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Návod na obsluhu(EN)

GAB-P navažovacia váha s tlačou(SK)

Version 1.1
03/2014
GB



GAB-P-BA-e-1411

GB

KERN GAB-P

Version 1.1 03/2014

Operating manual

Table scale

English

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English

1 Technical data

KERN	GAB 6K-5P	GAB 10K-4P	GAB 30K-4P
Weighing range (max)	6 kg	12 kg	30 kg
Readability (d)	0.05 g	0.1 g	0.2 g
Reproducibility	0.05 g	0.1 g	0.2 g
Linearity	± 0.15 g	± 0.3 g	± 0.6 g
Stabilization time	2 s	2 s	2 s
Recommended adjusting weight (not supplied)	6 kg (F2)	12 kg (F2)	30 kg (M1)
Heating time (operating temperature)	120 min		
Net weight (kg)	6 kg		
Dimensions of housing (l x L x h) [mm]	371 x 366 x 131		
Weighing plate, stainless steel	365 x 240 x 11 mm		
Weighing Units	kg, t, lb, oz		
Permissible ambient condition	-10° C to 40° C		
Allowable air humidity	0 % - 80 % (non-condensing)		
Electric Supply	Mains adapter 220 V - 240 V AC, 50 Hz balance 12 V, 500 mA		
Rechargeable battery	6 V, 10 Ah		
	Operating period without printer – background lighting on 80 h.		
	Operating period without printer – background lighting off 150 h		
	if the printer is used frequently, the operating time will be halved		
	Loading time approx. 12 hrs.		
Data interface	RS 232C		

English

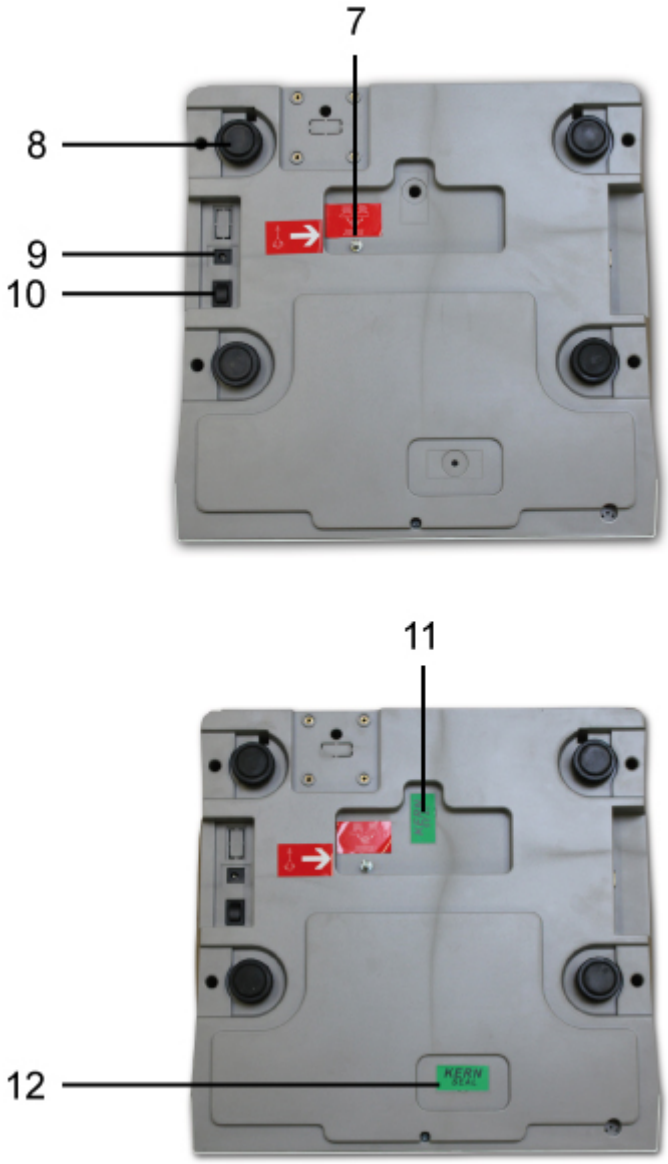
KERN	GAB 6K-3PM	GAB 10K-3PM	GAB 30K-3PM
Weighing range (max)	3 kg / 6 kg	6 kg / 15 kg	15 kg / 30 kg
Readability (d)	1 g / 2 g	2 g / 5 g	5 g / 10 g
Minimum load	20 g	40 g	100 g
Verification value	1 g / 2 g	2 g / 5 g	5 g / 10 g
Verification class	III	III	III
Reproducibility	1 g /2 g	2 g / 5 g	5 g / 10 g
Linearity	± 1 g / 2 g	± 2 g / 5 g	± 5 g / 10 g
Stabilization time	2 s	2 s	2 s
Recommended adjusting weight (not supplied)	6 kg (M1)	15 kg (F2)	30 kg (M1)
Heating time (operating temperature)	10 min / 10 min		
Net weight (kg)	6 kg		
Dimensions caisse (l x L x h) [mm]	371 x 366 x 131		
Weighing plate, stainless steel	365 x 240 x 11 mm		
Weighing Units	g, kg		
Permissible ambient condition	-10° C to 40° C		
Allowable air humidity	0 % - 80 % (non-condensing)		
Electric Supply	Mains adapter 110 – 230 V AC Balance 12 V DC, 500mA		
Rechargeable battery	6 V, 10 Ah		
	Operating period without printer – background lighting on 80 h.		
	Operating period without printer – background lighting off 150 h		
	if the printer is used frequently, the operating time will be halved		
	Loading time approx. 12 hrs.		
Data interface	RS 232C		

English

2 Appliance overview



1. Weighing pan
2. Printer
3. Buttons
4. Bubble level
5. RS 232 interface
6. Battery compartment



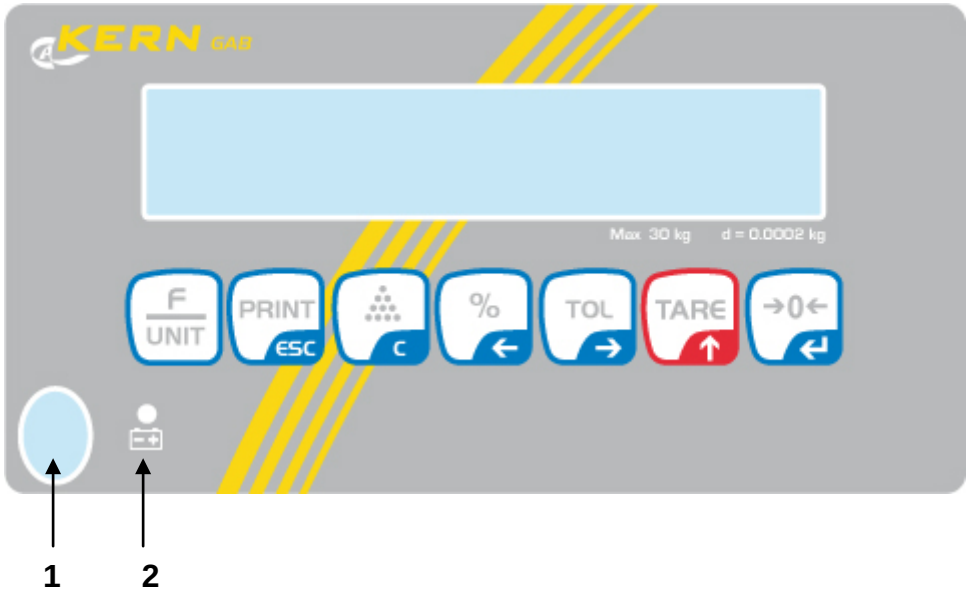
7. Transport guard screw
8. Levelling screw
9. Connection of mains adapter
10. ON/OFF switch
11. Seal of verifiable models
12. Seal with an underneath verification switch (verifiable models)

2.1 Overview of display

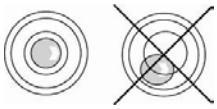


	Display	Description	Description
1		The battery capacity display	appears when the capacity of the battery is getting low
2		Stability display	Scales are in a steady state
3		weighing units selectable	Non-verifiable models: kg, t, lb, oz Verifiable models: g, kg
4	**GROSS**	Gross weight display	Showing gross weight
	NET	Net weight display	Displays the net weight
	ZERO	Zeroing display	Should the balance not display exactly zero despite empty scale pan, press the →0← button. The balance will be set to zero after a short standby time.
	TARE	Taring	Scales have been tared
	AUTO	Automatic adding-up	Is displayed if in the menu „Automatic totalizing“ has been selected
5	HI OK LO	Tolerance check Check weighing	Load above (HI), below (LO) or within (OK) tolerance range

