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Operating instructions Step-On Personal scale

KERN MPD

Type MPD 250K100M
Type MPD 250K100NM
Type MPD 200K-1EM
Version 1.0
2017-02
GB



MPD-BAPS-e-1710



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Operating instructions Step-On Personal scale

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1 Technical data

KERN (Type)	MPD 250K100NM	MPD 200K-1EM
Trademark	MPD 250K100M	MPD 200K-1EM
Display	6-digit	
Weighing range (max)	250 kg	
Reproducibility	0.1 kg	0,2 kg
Linearity $\pm$	0.1 kg	0,2 kg
Display	LCD with 25mm high digits	
Recommended adjustment weight, (Class)	200 kg (M1)	
Stabilization time (typical)	3 sec.	
Warm-up time	10 min	
Operating temperature	0° C + 40° C	
Humidity of air	max. 80 % (not condensing)	
Electric Supply	Input voltage 110V-240V AC, 50/60 Hz	-
Balance (W x D x H) mm	365 x 490 x 120	
Weighing plate mm	365 x 360 x 80	
Weight kg (net)	8,9	8,7
Rechargeable battery operation	optional; 6 x 1.2 V 2000 mA	-
Batteries	6 x 1.5 V AA	

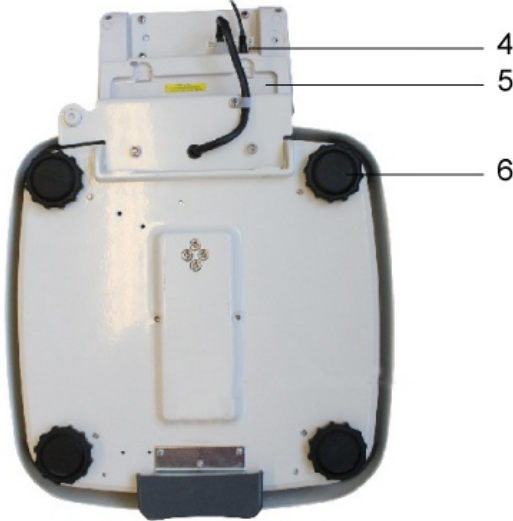
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Electric Supply	Input voltage 110V-240V AC, 50/60 Hz	-
Balance (W x D x H) mm	365 x 490 x 120	
Weighing plate mm	365 x 360 x 80	
Weight kg (net)	8,9	8,7
Rechargeable battery operation	optional: 6 x 1.2 V 2000 mA	-
Batteries	6 x 1.5 V AA	

2 Declaration of conformity

To view the current EC/EU Declaration of Conformity go to:

www.kern-sohn.com/ce

3 Appliance overview

 1 Display unit 2 Weighing platform (anti-slip surface) 3 Foot switch	
Underside  4 Mains port 5 Rechargeable battery compartment 6 Rubber feet (adjustable height)	

3.1 Overview of display

Display	Description	Description
STABLE	Stability display	Scales are in a steady state
ZERO	Zeroing display	Weighing scale shows „0.0“.
GROSS	Gross weight display	Illuminated when gross weight is displayed

4 Basic Information (General)

4.1 Proper use

These scales are used to determine weight of people sitting at rest, The person should be weighed carefully and have contact with the center of the seat, sit and stay calm.

As soon as a stable weighing value is reached the weighing value can be read. The scales are designed for long-term usage.

Determination of the body weight.

Use as „non-standalone weighing scale“, that is, a person sits carefully onto the seating surface's centre. Once a steady display value is shown, you can read the weight value.



The weighing platform may only be stepped on by persons capable of standing on both feet on the weighing platform.

The weighing platforms are fitted with an anti-slip surface that must not be covered during weighing a person.

The balance should be checked for correct condition prior to each utilisation by a person familiar with proper operation of the balance.

4.2 Improper Use

Do not use these scales for dynamic weighing processes.

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

Impacts and overloading exceeding the stated maximum load (max) of the weighing plate, minus a possibly existing tare load, must be strictly avoided. This could cause damage to the balance.

