KERN & Sohn GmbH
Ziegelei 1
D-72336 Balingen
E-Mail: info@kern-sohn.com
Tel: +49-[0]7433- 9933-0
Fax: +49-[0]7433-9933-149
Internet: www.kern-sohn.com

# Operating instructions
# Platform/floor scales

## KERN EOS-A

Version 1.0
07/2025
en

TEOS-A-BA-e-2510

en

# KERN EOS-A

Version 1.0 07/2025

**Operating instructions Platform/floor scales**

Table of contents

# 1 Technical

| KERN | EOS 150K-2 |
|---|---|
| Item number / Type | TEOS 150K-2-A |
| Readability (d) | 0.05 kg |
| Weighing range (max) | 150 kg |
| Repeatability | 0.05 g |
| Linearity | ± 0.15 kg |
| Settling time (typical) | 2 |
| Adjustment points | 150 kg |
| Recommended adjustment weight, not included, (class) | 150 kg (M2) |
| Warm-up time | 10 |
| Weighing units | kg, lb |
| Air humidity | max. 80% rel. (non-condensing) |
| Permissible ambient temperature | 10 °C ... + 35 °C |
| Input voltage device | 12 V, 500 mA |
| Input voltage power supply | 220 V - 240 V AC 50 Hz |
| Batteries (optional) | 6 x 1.5 V AA |
| Weighing plate, stainless steel | 900 x 550 x 60 mm |
| Net weight (kg) | 20 kg |

# 2 Declaration of conformity

The current EC/EU declaration of conformity can be found online at:

**www.kern-sohn.com/ce**

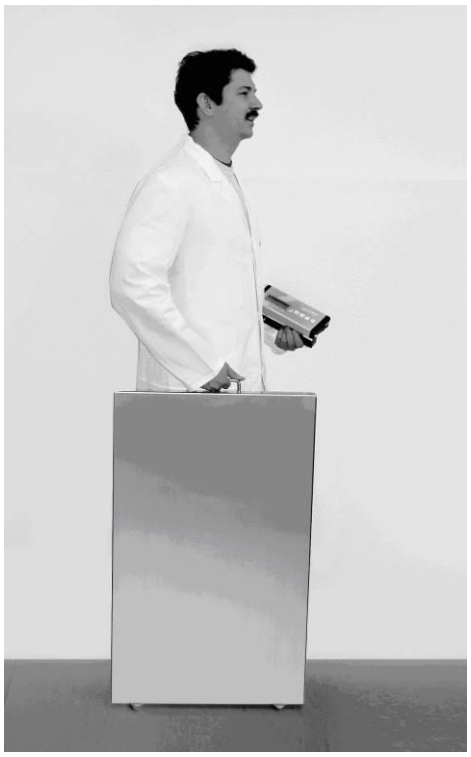
# 3 Device overview

## 3.1 Components

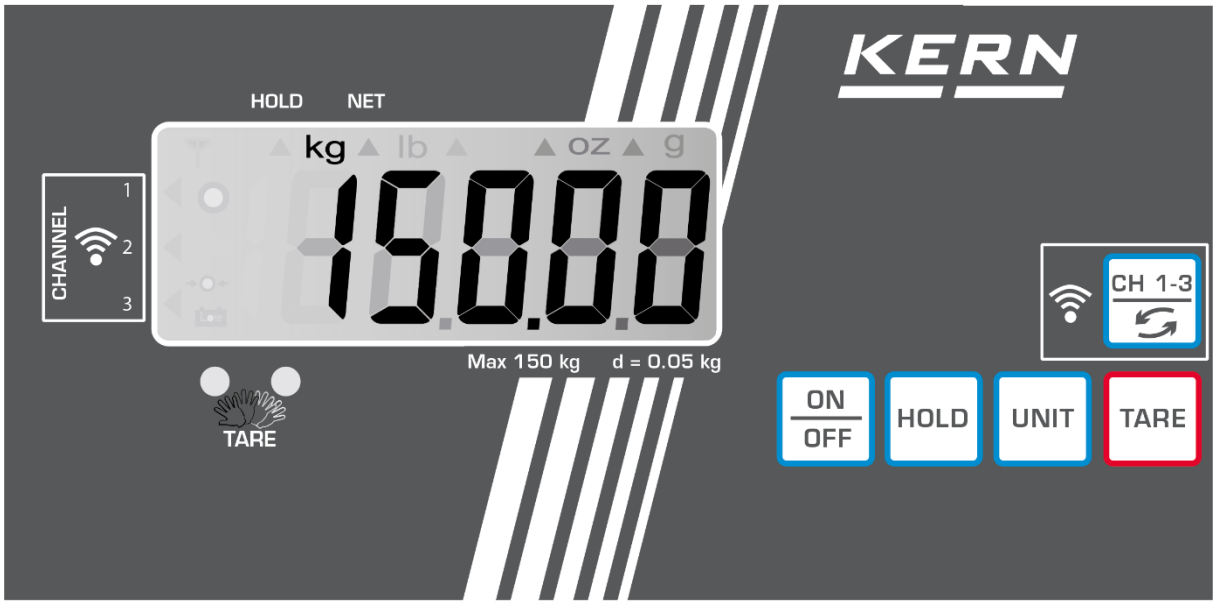
Scale (platform and display unit) and rubber mat:


| Item | Design |
|---|---|
| 1 | Display |
| 2 | Tare field |
| 3 | Buttons |
| 4 | Wall mount |

- Convenient transport thanks to 2 castors and 1 handle

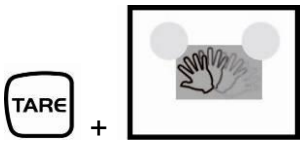


## 3.2 Display overview




| Display | Meaning |
|---|---|
|  | Display Receive mode |
|  | Weighing unit **[kg⇆ lb]**, (see section 9) "Switch weighing unit" |
|  | Hold/animal weighing function active (see section 9) |
|  | Stored tare value (see section 9) "Tare" |
|  | Scale zero display:<br>If the scale does not display exactly zero despite the weighing pan being unloaded, use the taring functions (see section 9).<br>After a short wait, the scale will reset to zero. |
|  | Displayed when the batteries are exhausted. |
|  | Display of the three possible channels |
|  | Touch-free tare field |

### 3.3 Keyboard overview

| Key | Function |
|---|---|
|   | Switch scale on/off |
|   | Hold/tare weighing function |
|   | Tare the scale by<br>• The TARE button or<br>• The touch-sensitive tare field |
|   | Switch weighing unit |
|   | Select channel |

# 4 Basic information (general)

## 4.1 Intended use

The scale you have purchased is designed to determine the weight of items. It is intended for use as a "non-automatic scale", i.e. the items to be weighed must be placed manually, carefully and in the centre of the weighing plate. Once a stable weight has been reached, the weight can be read off.

## 4.2 Improper use

- Our scales are non-automatic scales and are not intended for use in dynamic weighing processes. However, the scales can also be used for dosing applications after checking the individual area of application and the accuracy requirements.
- Avoid impacts and overloading the scale beyond the specified maximum load (Max) at all costs. This could damage the scale.
- Do not operate the scale in potentially explosive atmospheres.
- The scale must not be modified in any way. This can lead to incorrect weighing results, safety defects and destruction of the scale.
- The scale must only be used in accordance with the specifications described.

## 4.3 Warranty

The warranty shall expire in the event of

- failure to observe our specifications in the operating instructions
- Use outside the described applications
- Modification or opening of the device
- Mechanical damage and damage caused by media, liquids natural wear and tear
- Improper installation or electrical installation
- Overloading of the measuring mechanism

### 4.4 Test equipment monitoring

As part of quality assurance, the metrological properties of the scale and any test weights must be checked at regular intervals. The responsible user must define a suitable interval for this as well as the type and scope of this test. Information regarding the test equipment monitoring of scales and the test weights required for this purpose is available on the KERN website (www.kern-sohn.com). KERN can calibrate test weights and scales quickly and cost-effectively in its accredited DKD calibration laboratory (traceable to the national standard).