2.2 Keyboard overview



1. Bubble level



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

2. Storage battery status display



Power supply connected Icon is glowing for power supply via power pack

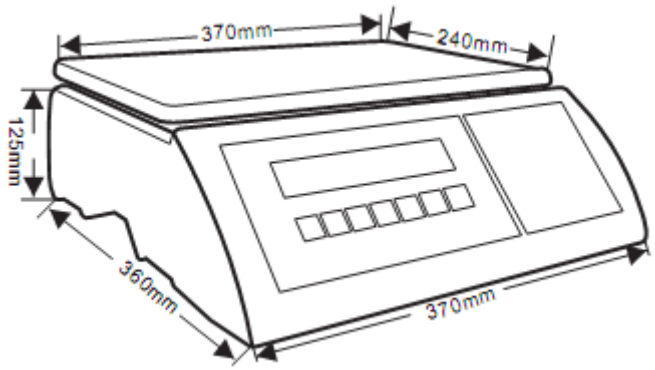
- If the LED lights green, the rechargeable battery is fully charged.
- When the battery is being recharged, the LED lights red

English

Selection	Function		
	F	In piece counting mode change between reference weight - item number - total weight	
	UNIT	In weighing mode: Weighing units switch-over	
	PRINT	• Data transfer via interface • Save value to memory if memory function “automatic“, is disabled • In menu: Select main menu items	Call up menu: Press both buttons at the same time
	ESC	Return to weighing mode	
		Changes between weighing mode and quantity counting mode	
	C	• Delete displayed value • In menu: Return to weighing mode	
	%	Call up percent weighing	
	←	Move to the left by one decimal point	
	TOL	Enter upper, lower or both limits	
	→	Move to the right by one decimal point	
	TARE	• Tare balance and enter pre-tare value • In menu: Select submenus	
	↑	Increase displayed value	
	→0←	• Reset scales to zero • In menu: Save selected setting	
	↵	Confirm entered value or select function	

English

2.3 Dimensions



3 Basic Information (General)

3.1 Proper use

The balance acquired by you serves to determine weight. 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 pan. As soon as the goods to be weighed are placed on the balance and the weight has been displayed.

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 pan. 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.(www.kern-sohn.com). 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.

All language versions contain a non-binding translation. The German original document is binding.

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 transport securing devices. (see chapter 6.2)**
- ⇨ 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.

On the installation site observe the following:

- 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 / installation

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

Make sure that all transport locking devices are removed

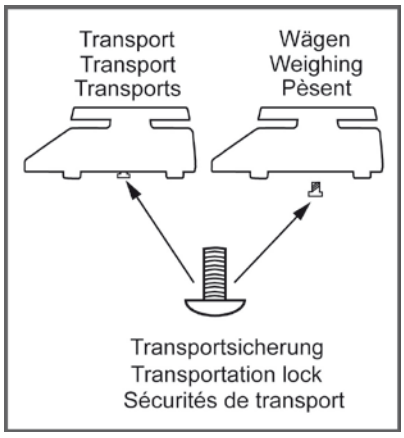


To release the transport lock unscrew the transport screw

- ⇨ **1 – non verifiable models** or
- ⇨ **2 –verifiable models**

counter-clockwise.

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



English

6.3 Scope of delivery

Serial accessories:

- Balance, see chap. 2
- Mains adapter
- Rechargeable battery
- Operating 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 Rechargeable battery operation

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 12 hours.
The appearance of the battery symbol  in the weight display indicates that the battery is almost exhausted.
To charge the chargeable battery, connect the mains cable.
The LED display informs you during loading about the loading status of the rechargeable battery.

- If the LED lights green, the rechargeable battery is fully charged.
- When the battery is being recharged, the LED lights red

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

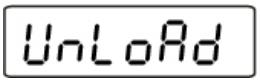
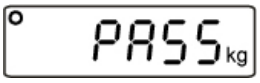
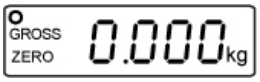
As the acceleration value due to gravity is not the same at every location on earth, each balance must be coordinated - in compliance with the underlying physical weighing principle - to the existing acceleration due to gravity at its place of location (only if the balance has not already been adjusted 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. To disable the access lock, requires that the seal is destroyed and the adjusting switch is actuated in step 3 when turning on the scale. For position of adjusting switch, see chap. 6.10.1.

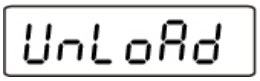
Attention:
After destruction of the seal the balance must be re-verified by an authorised agency and a new verification wire/seal mark fitted before it can be reused for applications subject to verification.

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 pan.

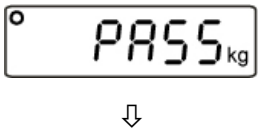
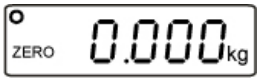
6.8 Non-verifiable models:

⇨ Switch on the balance and during the selftest press the TARE and the % button at the same time. „UnLoad“ is displayed shortly.	 ⇩
⇨ Ensure that there are no objects on the weighing pan.	
⇨ „LoAd“ is displayed	
⇨ Place adjustment weight, the stability display ○ appears	
⇨ After the adjustment the balance will carry out a self-test. „PASS“ will be displayed shortly. Remove adjusting weight **during** selftest, the appliance will return into weighing mode automatically. An adjusting error or incorrect adjusting weight will be indicated by the error message; repeat adjustment procedure.	 ⇩ 

6.9 Verifiable models:

⇨ Switch on balance and press the adjustment switch at the same time. ⇨ After that, during the balance’s selftest, press TARE and % at the same time. „UnLoad“ is displayed.	
⇨ Acknowledge with →0←. Ensure that there are no objects on the weighing pan.	
⇨ The currently set adjustment weight will be displayed. ⇨ To change by using the navigation buttons (see chap. 8) select the desired setting, the active digit is flashing.	
⇨ Acknowledge with →0←. „LoAd“ is displayed.	

English

⇨ Carefully place adjusting weight in the centre of the weighing plate. Wait for stability display ○, then press →0←. „PASS“ will be displayed shortly.	 ⇩
⇨ After the adjustment the balance will carry out a self-test. Remove adjusting weight **during** selftest, the appliance will return into weighing mode automatically. An adjusting error or incorrect adjusting weight will be indicated by the error message; repeat adjustment procedure.	

6.10 Verification

General hints:

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

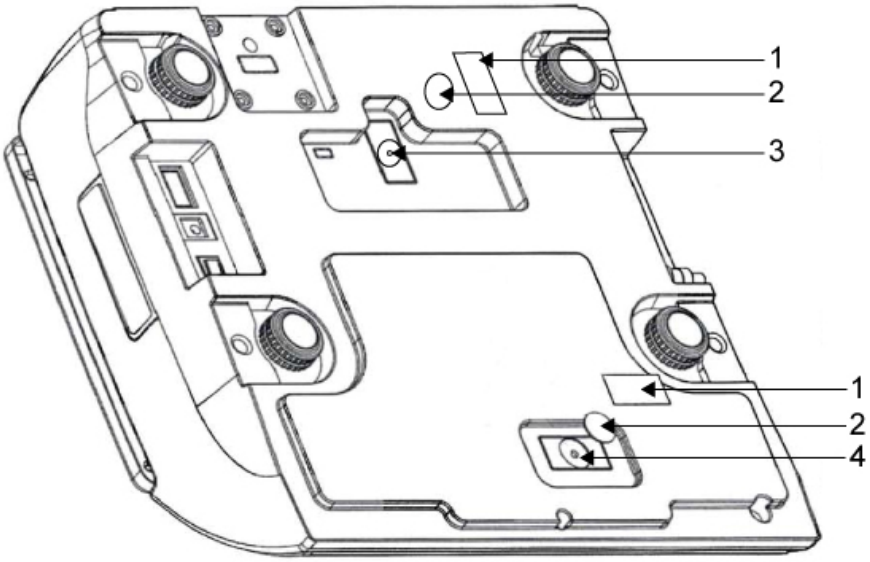
An EU type approval exists for balances described in their technical data as verifiable. If a balance is used where obligation to verify exists as described above, it must be verified and re-verified at regular intervals.
Re-verification of a balance is carried out according to the respective national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

English

6.10.1 Position of seals and adjusting switch



1. Seal of approval
2. Cover
3. Housing screw
4. Adjustment switch

6.11 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.

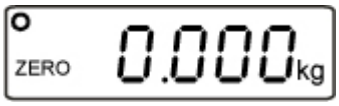
In calibrated scales the service mode is locked individually for each switch.
To disable the access lock, destroy the seal and actuate the switch.

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.

7 Operation

7.1 Switching 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 appears, the balance is ready for weighing.



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

Printout example:

No.1
2013/08/10 18:39
N: 5.000kg
G 5.000kg
T: 0.000kg

7.2 Zeroing

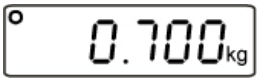
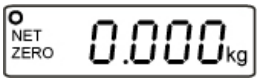
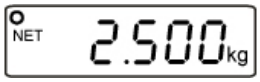
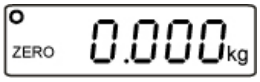
Resetting to zero corrects the influence of light soiling on the weighing plate.

⇨ Unload the balance

⇨ Press 

, the balance starts resetting to zero.

7.3 Taring

⇨ Deposit weighing receptacles	 (example)
⇨ After successful standstill control press the TARE button. The zero display and „NET“ will appear. The weight of the weighing container is now internally saved.	
⇨ Place material to be weighed and read weight value	 (example)
⇨ 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.	
⇨ To delete the tare value, remove load from weighing plate and press TARE.	

Printout example:

No.1		1. Weighing
2013/08/10	18:39	Date and time
N:	2.500kg	Net weight
G	3.200kg	Gross weight
T:	0.700kg	Tare value

7.4 Overload warning

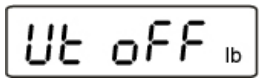
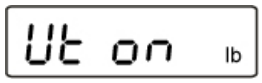
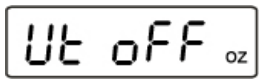
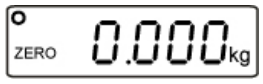
Overloading exceeding the stated maximum load (max) of the balance, minus a possibly existing tare load, must be strictly avoided. This could cause damage to the balance.
Exceeding maximum load is indicated by the display of „----“ and an audio sound.
Unload balance or reduce preload.

7.5 Weighing units switch-over

Use the F UNIT button to switch over between the individual weighing units.

Only in non-verifiable models:

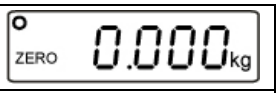
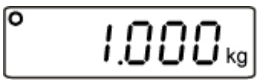
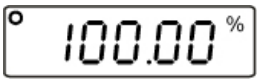
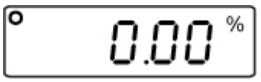
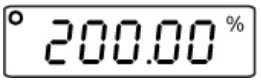
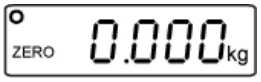
How to enable weighing units:

⇨ In menu select the menu item „Ut on“ or „-off“ (see chap.8.2), the first unit will be displayed	 (example) ⇳
⇨ To enable [on] / disable [off] the displayed weighing unit, press TARE	
⇨ Acknowledge with →0← ↵. The next unit with the current setting will be displayed.	 (example) ⇳
⇨ To enable [on] / disable [off] the displayed weighing unit, press TARE	
⇨ Repeat sequence for each weighing unit.	
⇨ Return to weighing mode using C	

English

7.6 Percent weighing

Percent weighing allows to display weight in percent, in relation to a reference weight.

⇨ Switch on balance, wait for zero display	
⇨ Put a reference weight on the weighing plate, which corresponds to 100 %.	 (example)
⇨ Press  , in the display **100,00 %** appears	
⇨ Remove the reference weight The display will return to **0.00 %**	
⇨ Place a sample The display will show the percentage value of the sample in relation to the reference value.	 (example)
⇨ To return to gram / kilo mode, press 	

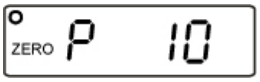
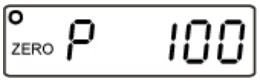
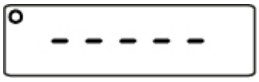
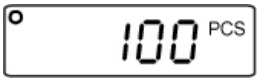
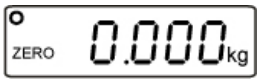
Printout example:

G 200,00% Weight value in percent

7.7 Parts counting

Before the balance can count parts, it must know the average part weight (i.e. reference). Proceed by putting on a certain number of the parts to be counted. The balance determines the total weight and divides it by the number of parts (the so-called reference quantity). Counting is then carried out on the basis of the calculated average piece weight.

i	**The higher the reference quantity the higher the counting exactness.**

⇨ Place reference quantity in weighing mode. ⇨ Press C and the scales will change to quantity counting mode; reference quantity of 10, „P 10“ will appear.	
⇨ Use TARE to set the desired reference quantity (e.g. 100), selectable 10, 20, 50, 100 and 200 ⇨ Acknowledge by →0←. ⇨ An audio signal will sound shortly and a dashed line will be displayed before the respective item number appears.	 (example)  ⇩ 
⇨ Remove the items from the weighing plate. The balance is from now in parts counting mode counting all units on the weighing plate.	
⇨ To change between reference weight, total weight and quantity, press the F/UNIT key.	
⇨ Back to Weighing mode by C.	

Printout example:

2013/08/10	18:39	Date/time
G	1.000kg	Reference weight
	10g/pcs	Piece weight
PCS:	100pcs	Number of items

English

7.8 Weighing with tolerance range

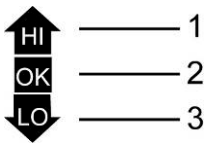
You can set an upper or lower limit when weighing with tolerance range and thus ensure that the material to be weighed remains exactly within the set limits. Exceeding or dropping below the tolerance range is indicated by an audio sound or optical signal.

Audio signal:
The audio sound depends on the setting in menu block “bP“ (see chap.8.2.)

Options:

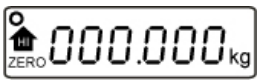
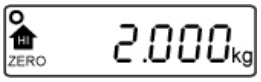
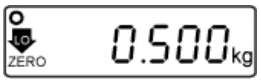
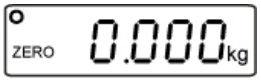
- 0 No audio sound during tolerance weighing
- 1 An acoustic signal sounds when material to be weighed is within tolerance limits
- 2 An acoustic signal sounds when material to be weighed is beyond tolerance limits

Optical signal:
The arrow symbols indicate whether load is within the two set limits.
The icons provide the following information:



1. Material to be weighed above tolerance limit
2. Material to be weighed within tolerance range
3. Material to be weighed below tolerance limit

Settings:

⇨ In weighing mode press TOL, the left number flashes and the symbol „HI“ will be displayed.	
⇨ Enter upper limit by pressing TOL and TARE.	 (example)
⇨ Acknowledge with →0←. The weighing scales will change to the display of the lower limit.	
⇨ Enter the lower limit value and confirm with →0←	 (example)
⇨ The scales will change to zero display	

Weighing with tolerance range

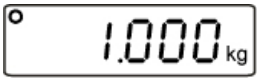
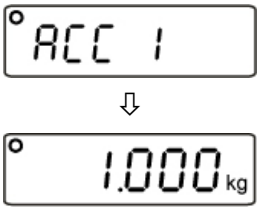
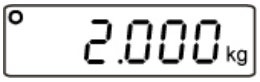
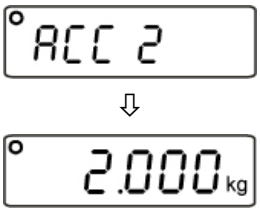
⇨ Tare when using a weighing container.
⇨ Put on material to be weighed, tolerance control is started.

i	▪ The tolerance control is not active when the weight is under 20d. ▪ To finish tolerance weighing, set both limit values to zero.

English

7.9 Manual totalizing

This function is used to add the individual weighing values to the summation memory and to provide a printout via the installed printer, when the stability display appears and the PRINT button is pressed.
(in order to set this function see chap. 8.2 „ACC on“)

⇨ Place material to be weighed A Wait until stability display appears	 (example)
⇨ Press PRINT „ACC 1“ followed by the weight value will appear. The weight value is added into the summation memory and will be printed out when the PRINT button is pressed	
⇨ Remove material to be weighed A Further material to be weighed can only be added after the balance has returned to zero.	
⇨ Place material to be weighed B Wait until stability display appears	 (example)
⇨ Press PRINT „ACC 2“ followed by the weight value will appear. The weight value is added into the summation memory and will be printed out when the PRINT button is pressed	
⇨ Remove material to be weighed B Further material to be weighed can only be added after the display has returned to zero.	
⇨ Add more material to be weighed as described before. Please note that the balance must be unloaded between the individual weighing procedures.	
⇨ You can repeat this process until the capacity of the scales is exhausted.	

English

Display of the saved weighing data:

⇨ With the weighing platform unloaded, press PRINT ESC and the number of weighing processes, followed by the total weight will be displayed for 2 sec and afterwards printed.

Delete weighing data:

⇨ With the weighing platform unloaded, press PRINT ESC **2x**.
The data in the summation memory are deleted.

Printout example:

1. Weighing

No.1		1. Weighing
2013/08/10	18:39	Date/time
N:	1.000kg	Net weight
G	1.000kg	Gross weight
T:	0.000kg	Tare value

2. Weighing

No.2		2. Weighing
2013/08/10	18:39	Date/time
N:	2.000kg	Net weight
G	2.000kg	Gross weight
T:	0.000kg	Tare value

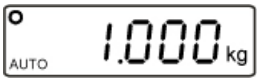
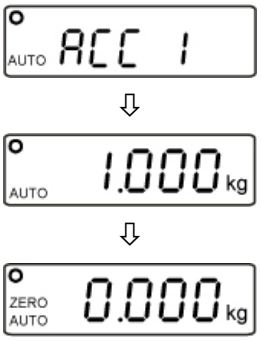
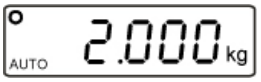
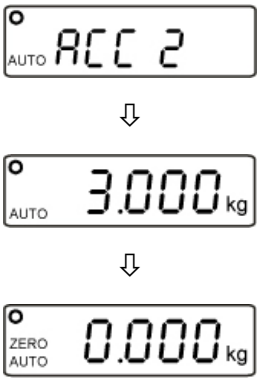
Number of weighings / total

No.2		Number weighing processes
2013/08/10	18:39	Date/time
C	3.000kg	Total

English

7.10 Automatic adding-up

This function is used to add the individual weighing values automatically into the summation memory and to provide a printout via the installed printer.
To set this function, see chap. 8.2 „AU on“

⇨ Place material to be weighed A After stabilisation display has taken place, you will hear an audio sound. The symbol for „AUTO“ appears. The weighing value will be saved to the summation memory.	 (example)
⇨ Remove material to be weighed A „ACC 1“followed by the weight value will be displayed shortly and printed. Afterwards the weighing scales change to zero display.	
⇨ Place material to be weighed B After stabilisation display has taken place, you will hear an audio sound. ⇨ The weighing value will be saved to the summation memory.	
⇨ Remove material to be weighed B „ACC 2“followed by the total weight of both weighings will be displayed shortly. The weight of the items to be weighed B will be printed. After that the balance changes to the zero display.	
⇨ Add more material to be weighed as described before. Please note that the balance must be unloaded between the individual weighing procedures.	
⇨ You can repeat this process until the capacity of the scales is exhausted.	

Display of the saved weighing data:

⇨ With the weighing platform unloaded, press PRINT/ESC and the number of weighing processes, followed by the total weight will be displayed for 2 sec and afterwards printed.

Delete weighing data:

⇨ With the weighing platform unloaded, press PRINT/ESC **2x**.
The data in the summation memory are deleted.

Printout example:

1. Weighing

No.1		1. Weighing
2013/08/10	18:39	Date/time
N:	1.000kg	Net weight
G	1.000kg	Gross weight
T:	0.000kg	Tare value

2. Weighing

No.2		2. Weighing
2013/08/10	18:39	Date/time
N:	2.000kg	Net weight
G	2.000kg	Gross weight
T:	0.000kg	Tare value

Number of weighing processes / total

No.2		Number weighing processes
2013/08/10	18:39	Date/time
C	3.000kg	Total

English

8 The menu

8.1 Navigation in the menu:

Call up menu	Press  and  at the same time in weighing mode
Menu block **Select main menu**	Using  the individual menu items of the main menu can be selected subsequently
Menu item **Select submenu**	Switch over into the available menu items of the submenu using .
Confirm setting	Use  to save the selected setting
Modify/change the active digit	•  Change to the left •  Change to the right •  Increase number
Return to weighing mode	Press  to exit menu.

8.2 Menu overview

8.2.1 Non-verifiable models:

Menu block Main menu	**Menu item Submenu**	**Available settings / explanation**
r dUAL	not documented r duAL, 12000, 15000, 3000d, 6000d, 15000d, 30000d, 60000d	
EL AU* **Background illumination**	EL Au	Background light automatic off
	EL on	Background lighting on
	EL off	Background lighting off
P Prn* **Data output**	P Prn	Printout by pressing the print button
	P Prt	not documented
	P Cont	Continuous data output
b 4800* **Baud rate**	Setting options for baud rate: 600/1200/2400/4800/9600	
Lab 1* **Printout**	Lab 1	not documented
	Lab 2	
	Lab 3	
AU off* **Add-up mode (automatically)**	AU on	Automatic totalizing function on
	AU off	Automatic totalizing function off
ACC off* **Add-up mode**	ACC off	Totalizing function off
	ACC on	Totalizing function on
A2 2d	A2 2d	Zero point correction
	A4 4d	
	A2 off	
	A2 0.5d	
	A2 1d	
Ut on* **Weighing units**	Ut on	Switch on or off weighing units
	Ut off	

English

bP0* **Acoustic signal**	bP 0	No audio sound during tolerance weighing
	bP 1	Audio sound when weight is within tolerance range
	bP 2	Audio sound when weight is beyond tolerance range
SPd 15* **Display speed**	SPd 15	not documented
	SPd 30	
	SPd 7.5	
oF 0* **Auto off**	Auto off after 0, 3, 5, 15, or 30 minutes	
return	Return to weighing mode	