Never operate balance in explosive environment. The serial version is not explosion protected. It should be noted that a flammable mixture of anaesthetics and oxygen or laughing gas may occur.

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.

The balance cannot be used to determine a body weight in practice of medicine.

4.3 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 and damage caused by media, liquids,
- natural wear and tear
- The appliance is improperly set up or incorrectly electrically connected
- The measuring system is overloaded
- Dropping the balance

4.4 Monitoring of Test Resources

In the framework of quality assurance the measuring-related weighing 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.

5 Basic Safety Precautions

5.1 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.	
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6 Transport and storage

6.1 Testing upon acceptance

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

6.2 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 weighing platform, power unit etc. against shifting and damage.

7 Unpacking, Setup and Commissioning

7.1 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.

On the installation site observe the following:

- Place scales on a stable, even 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 the balance and of the person to be weighed.
- Avoid contact with water.

Major display deviations (incorrect weighing results) may be experienced should electromagnetic fields (e.g. due to mobile phones or radio equipment), static electricity accumulations or instable power supply occur. Change location or remove source of interference.

7.2 Unpacking

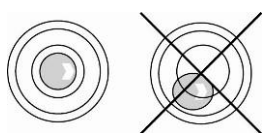
Remove the individual components of the balance or the complete balance from the packaging with care and install at the intended location. When using the power pack, ensure that the power cable does not produce a risk of stumbling.

7.3 Scope of delivery

Serial accessories:

- Balance
- Power pack unit
- Operating instructions

7.4 Placing



- ⇒ Level balance with foot screws until the air bubble of the water balance is in the prescribed circle.
- ⇒ Check levelling regularly.

7.5 Mains connection

only model MPD 250K100NM

Power is supplied by the external power unit which also serves to isolate the mains supply from the scale. The stated voltage value must be the same as the local voltage.

Always use genuine approved KERN power pack units.

The small sticker attached to the side of the display unit indicates the power port:



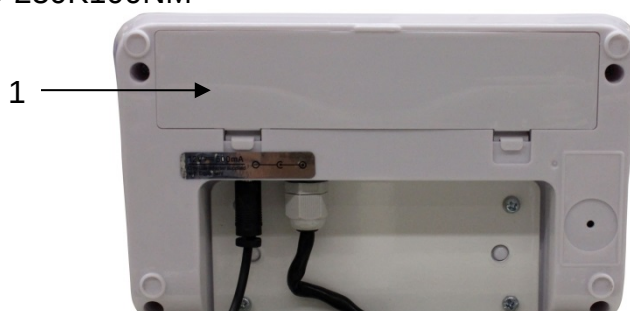
The LED remains illuminated as long as the weighing scale remains connected to the mains. The LED display informs you during loading about the loading status of the rechargeable battery.

green: Rechargeable battery completely reloaded

blue: Charging storage battery

7.6 Rechargeable battery operation (optional)

only model MPD 250K100NM



Open battery compartment cover (1) at the base of the display unit and insert battery. Charge the battery for at least 12 hours before initial use.

The appearance of the symbol  in the weight display indicates that the battery is almost exhausted. The weighing scale will remain ready for operation for a few more minutes before switching off in order to save battery. Load rechargeable battery.



Voltage has dropped below prescribed minimum.



Rechargeable battery very low.



Rechargeable battery completely reloaded

If the balance is not used for a longer time, take out the rechargeable battery and store it separately. Leaking liquid could damage the balance.

7.7 Battery operation

As an alternative to rechargeable battery operation, the balance may also be operated with 6x AA batteries.

Open battery compartment cover (1) at the lower side of the display unit and insert batteries according to the example below. Lock the battery cover again. If the batteries are empty, in the balance display appears the symbol . Change batteries. To save battery power, the balance switches off automatically.



Capacity of batteries exhausted.



Batteries will soon be flat.



Batteries are completely charged

Insert batteries

Remove battery compartment cover	
Connect battery holder to housing contact acc. to illustration	
Insert battery holder	
Insert batteries into battery compartment and lock with battery compartment cover.	

7.8 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. 1). During this warming up time the balance must be connected to the power supply (mains, accumulator or battery) and be switched on.

