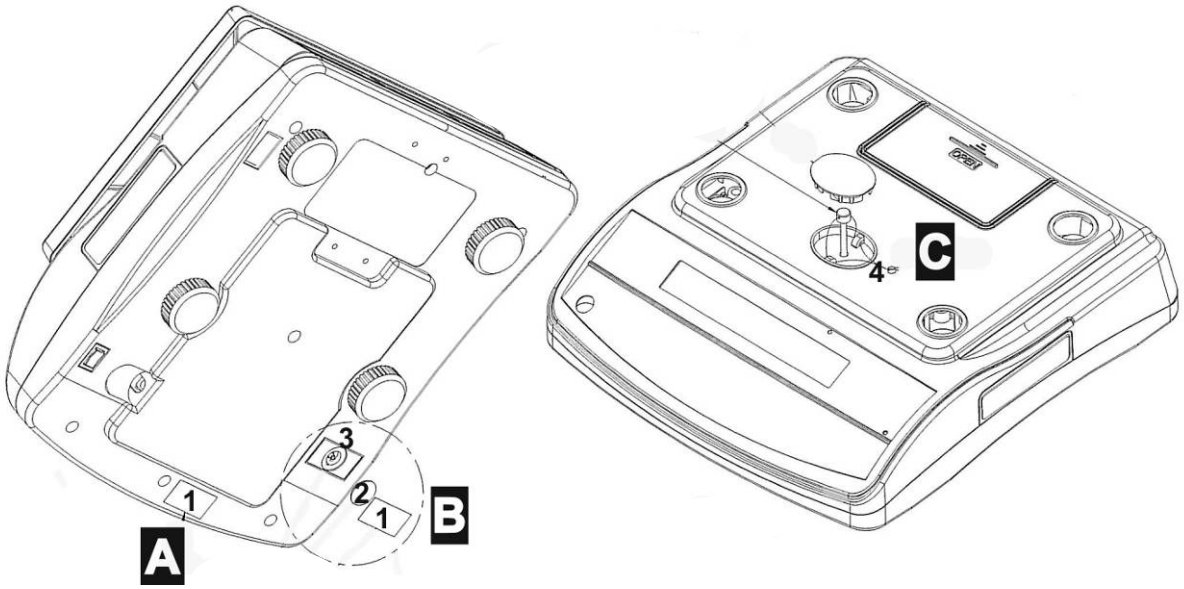
An EU type approval exists for balances described in their technical data as verifiable. If a balance is used where obligation to verify exists as described above, it must verified and re-verified in regular intervals.
Re-verification of a balance is carried out according to the respective national regulations. 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.

### 6.8.1 Adjustment controls and seals

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




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

## 6.9 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.
If this happened accidentally, please contact KERN.

In calibrated scales the service mode is locked individually for each switch. To disable the access lock, destroy the seal and confirm the swatch. For position of switch see chpt. 6.8.1.

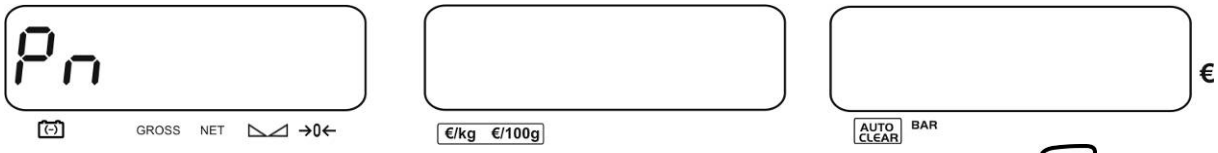
**Attention**:
After destruction of the seal the balance must be re-verified by an authorised agency and a new verification wire/seal mark fitted before it can be reused for applications subject to verification.

### 6.9.1 Service mode

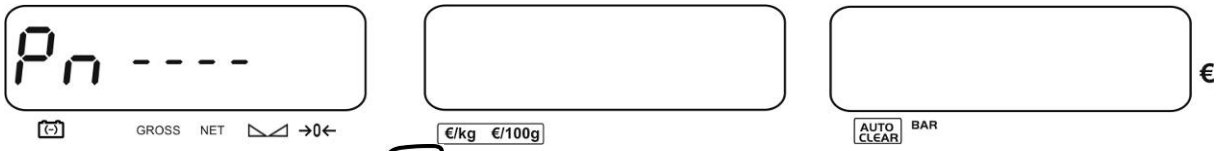
This overview of the service parameters is merely for checking the parameters set by the appropriate Bureau of Standards. No changes may be made.