8.2.2 Verifiable models:

Menu block Main menu	**Menu item Submenu**	**Available settings / explanation**
r dUAL	Resolution r duAL, 12000, 15000, 3000d, 6000d, 15000d, 30000d, 60000d	
EL AU* **Background illumination**	EL Au	Background light automatic off
	EL on	Background lighting on
	EL off	Background lighting off
P Prn* **Printout**	P Prn	Printout by pressing the print button
	P Prt	not documented
	P Cont	Continuous data output
AU off* **Add-up mode (automatically)**	AU on	Automatic totalizing function on
	AU off	Automatic totalizing function off
E Pn	E Pn	Standard printer
	LP 50	not documented
ACC off* **Add-up mode**	ACC off	Totalizing function off
	ACC on	Totalizing function on
Ut on* **Weighing units**	Ut on	Switch on or off weighing units
	Ut off	

beeP 0* **Acoustic signal**	beeP 0	No audio sound during tolerance weighing
	beeP 11	Audio sound when weight is within tolerance range
	beeP 2	Audio sound when weight is beyond tolerance range
SPd 15* **Display speed**	SPd 15	not documented
	SPd 30	
	SPd 7.5	
oF 0* **Auto off**	Auto off after 0, 3, 5, 15, or 30 minutes	
return	Return to weighing mode	

English

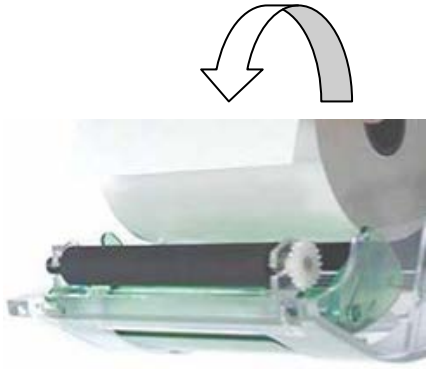
9 Printer

9.1 Change paper roll



⇨ To open, lift green cover and pull upwards.

⇨ Insert new paper roll as shown on diagram.



⇨ Pull a short length of the end of the paper roll towards the front and close cover. Press evenly from both sides on the cover (See arrows).



⇨ Press FEED and the receipt will be moved on.

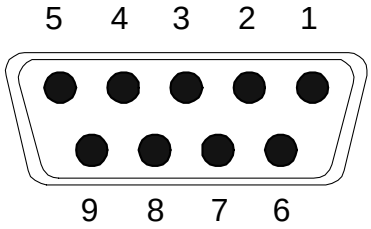
10 Data output RS 232C

The balance is typically equipped with a RS 232C interface.

10.1 Technical data

- ASCII code
- 8 data bits
- no parity bit
- Baud rate 9600 baud

10.2 Pin allocation of the balance output socket (front view)



Pin 2: Output
Pin 3: Input
Pin 5: Signal ground

10.3 Remote control instructions

Command	Function
T	No data are sent, the balance carries out the tare function.
Z	No data are sent, the zero-display appears.

11 Maintenance, servicing, removal, error messages

11.1 Clean

Before cleaning, 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. Take care that the device is not penetrated by fluids and polish it 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 Servicing, 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.

11.4 Error messages

ERR 4	Zero range exceeded
ERR 5	Invalid entry
ERR 6	Damaged electronics
ERR 8	Adjustment error: wrong adjustment weight
ERR 9	Instability when the balance is switched on

12 Declaration of conformity

KERN & Sohn GmbH
D-72322 Balingen-Frommern *Phone: 0049-[0]7433- 9933-0*
Postbox 4052 *Fax: 0049-[0]7433-9933-149*
E-Mail: info@kern-sohn.de *Internet: www.kern-sohn.de*

Declaration of conformity

EC Declaration of Conformity
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.
EN	Declaration of conformity	We hereby declare that the product to which this declaration refers conforms to 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 GAB-P

EU Directive	Standards
2004/108/EC	EN 55022 : 2010 EN 61000-3-3 : 2008 EN 55024 : 2010 (EN61000-4-2: 2009, EN61000-4-3: 2006/A2 : 2010, EN61000-4-4: 2006/A1: 2010, EN61000-4-5: 2006, EN61000-4-6: 2009, EN61000-4-11: 2004)
2006/95/EC	EN 60950-1 : 2006

Datum 11.09.2013
Date

Ort der Ausstellung 72336 Balingen
Place of issue

Signatur
Signature

Albert Sauter
KERN & Sohn GmbH
Manager
Managing director

English