## 5 Basic safety instructions

### 5.1 Observe the instructions in the operating manual

Read these operating instructions carefully before installation and commissioning, even if you already have experience with KERN scales.

### 5.2 Staff training

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

## 6 Transport and storage

### 6.1 Inspection upon receipt

Please check the packaging immediately upon receipt and the device upon unpacking for any visible external damage.

### 6.2 Packaging/return transport

- ⇨ Keep all parts of the original packaging for any necessary return transport.
- ⇨ Only use the original packaging for return transport.
- ⇨ Disconnect all connected cables and remove all loose/movable parts before shipping.
- ⇨ Refit any transport safety devices provided.
- ⇨ Secure all parts, e.g. glass windscreen, weighing plate, power supply unit, etc., against slipping and damage.

# 7 Unpacking, installation and commissioning

## 7.1 Installation location, place of use

The scales are designed to deliver reliable weighing results under normal operating conditions.
You will work accurately and quickly if you choose the right location for your scale.

**Please note the following at the installation site:**

- Place the scale on a stable, level surface.
- Avoid extreme heat and temperature fluctuations, e.g. by placing the scale next to a heater or in direct sunlight.
- Protect the scale from direct draughts from open windows and doors.
- Avoid vibrations during weighing.
- Protect the scale from high humidity, vapours and dust.
- Do not expose the device to high humidity for long periods of time. Unauthorised condensation (condensation of air humidity on the device) may occur if a cold device is brought into a significantly warmer environment. In this case, allow the device to acclimatise at room temperature for approx. 2 hours after disconnecting it from the mains.
- Avoid static charging of the weighing goods and weighing containers.
- Do not operate in areas where there is a risk of explosion or in areas where gases, vapours, mists or dust may cause an explosion!
- Keep chemicals (e.g. liquids or gases) that could attack and damage the inside or outside of the scale away from the device.
- Significant display deviations (incorrect weighing results and damage to the scale) are possible in the presence of electromagnetic fields, static charges (e.g. when weighing/counting plastic parts) and unstable power supplies. The location must then be changed or the source of interference eliminated.

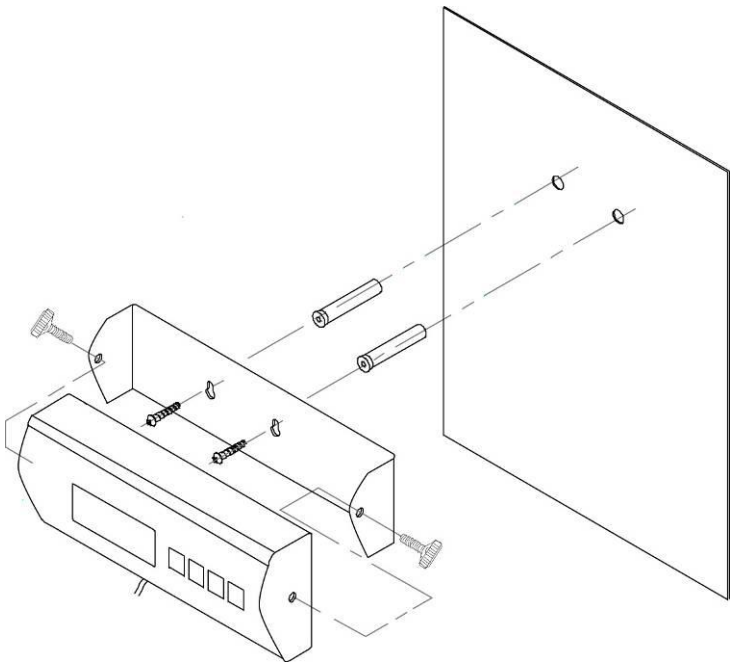
## 7.2 Unpacking and inspection

Remove the device and accessories from the packaging, remove the packaging material and set up the device at the intended workplace. Check that all parts of the scope of delivery are present and undamaged.