**Access to menu:**

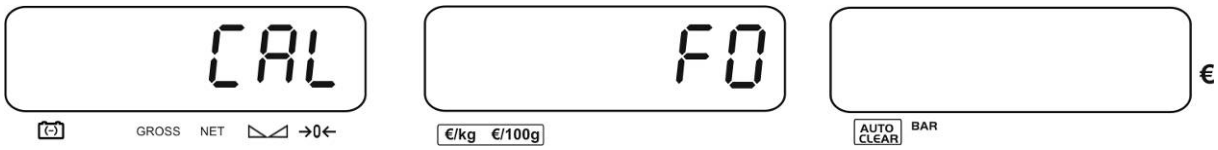
1. Switch-on balance and during the selftest press TARE.




2. Use the numeric keys to enter „0000“ for a password and confirm by TARE.




3. Confirm password with TARE




4. The first function „F0 CAL“ is displayed. Press adjusting switch.

**Select function:**

⇨ You can select individual functions containing the current settings one after the other by using AUTO CLEAR or a numeric key (i.e. for F0 or 2 for F2).

**Change / save settings:**

⇨ Confirm selected function by pressing TARE. Select desired setting by pressing AUTO CLEAR and confirm by pressing TARE or cancel by pressing →0←.

**Exit menu:**

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

English

**Overview for service parameter:**

Factory settings are marked by [*].

| Function (↓ AUTO CLEAR, → TARE) | | | Settings (↓ AUTO CLEAR) | | | Description |
|---|---|---|---|---|---|---|
| **CAL** | **F0** | | | | | Adjustment function, see chpt. 6.7 |
| | | | | | | |
| **CAL** | **F1** | | | | | Resolution |
| | | | rES | 1 | 3000 | |
| | | | rES | 1 | 6000 | |
| | | | rES | dual | rAnge* | Always use this setting |
| | | | | | | |
| **CAL** | **F2** | | | | | € / kg ⇆ can be switched over to € / 100g |
| | | | Price | Unit | 1* | Always use this setting |
| | | | Price | Unit | 2 | |
| | | | | | | |
| **CAL** | **F3** | | | | | Weighing range (max) |
| | | | CAPA | 6 | | Factory setting<br>RPB 6K1DM, RPB 6K1DHM |
| | | | CAPA | 15 | | Factory setting<br>RPB 15K2DM, RPB 15K2DHM |
| | | | CAPA | 30 | | Factory setting<br>RPB 30K5DM, RPB 30K5DHM |
| | | | | | | |
| **CAL** | **F4** | | | | | Position decimal point<br>”weight display“ |
| | | | 0.000 | Point | | Factory setting<br>RPB 6K1DM, RPB 6K1DHM,<br>RPB 15K2DM, RPB 15K2DHM |
| | | | 0.00 | Point | | Factory setting<br>RPB 30K5DM, RPB 30K5DHM |
| | | | 0.0 | Point | | |
| | | | 0 | Point | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **CAL** | **F5** | | | | | Position decimal point<br>“price displays” |
| | | | Point | 0 | 0 | |
| | | | | 0.0 | 0.0 | |
| | | | | 0.00 | 0.00* | Always use this setting |
| | | | | 0.000 | 0.000 | |
| | | | | 0.0000 | 0.0000 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **CAL** | **F6** | | | | | Display internal resolution |
| | | | XXX | A-d | CoUntS | |
| | | | | | | |
| **CAL** | **F7** | **Coin** | | | | Interval size currency |
| | | | Min | Coin | 1* | Always use this setting |
| | | | Min | Coin | 2 | |
| | | | Min | Coin | 5 | |
| | | | Min | Coin | 10 | |
| | | | | | | |
| **CAL** | **F8** | | | | | Printer Settings |
| | | | rS-232 | tYPE | PRINTER | On |
| | | | rS-232 | tYPE | oFF | Off |
| **CAL** | **F9** | | | | | Baudrate |
| | | | bAUd | rAtE | 2400 | |
| | | | bAUd | rAtE | 4800* | |
| | | | bAUd | rAtE | 9600 | |
| | | | bAUd | rAtE | 19200 | |
| | | | | | | |
| **CAL** | **F10** | | | | | Not documented |
| | | | rS-232 | mode | 8 n 1* | |
| | | | rS-232 | mode | 7 E 1 | |
| | | | rS-232 | mode | 7 o 1 | |
| | | | | | | |
| **CAL** | **F11** | | | | | Not documented |
| | | | PErCnt | tArE | on | |
| | | | PErCnt | tArE | off* | Always use this setting |
| | | | | | | |
| **CAL** | **F12** | | | | | Not documented |
| | | | Grv | rAte | X.XXXX | |
| | | | | | | |
| **CAL** | **F13** | | | | | Calculation of credit |
| | | | CHAnGE | on | | On -<br>Always use this setting |
| | | | | off | | Off |

English

# 7 Operation Mode

## 7.1 Turn on/off

⇨ To turn on/off confirm forward at the underneath on the right of the scale and keep pressed for a little while. 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.


⇨ To switch-off push backward the switch-on/switch-out on the right lower side of the balance.



## 7.2 Zeroing

Resetting to zero corrects the influence of light soiling on the weighing plate.

⇨ Unload the balance

⇨ Press →0←, the balance starts resetting to zero.
The indicator [▼] above →0← appears.

## 7.3 Weighing with taring

⇨ Deposit weighing vessel. After successful stop check press the →0← button. Zero display and the indicator **[▼]** above [NET] appear.

⇨ Weigh the material, the net weight will be indicated.

⇨ The weight of the weighing container will be displayed as a minus number after removing the weighing container.

⇨ To delete the TARE value unload the weighing plate and press TARE, the indicator [▼] above [GROSS] appears.

## 7.4 Overload warning

Overloading exceeding the stated maximum load (max) of the balance, minus a possibly existing tare load, must be strictly avoided. This could cause damage to the balance.
Exceeding maximum load is indicated by the display of "„**-OL-**", and an audio sound. Unload balance or reduce preload.

# 8 Weighing with price determination

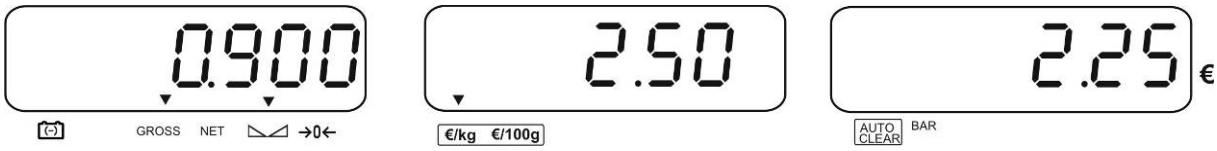
As soon as the goods to be weighed are placed on the balance and the basic price has been set the price is calculated automatically and displayed in the provided field.

## 8.1 Basic price entry via keyboard

⇨ When using the weighing container, tare by using TARE, see chpt. 7.3.


⇨ Place goods to be weighed on balance.

⇨ Enter basic price via numeric keys 0 ~ 9 and the sales price will be automatically computed and displayed.

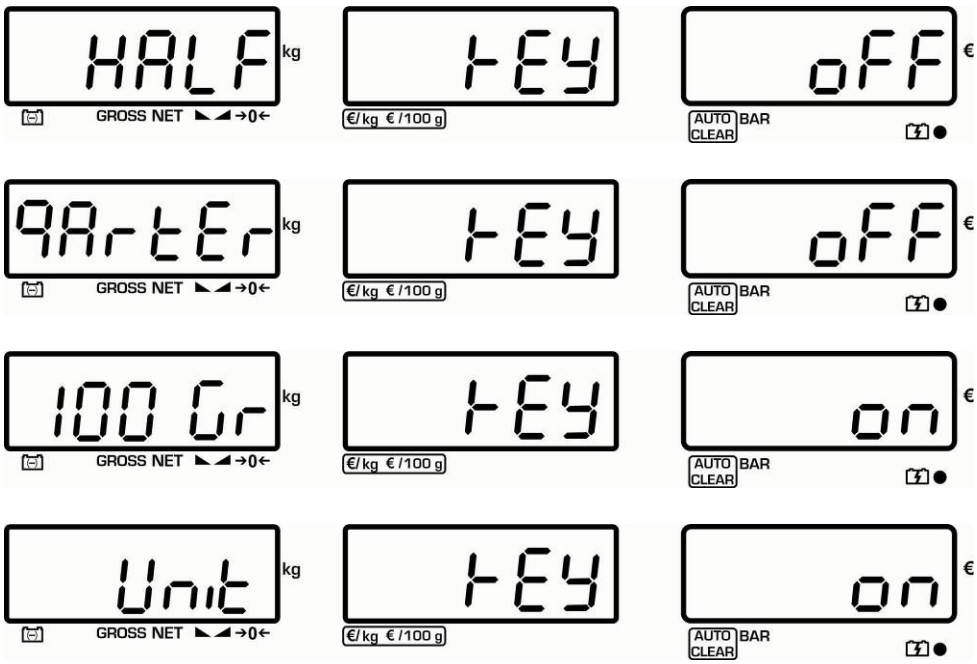



- The set basic price is deleted by C.
- Using switch over basic price from **€ / kg** ⇆ to **€ / 100g** (see chapter 8.1.1).
- Calculating the change, see chap. 8.2

English

### 8.1.1 Unit switch over €/kg to €/100 g

The following parameters should be set for this:




To carry out these settings please proceed as follows:

Switch-on balance and during the selftest press  .

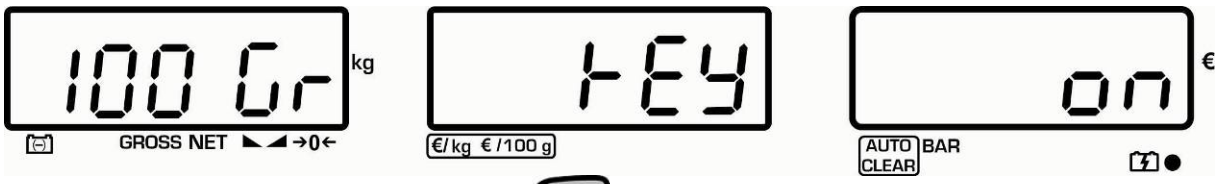

(should „oFF“ not be displayed, press 

)

Press TARE

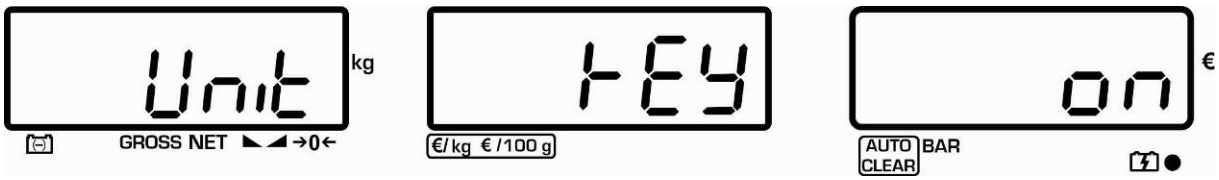

(should „oFF“ not be displayed, press AUTO CLEAR )

Press TARE




(should „on“ not be displayed, press AUTO CLEAR )

Press TARE again




(should „on“ not be displayed, press AUTO CLEAR )

Confirm by TARE

After a short acoustic signal the balance returns automatically into weighing mode.

The function is activated. Use button to switch over between €/kg and €/ 100g.

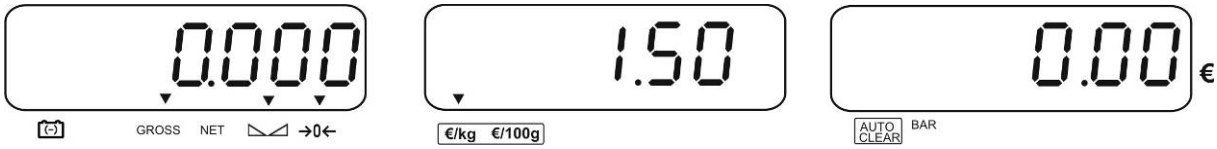
English

## 8.2 Memory for basic price (PLU = Price look up)

The balance is able to store up to 10 basic prices.

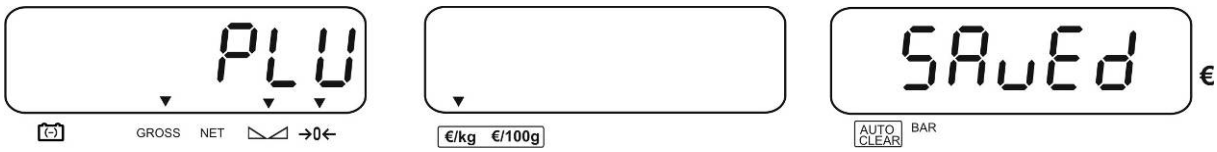
**Save:**

⇨ Enter basic price via the numeric keys 0 ~ 9.




⇨ Keep PLU pressed for about 3 seconds


⇨ Enter the desired PLU key via the numeric keys 0 ~ 9.

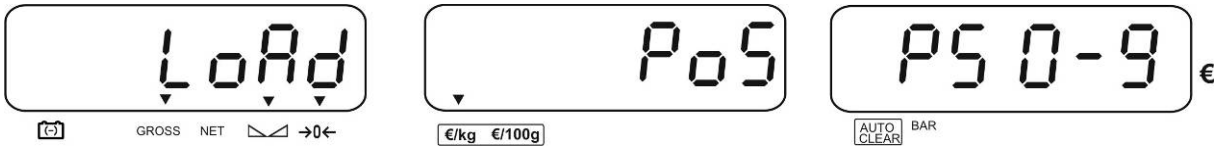



The basic price is saved at the entered PLU.

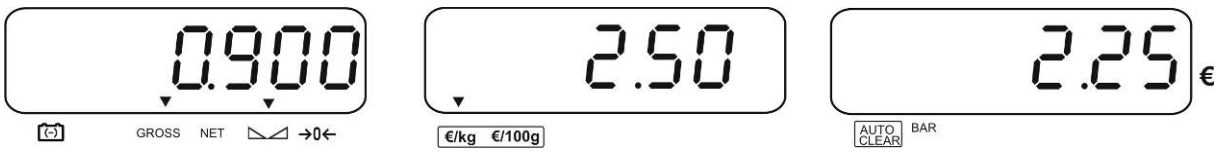
**Retrieve / show sales price:**

⇨ Place goods to be weighed

⇨ Press PLU




⇨ Press desired PLU 0 ~ 9 and the saved basic price as well as the sales prices computed from it will be shown.



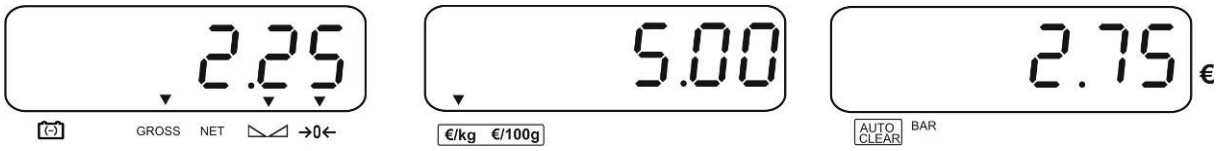

English

Before calling-up an other PLU, the displayed basic price has to be deleted by C .

**Calculating the change:**

⇨ Press BAR at the display sales price (e.g. 2.25 €).


⇨ Enter the given amount of money, e.g. 5.00 € using the numeric keys 0 ~ 9. The balance calculates the change and displays it, e.g. 2.75 €.




⇨ Using →0← or TARE the balance returns into the weighing mode.

English

# 9 Additional useful functions

## 9.1 AUTO CLEAR

**Enable**:

⇨ To enable the AUTO-CLEAR function press AUTO CLEAR ; the arrow above „“AUTO CLEAR“ will start flashing on the display at the same time.
The set basic price is deleted automatically when balance is unloaded.

**Disable**:

⇨ Press AUTO CLEAR anew, the AUTO-CLEAR function will be deactivated, the arrow above „AUTO CLEAR“ will extinguish.
When the load is removed, the set basic price will be retained.

## 9.2 Display background illumination

⇨ Press , „backlight“ with the current setting will appear.


⇨ Press AUTO CLEAR repeatedly until the desired setting is displayed.

| | |
|---|---|
| **on** | Background illumination on |
| **off** | Background illumination off |
| **Auto** | Automatic background illumination on when weighing pate is loaded |

⇨ Either save by pressing TARE or cancel by pressing →0← . The balance returns to weighing mode.

## 9.3 AUTO POWER OFF

To save the rechargeable battery (option), the automatic switch-off function can be activated, switch-off time selectable after 0, 3, 5 or 10 minutes.

⇨ Switch-on balance and during the selftest press BAR. „Auto off“ with the current setting will appear.


⇨ Press AUTO CLEAR repeatedly until the desired setting is displayed.

| | |
|---|---|
| **0** | Automatic switch off deactivated |
| **3** | Automatic switch off after 3 min |
| **5** | Automatic switch off after 5 min |
| **10** | Automatic switch off after 10 min |

⇨ Either save by pressing TARE or cancel by pressing →0←. The balance returns to weighing mode.

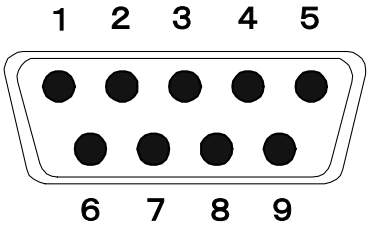
English

## 10 RS 232 interface

### 10.1 Technical data

RS 232 connection to output of weighing data
ASCII code
Baud rate 600, 1200, 2400, 4800, 9600
8 data bits
No parity

### 10.2 Pin allocation of balance output bushing:




| | | | |
|---|---|---|---|
| Pin 2 | RXD | Input | Receiving data |
| Pin 3 | TXD | Output | Transmission data |
| Pin 5 | GND | — | Signal ground |

**9pin D Connector:**

| **Balance** | | **Computer** |
|---|---|---|
| Pin 2 | — | Pin 3 |
| Pin 3 | — | Pin 2 |
| Pin 5 | — | Pin 5 |

### 10.3 Fernsteuerbefehle

| **Remote control command** | **Computer** |
|---|---|
| T | Taring |
| Z | Zeroing |
| S | Output of stable weighing values |
| W | Output of stable or unstable weighing results |

### 10.4 Printout example:

| | | |
|---|---|---|
| N: | 0,583 kg | Item to be weighed |
| | 3.33 EUR/kg | Price per kg |
| | 1.94 EUR | Price of load placed |

# 11 Service, maintenance, disposal

## 11.1 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.**

## 11.2 Service, maintenance

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

## 11.3 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.

# 12 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.<br>• The mains supply connection has been interrupted (mains cable not plugged in/faulty).<br>• Power supply interrupted.<br>• Batteries are inserted incorrectly or empty<br>• No batteries inserted. |
| The displayed weight is permanently changing | • Draught/air movement<br>• Glass doors not closed<br>• Table/floor vibrations<br>• Weighing plate has contact with other objects.<br>• 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<br>• Adjustment is no longer correct.<br>• The balance is on an uneven surface.<br>• Great fluctuations in temperature.<br>• Electromagnetic fields / static charging (choose different location/switch off interfering device if possible) |

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

## 12.1 Error messages

| | |
|---|---|
| ERR 4 | Zero range exceeded |
| ERR 5 | Invalid entry |
| ERR 6 | Damaged electronics |

## 13 Declaration of -Conformity

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# Declaration of -Conformity

**EG-Konformitätserklärung**
**EC- Déclaration de conformité**
**EC-Dichiarazione di conformità**
**EC- Declaração de conformidade**
**EC-Deklaracja zgodności**

**EC-Declaration of -Conformity**
**EC-Declaración de Conformidad**
**EC-Conformiteitverklaring**
**EC- Prohlášení o shode**
**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 conformità | 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 RPB-D

| EU Directive | Standards |
|---|---|
| 2004/108/EC | EN55022: 2006 A1:2007<br>EN61000-3-3:1955+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*

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

**Signatur**
*Signature*

Albert Sauter
KERN & Sohn GmbH
**Geschäftsführer**
*Managing director*



English