The accuracy of the balance depends on the local acceleration of gravity.

The value of gravity acceleration is shown on the type plate.

8 Operation



⇒ Turn on weighing scale by foot switch (chap. 3).



⇒ The balance will carry out a self-test
The scales are ready for operation as soon as the weight display for "0.0 kg" has appeared.

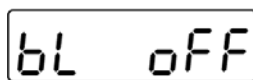
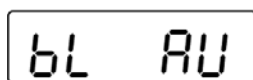
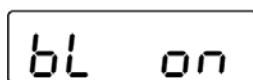


⇒ Have person stand in the centre of the scales. Wait until the standstill display „STABLE“ appears, then read the weighing result.

8.1 Display highlight



⇒ Turn on the scales with the use of a foot switch.
⇒ The scales shall undergo automatic testing.
The scales is prepared for weighing right after the "0.0kg" mass indication is displayed.

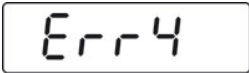
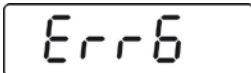
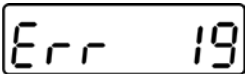


⇒ Press and hold the foot switch.
Background highlight setting options shall be displayed in sequence.

⇒ Select the demanded setting by means of pushing the switch for a while.
The indication shall blink for a while and then the selected setting will be applied.

bL on	Highlight is always turned on
bL AU	Automatic highlight turning off
bL oFF	Highlight always turned off

9 Error messages

Display	Description
OL or-----	Weighing range has been exceeded (excess load)
-----or Null	Below weighing range (underload)
	Zero range exceeded (on start-up or when pressing the  key) • Load on weighing pan • Excess load, during zero setting of weighing scale • Incorrect adjusting process • Fault on load cell
	Value outside the A/D converter range • Damaged weighing cell • Damaged electronics
	Lack of possibility of zero point initiation • Damaged / overloaded measuring cell • The objects are located on the platform / have contact with it • Unremoved transportation protection • Main Board damaged

- Load on weighing pan
- Excess load, during zero setting of weighing scale
- Incorrect adjusting process
- Fault on load cell

- Damaged weighing cell
- Damaged electronics

- Damaged / overloaded measuring cell
- The objects are located on the platform / have contact with it
- Unremoved transportation protection
- Main Board damaged

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

10 Service, maintenance, disposal

10.1 Cleaning / Disinfecting

Clean weighing platform (such as seat) as well as casing with household detergents or commercially available disinfectants, e.g. 70% isopropanol. We recommend a disinfectant suitable for wiping disinfection. Please follow manufacturer's instructions.

Do not use abrasive or aggressive cleaners such as spirits or alcohol or similar as they might damage the high-quality surface.

To prevent cross-contamination (fungal skin infection) please observe the following time intervals for disinfection:

- Weighing plate before and after any measurement with direct skin contact
- When required:
 - o Display
 - o Touch-sensitive keyboard



Do not spray disinfectants onto appliance.

Make sure that disinfectant does not penetrate the interior of the balance.

Remove dirt immediately.

10.2 Sterilisation

Sterilisation of the appliance is not allowed.

10.3 Service, maintenance

The appliance may only be opened by trained service technicians who are authorized by KERN.

Disconnect the scales before opening.

10.4 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.

11 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.
- Rechargeable battery inserted incorrectly or empty
- No rechargeable battery inserted

The displayed weight is permanently changing

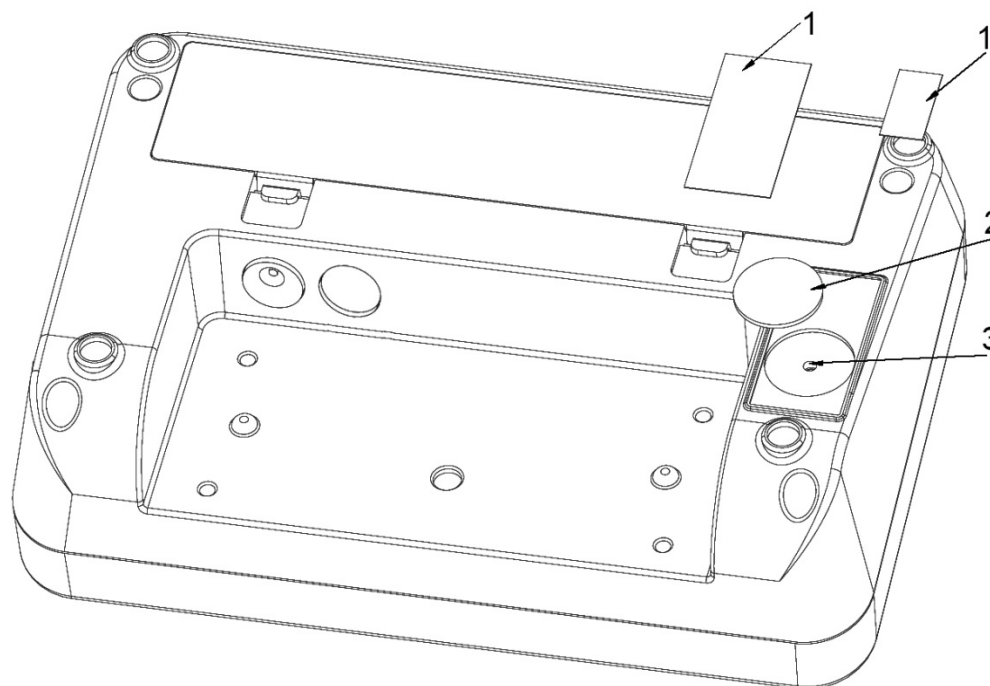
- Draught/air movement
- Table/floor vibrations
- The weighing plate is in contact with foreign bodies or is not correctly positioned.
- Electromagnetic fields / static charging (choose different location/switch off interfering device if possible)

The weighing result is obviously incorrect

- The display of the balance is not at zero
- Adjustment is no longer correct.
- Great fluctuations in temperature.
- Warm-up time was ignored.
- 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.

Position adjustment switch and seals:



1. Self-destroying seal mark
2. Cover
3. Adjustment switch

12 Adjustment

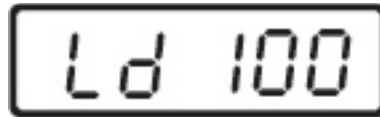
As the acceleration value due to gravity is not the same at every location on earth, each display unit with connected weighing plate must be coordinated - in compliance with the underlying physical weighing principle - to the existing acceleration due to gravity at its place of location (only if the weighing system 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 display unit periodically in weighing operation.



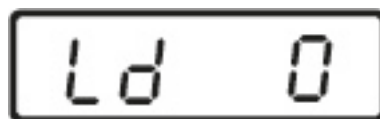
- Prepare the required adjustment weight. The adjustment weight to be applied depends on the capacity of a weighing scale, see chap. 1. Carry out adjustment as closely as possible to admissible maximum load of weighing scale. Information about test weights you will find in the internet under <http://www.kern-sohn.com>
- Observe stable environmental conditions. For warm-up time required for stabilisation see chap. 1.

Procedure:

- ⇒ Switch off the balance.
- ⇒ Press adjustment switch and turn on weighing scale by operating foot switch (chap. 3)..
- ⇒ Wait until the size of the adjustment weight (see chap. 1) required is displayed.

A rectangular digital display with a black border. The text 'Ld 100' is shown in a black, monospaced, digital font. 'Ld' is on the left and '100' is on the right.

- ⇒ Place adjustment weight in the centre of the weighing platform. Wait until „Ld 0“ is shown.

A rectangular digital display with a black border. The text 'Ld 0' is shown in a black, monospaced, digital font. 'Ld' is on the left and '0' is on the right.

- ⇒ Take away adjustment weight. Ensure that there are no other objects on the weighing pan.

A rectangular digital display with a black border. The text 'PASS' is shown in a black, monospaced, digital font, centered within the display.

- ⇒ Wait for a few seconds until „PASS“ is displayed.
- ⇒ After successful adjustment the balance automatically returns to weighing mode.