**Scope of delivery / Standard accessories:**

- Scale
- Power
- Rubber mat
- Wall bracket
- Operating instructions

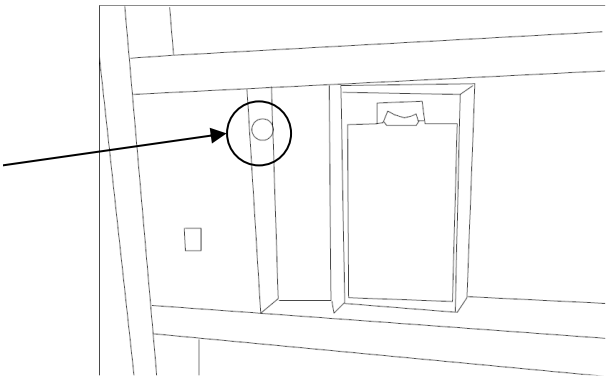
### 7.2.1 Installation instructions for using the wall mount



### 7.3 Mains connection

The mains connection is located on the underside of the display device or platform. mains connection. Two power supply units are included.
The power supply is provided by the external power supply unit. The voltage value printed on the power supply unit must match the local voltage.
Only use original KERN mains adapters. The use of other brands requires the approval of Kern.

Fig. Power connection platform:

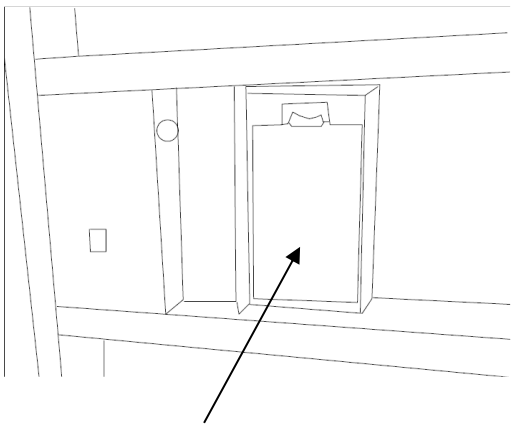


Connection of mains adapter

### 7.4 Battery operation

Remove the battery cover on the underside of the display unit or platform and insert 6 x 1.5 V AA batteries. Replace the battery cover.
To save battery power, the scale switches off automatically 3 minutes after weighing is complete. Additional switch-off times can be set in the menu (function "A.OFF"), (see section 10).
When the batteries are empty, the battery symbol is displayed (see section 3). Switch off the scale and replace the batteries immediately.
If the scale is not used for a long period of time, remove the batteries and store them separately. Leaking battery fluid could damage the scale.

Fig. Battery compartment platform:



Battery compartment platform

## 7.5 Initial start-up

To obtain accurate weighing results with electronic scales, the scale must have reached its operating temperature (see warm-up time in section 1). The scale must be connected to the power supply (mains connection, rechargeable battery or battery) for this warm-up time.
The accuracy of the scale depends on the local acceleration due to gravity.
It is essential to observe the instructions in the Adjustment section.

# 8 Adjustment

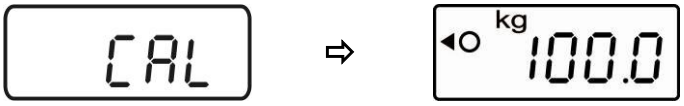
Since the value of the acceleration due to gravity is not the same at every location on earth, each scale must be adjusted to the acceleration due to gravity at the installation site in accordance with the underlying physical weighing principle (only if the scale has not already been adjusted to the installation site at the factory). This adjustment procedure must be carried out during initial commissioning, after each change of location and in the event of fluctuations in the ambient temperature. In order to obtain accurate measured values, it is also recommended to adjust the scale periodically during weighing operation.

- Perform the adjustment as close as possible to the maximum load of the scale (see section 1 for recommended adjustment weight). However, adjustment is also possible with weights of other nominal values or tolerance classes, but this is not optimal in terms of measurement technology. The accuracy of the adjustment weight must correspond approximately to the readability [**d]** of the scale, preferably slightly better.
  Information on test weights can be found on the Internet at: http://www.kern-sohn.com
- Ensure stable ambient conditions. A warm-up time (see section 1) is required for stabilisation.
- Ensure that there are no objects on the weighing plate.
- Avoid vibrations and air currents.
- Only perform adjustment with the standard weighing plate in place.

⇨ In weighing mode, press and hold the UNIT button until "CAL" is displayed, followed by the weight value of the required adjustment weight. "LOAd" is displayed alternately.


(Example)

⇨ Carefully place the required adjustment weight (see Table 1 "Technical data") in the centre of the weighing plate.
Press the **TARE** key to start the adjustment.




(Example)

⇨ Wait until the stability indicator appears; the adjustment is then complete. After successful adjustment, the scale automatically returns to weighing mode and displays the weight value of the adjustment weight.


(Example)

⇨ Remove the adjustment weight.


If there is an adjustment error or the adjustment weight is incorrect, an error message will appear on the display. Remove the adjustment weight and repeat the adjustment process.

Keep the calibration weight with the scale. Daily checking of the scale accuracy is recommended for quality-critical applications.

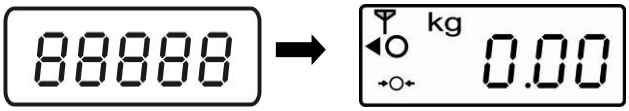
# 9 Operation

**Switch**


Ensure that the channel on the platform matches the channel on the display unit (see section "Setting the channels").
In addition, the distance between the platform and the display device should not exceed 10 m.

⇨ Set the toggle switch on the side of the platform to "1" .

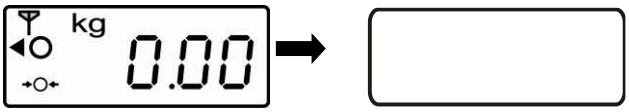
⇨ Press the **ON/OFF** button on the display unit.
The scale performs a self-test. As soon as the weight display appears, the scale is ready for weighing.
The data reception symbol flashes
The triangle "◀ " indicates the selected channel.
If the data reception symbol does not appear, use the **CH1-3** button to switch to the correct channel.




If the scale does not display exactly zero despite the weighing plate being unloaded, press the TARE button. After a short wait, the scale is reset to zero.

**Switching off**


⇨ Press the **ON/OFF** button, the display goes out




⇨ Set the toggle switch on the side of the platform to "0".

**Weigh**

⇨ Switch on the scale using the **ON/OFF** button.

⇨ Place the item to be weighed on the platform

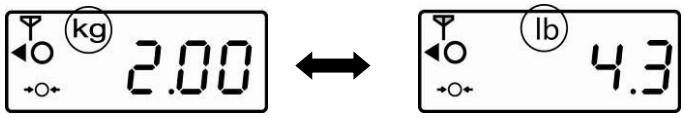
⇨ Wait for the stability indicator

⇨ Read the weighing result.


**Switch the weighing unit**

**Switch**


⇨ Press the UNIT key to display the weighing result in another unit **[**kg⇆ **lb]**.




Unit conversion**: 1 kg = 2.20462 lb**

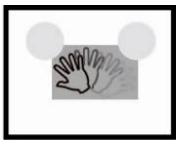
The weighing units must be set to "ON" in the menu (see section 10).

**Tare**

a)

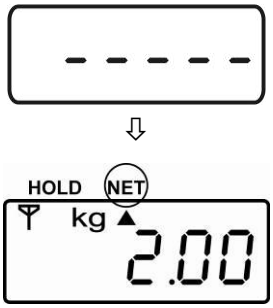

**or**

b)



⇨ Place an empty weighing container on the scale; the weight of the weighing container is displayed.


⇨ Press the TARE key or swipe your hand over the non-contact tare field; the display will show zero. The indicator [▲ ] under [NET] is displayed. The tare weight remains stored until it is deleted.




⇨ Weigh the goods, the net weight is displayed.

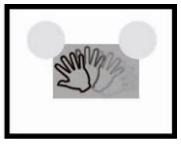

The taring process can be repeated any number of times, for example when weighing several components to form a mixture (additional weighing). The limit is reached when the entire weighing range is utilised.

After removing the weighing container, the weight of the weighing container appears as a negative value.

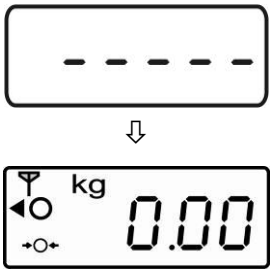
The tare weight remains stored until it is deleted.

**Delete tare**


**or**



⇨ Unload the scale and press the TARE button or swipe across the tare field; the zero display appears.




The touch-free tare function can be switched on or off in the menu (see Chapter 10): Set "t_lr" to "ON" or "OFF".

**Hold-**
**(animal weighing function)**


The scale has an integrated animal weighing function (average value calculation). This makes it possible to weigh pets or small animals (load min. 1% of max.) accurately, even if they do not stand still on the weighing plate.

⇨ Place the item to be weighed on the scale and press the HOLD button. The indicator [▲ ] starts flashing on the display. During this time, the scale takes several measurements and then displays the calculated average value.


⇩


⇨ This value remains on the display until the HOLD button is pressed again. The indicator [▲ ] under [HOLD] goes out and the scale returns to normal weighing mode.

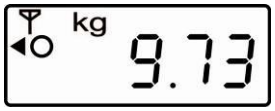
⇨ This function can be repeated as often as desired by pressing the HOLD button again.

**i** If there is too much movement (strong display fluctuations), no average value can be determined.

**Plus/minus weighing**


⇨ For example, for piece weight control, production control, etc. Switch on the scale with the ON/OFF button and wait for the display to go to zero.


⇨ Place the target weight on the weighing plate.




(example)

⇨ Tare to zero using the TARE button or **TARE touch field**.

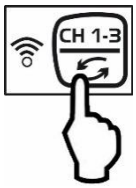

⇨ Remove the target weight.


⇨ Place the test items one after the other on the weighing plate; the respective deviation from the target weight is displayed with the correct sign as "+" or "-" (e.g. + 0.73 g).


The same procedure can be used to produce packages of equal weight based on a target weight.

⇨ Return to weighing mode by pressing the TARE key or the **TARE touch field.**

## Setting channels




(display unit)

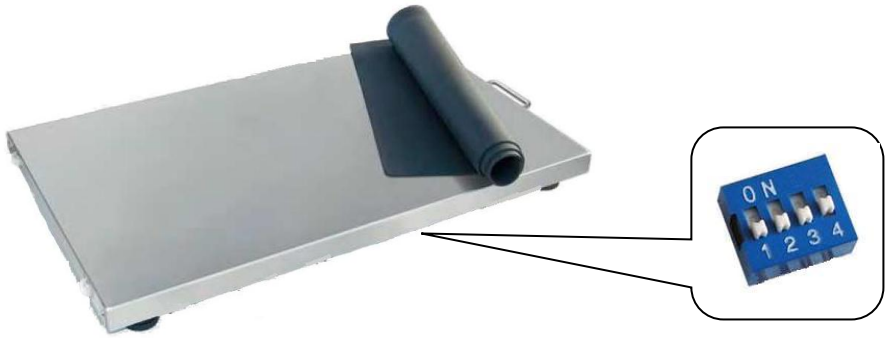
**+**


(platform)

