

Precision balances KERN PBS · PBJ



## Multifunctional laboratory balance with single-cell weighing system and EC type approval [M]

### Features

- KERN PBJ: **Internal adjustment** in the case of a change in temperature and time-controlled at defined intervals, guarantees high degree of accuracy and makes the balance independent of its location of use
- KERN PBS: **Adjusting program CAL** for quick setting of the balance accuracy using an external test weight
- **Metal housing:** robust and sturdy
- **Dosage aid:** High-stability mode and other filter settings can be selected
- **Weighing with tolerance range (check-weighing):** a visual signal helps with portioning, dispensing or grading
- **Totalising** of weights
- **Identification number:** 4 digits, printed on calibration protocol freely programmable
- **Automatic data output to the PC/printer** each time the balance is steady

- **1 Draught shield** standard for models with [d] = 0,001 g, weighing space W×D×H 180×193×87 mm
- **Protective working cover** included with delivery

### Technical data

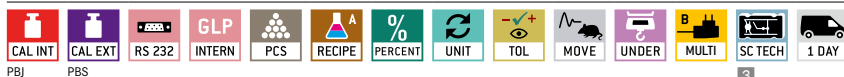
- Large backlit LCD display, digit height 14 mm
- Dimensions weighing surface, stainless steel
  - A W×D 108×105 mm
  - B W×D 180×190 mm, see larger picture
- Overall dimensions W×D×H 209×322×78 mm (without draught shield)
- Net weight approx. 3,2 kg
- Permissible ambient temperature 10 °C/30 °C

### Accessories

- **Protective working cover**, scope of delivery: 5 items, for models with weighing plate size
  - A KERN PBS-A01S05
  - B KERN PBS-A02S05
- **2 Set for density determination** of liquids and solids with density ≥ 1, for models with weighing plate size
  - A KERN PBS-A04
  - B KERN PBS-A03
- **RS-232/Ethernet adapter** for connection to an IP-based Ethernet network, KERN YKI-01
- Further details, plenty of further accessories and suitable printers see *Accessories*

- **3 Single-cell advanced technology:**
  - **Fully automatic manufactured weighing cell from one piece of material**
  - **Stable temperature behaviour**
  - **Short stabilisation time:** steady weight values within approx. 3 s under laboratory conditions
  - **Shock proof construction**
  - **High corner load performance**

STANDARD



OPTION



Model	Weighing capacity [Max] g	Readability [d] g	Verification value [e] g	Minimal load [Min] g	Linearity g	Weighing plate	Quality code	Option					
								Verification		DAkkS Calibr. Certificate			
								M KERN		DAkkS KERN			
KERN							QUALITY						
PBS 620-3M	620	0,001	-	-	± 0,002	A	BC	-			963-127		
PBS 4200-2M	4200	0,01	-	-	± 0,02	B	BC	-			963-127		
PBS 6200-2M	6200	0,01	-	-	± 0,02	B	BC	-			963-128		
Note: For applications that require verification, please order verification at the same time, initial verification at a later date is not possible.													
Verification at the factory, we need to know the full address of the location of use.													
PBJ 620-3M	620	0,001	0,01	0,1	± 0,002	A	BC		965-201	I		963-127	
PBJ 4200-2M	4200	0,01	0,1	0,5	± 0,02	B	CC		965-216	II		963-127	
PBJ 6200-2M	6200	0,01	0,1	1	± 0,02	B	CC		965-202	I		963-128	
PBJ 8200-1M	8200	0,1	1	5	± 0,2	B	CC		965-217	II		963-128	