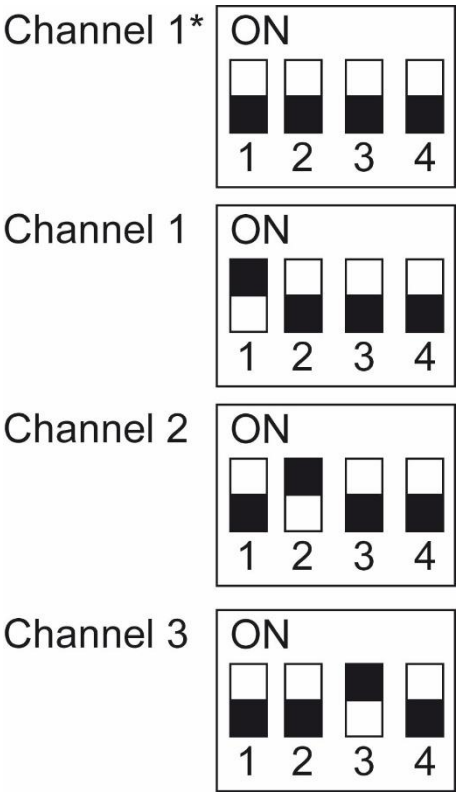
The scale has the option of setting different channels. This is particularly necessary when several platforms are used side by side. In this case, malfunctions may occur if different channels are not set. You can choose between 3 channels. *

**Set the channels on the display device:**
Set the toggle switch on the side of the platform to "1".
Switch on the display device using the ON/OFF button and wait for the display to go to zero. The data reception symbol flashes
The triangle "◀ " indicates the selected channel.
If the data reception symbol " " does not appear, use the **CH1-3** button to switch to the correct channel


**Set the channels on the platform:**
Switch off the platform (set the toggle switch on the side to "0")
Operate the dip switch on the underside of the platform. (Pin 4 is not used).



To set the respective channel, set the corresponding switch to "ON". Leave the other pins on the opposite side as they are.




*Factory setting channel 1

Then switch on the platform. The new setting is applied. The display changes to zero and is now ready for operation.


If the display does not show exactly zero, press the TARE button. After a short time, the display will change to zero.

## 10 Menu

Changes may only be made to the functions "Unit" (weighing units) and "A.OFF"
(automatic switch-off function).

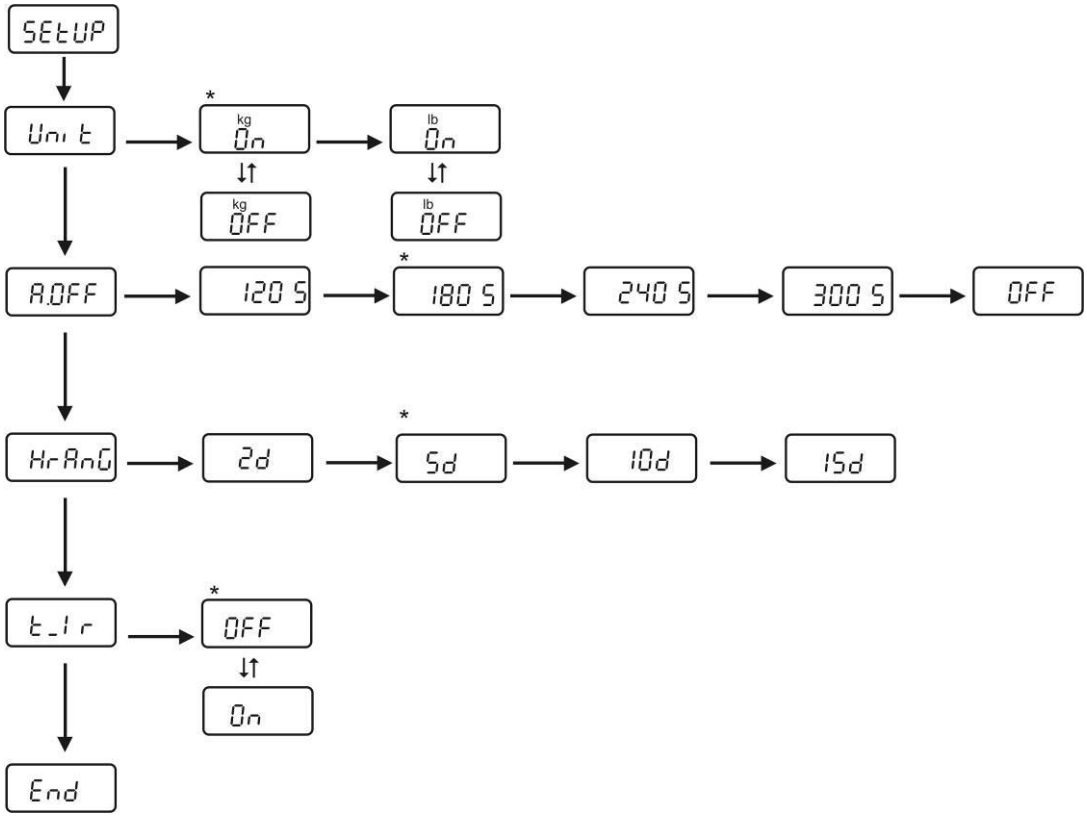
⇨ In weighing mode, press and hold the TARE button for approx. 3 seconds until "SETUP" followed by "UNIT" appears.

⇨ Press the HOLD button repeatedly until the desired function appears.

⇨ Confirm the selected function with the TARE button. The current setting is displayed. Select the desired parameter with the **HOLD** button↓ or **TARE** button→ . Press the HOLD button to return to the menu.

⇨ To exit the menu and save, press the HOLD button repeatedly until "END" appears, then confirm with the TARE button. The scale automatically returns to weighing mode.

**Navigation:**


Factory settings are marked with *.

# 11 Maintenance, servicing, disposal

## 11.1 Cleaning

Remove spilled material (e.g. loose sample residues or powder) immediately with a brush or hand vacuum cleaner.
Use a mild cleaning agent such as soapy water and a soft cloth to clean the device. Then wipe the device dry with a dry, soft, lint-free cloth.

**Observe the following instructions to avoid damage:**

- Do not use aggressive cleaning agents (e.g. solvents), as these will react with the materials and damage them.
- Do not use cleaning agents containing caustic soda, vinegar, salt, sulphur or citric acid on stainless steel parts.
- Do not use metal brushes or steel wool cleaning pads, as these will damage the surface.
- Make sure that no liquid gets into the device.

## 11.2 Maintenance

⇨ The device may only be opened by trained service technicians authorised by KERN.

⇨ Disconnect from the mains before opening.

## 11.3 Disposal

The disposal of packaging and the device must be carried out by the operator in accordance with the applicable national or regional regulations at the user's location.

## 12 Minor troubleshooting

In the event of a malfunction in the program sequence, the scale should be switched off briefly and disconnected from the mains. The weighing process must then be re-started from the beginning.

| Malfunction | Possible cause |
|---|---|
| The weight display is not lit. | • The scale is not switched on.<br>• The connection to the mains is interrupted (mains cable not plugged in/defective).<br>• The mains voltage has failed.<br>• Batteries are empty |
| The weight display changes continuously | • Draught/air movement<br>• Vibrations of the table/floor<br>• The weighing plate is in contact with foreign objects.<br>• Electromagnetic fields/static charge (select a different installation location/switch off any interfering devices if possible) |
| The weighing result is obviously incorrect | • The scale display is not at zero<br>• The adjustment is no longer correct.<br>• The scale is not level.<br>• There are significant temperature fluctuations.<br>• The warm-up time was not observed.<br>• Electromagnetic fields / static charge (select a different installation location / switch off any interfering devices if possible) |

## 13 Error messages

| Error message | Function |
|---|---|
| **LO** | Batteries in the display unit are exhausted |
| **LO d** | Platform battery capacity exhausted |
| **ErrE** | EEPROM error in display device |
| **ErrEd** | EEPROM error platform |
| **Err** | Overload |
| **ErrL** | Minimum weight not reached |