## Pictograms

<b>Internal adjusting:</b> Quick setting up of the balance's accuracy with internal adjusting weight (motordriven)	<b>KERN Communication Protocol (KCP):</b> It is a standardized interface command set for KERN balances and other instruments, which allows retrieving and controlling all relevant parameters and functions of the device. KERN devices featuring KCP are thus easily integrated with computers, industrial controllers and other digital systems	<b>Protection against dust and water splashes IPxx:</b> The type of protection is shown in the pictogram.
<b>Adjusting program CAL:</b> For quick setting up of the balance's accuracy. External adjusting weight required	<b>GLP/ISO log:</b> The balance displays serial number, user ID, weight, date and time, regardless of a printer connection	<b>Stainless steel:</b> The balance is protected against corrosion
<b>Easy Touch:</b> Suitable for the connection, data transmission and control through PC, tablet or smartphone	<b>GLP/ISO log:</b> With weight, date and time. Only with KERN printers	<b>Suspended weighing:</b> Load support with hook on the underside of the balance
<b>Memory:</b> Balance memory capacity, e.g. for article data, weighing data, tare weights, PLU etc.	<b>Piece counting:</b> Reference quantities selectable. Display can be switched from piece to weight	<b>Battery operation:</b> Ready for battery operation. The battery type is specified for each device
<b>Alibi memory:</b> Secure, electronic archiving of weighing results, complying with the 2014/31/EU standard.	<b>GLP/ISO log:</b> With weight, date and time. Only with KERN printers	<b>Rechargeable battery pack:</b> Rechargeable set
<b>Data interface RS-232:</b> To connect the balance to a printer, PC or network	<b>Recipe level A:</b> The weights of the recipe ingredients can be added together and the total weight of the recipe can be printed out	<b>Universal mains adapter:</b> with universal input and optional input socket adapters for A) EU, CH, GB; B) EU, CH, GB, USA; C) EU, CH, GB, USA, AUS
<b>RS-485 data interface:</b> To connect the balance to a printer, PC or other peripherals. Suitable for data transfer over large distances. Network in bus topology is possible	<b>Recipe level B:</b> Internal memory for complete recipes with name and target value of the recipe ingredients. User guidance through display	<b>Mains adapter:</b> 230V/50Hz in standard version for EU, CH. On request GB, USA or AUS version available
<b>USB data interface:</b> To connect the balance to a printer, PC or other peripherals	<b>Recipe level C:</b> Internal memory for complete recipes with name and target value of the recipe ingredients. User guidance through display, multiplier function, adjustment of recipe when dosages are exceeded or barcode recognition	<b>Power supply:</b> Integrated in balance. 230V/50Hz standard EU. More standards e.g. GB, USA or AUS on request
<b>Bluetooth* data interface:</b> To transfer data from the balance to a printer, PC or other peripherals	<b>Totalising level A:</b> The weights of similar items can be added together and the total can be printed out	<b>Weighing principle: Strain gauges</b> Electrical resistor on an elastic deforming body
<b>WLAN data interface:</b> To transfer data from the balance to a printer, PC or other peripherals	<b>Percentage determination:</b> Determining the deviation in % from the target value (100 %)	<b>Weighing principle: Tuning fork</b> A resonating body is electromagnetically excited, causing it to oscillate
<b>Control outputs (optocoupler, digital I/O):</b> To connect relays, signal lamps, valves, etc.	<b>Weighing units:</b> Can be switched to e.g. nonmetric units at the touch of a key. See balance model. Please refer to KERN's website for more details	<b>Weighing principle: Electromagnetic force compensation</b> Coil inside a permanent magnet. For the most accurate weighings
<b>Analogue interface:</b> to connect a suitable peripheral device for analogue processing of the measurements	<b>Weighing with tolerance range:</b> (Checkweighing) Upper and lower limiting can be programmed individually, e.g. for sorting and dosing. The process is supported by an audible or visual signal, see the relevant model	<b>Weighing principle: Single cell technology:</b> Advanced version of the force compensation principle with the highest level of precision
<b>Interface for second balance:</b> For direct connection of a second balance	<b>Hold function:</b> (Animal weighing program) When the weighing conditions are unstable, a stable weight is calculated as an average value	<b>Verification possible:</b> The time required for verification is specified in the pictogram
<b>Network interface:</b> For connecting the scale to an Ethernet network		<b>DAKkS calibration possible:</b> The time required for DAKkS calibration is shown in days in the pictogram
<b>Wireless data transfer:</b> between the weighing unit and the evaluation unit using an integrated radio module		<b>Package shipment:</b> The time required for internal shipping preparations is shown in days in the pictogram
		<b>Pallet shipment:</b> The time required for internal shipping preparations is shown in days in the pictogram

\*The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by KERN & SOHN GmbH is under license. Other trademarks and trade names are those of their respective owners.

## KERN – Precision is our business

To ensure the high precision of your balance KERN offers you the the appropriate test weight in the international OIML error limit classes E1-M3 from 1 mg - 2500 kg. In combination with a DAKkS calibration certificate the best pre-requisite for proper balance calibration.

The KERN DAKkS calibration laboratory today is one of the most modern and best-equipped DAKkS calibration laboratories for balances, test weights and force-measurement in Europe.

Thanks to the high level of automation, we can carry out DAKkS calibration of balances, test weights and force-measuring devices 24 hours a day, 7 days a week.

### Range of services:

- DAKkS calibration of balances with a maximum load of up to 50 t
- DAKkS calibration of weights in the range of 1 mg - 2500 kg
- Volume determination and measuring of magnetic susceptibility (magnetic characteristics) for test weights
- Database supported management of checking equipment and reminder service
- Calibration of force-measuring devices
- DAKkS calibration certificates in the following languages DE, GB, FR, IT, ES, NL, PL
- Conformity evaluation and reverification of balances and test weights

## Your KERN specialist dealer: