

Precision balances KERN PNS · PNJ



STANDARD



EasyTouch



The new standard in the laboratory with robust tuning fork weighing system, also with EC type approval [M]

### Features

- KERN PNS: Adjusting program CAL for quick setting of the balance accuracy using an external test weight at an additional price, see *test weights*
- KERN PNJ: Automatic internal adjustment, guarantees high degree of accuracy and makes the balance independent of its location of use Ideal for mobile applications which require verification, such as ambulatory gold and jewellery purchasing
- High-quality tuning fork measuring system for steady weight values and continuous weighing
- Capacity display: A bargraph display lights up to show how much of the weighing range is still available
- Precise counting: The automatic reference weight optimisation of reference weight gradually improves the average piece weight value
- Compact size, practical for small spaces
- Large, shock proof weighing plate made of stainless steel

- **A** Large glass draught shield with 3 sliding doors for easy access to the items being weighed, for models with weighing plate size  $\varnothing$  140 mm, Weighing space W×D×H 172×171×160 mm
- Protective working cover included with delivery

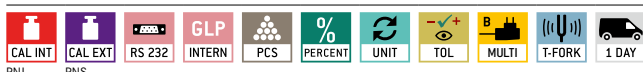
### Technical data

- Large LCD display, digit height 16,5 mm
- Dimensions weighing surface, stainless steel  
**A**  $\varnothing$  140 mm  
**B** W×D 190×190 mm, see larger picture
- Overall dimensions W×D×H, without draught shield  
**A** 196×293×266 mm, **B** 196×293×89 mm
- Net weight  
**A** approx. 4,2 kg, **B** approx. 3,6 kg
- Permissible ambient temperature 5 °C/40 °C

### Accessories

- Protective working cover, scope of delivery 5 items, KERN PNJ-A01S05
- RS-232/Bluetooth adapter to connect to Bluetooth capable devices, such as Bluetooth printers, tablets, laptops, smartphones, etc., KERN YKI-02
- RS-232/WiFi adapter for wireless connection to networks and WiFi capable devices, such as tablets, laptops or smartphones, KERN YKI-03
- RS-232/Ethernet adapter for connection to an IP-based Ethernet network, KERN YKI-01
- **B** Gemstones plate, aluminium with practical spout, W×D×H 130×80×30 mm, KERN AEJ-A05
- Minimum weight of sample, smallest weight to be weighed, depending on the required process accuracy, only in combination with a DAkkS calibration certificate, KERN 969-103
- Equipment qualification: compliant qualification concept which includes the following validation services, Installation Qualification (IQ), Operating Qualification (OQ)

STANDARD



OPTION



FACTORY



Model	Weighing capacity [Max]	Readability [d]	Verification value [e]	Minimal load [Min]	Linearity	Weighing plate	Option	
							Verification	DAkkS Calibr. Certificate
<b>KERN</b>	g	g	g	g	g		<b>M</b>	<b>DAkkS</b>
<b>PNS 600-3</b>	620	0,001	-	-	± 0,004	<b>A</b>	-	963-103
<b>PNS 3000-2</b>	3200	0,01	-	-	± 0,02	<b>B</b>	-	963-127
<b>PNS 12000-1</b>	12000	0,1	-	-	± 0,2	<b>B</b>	-	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.								
<b>PNJ 600-3M</b>	620	0,001	0,01	0,02	± 0,004	<b>A</b>	965-216	963-103
<b>PNJ 3000-2M</b>	3200	0,01	0,1	0,5	± 0,02	<b>B</b>	965-216	963-127
<b>PNJ 12000-1M</b>	12000	0,1	1	5	± 0,2	<b>B</b>	965-217	963-128

- 
**Internal adjusting:**  
 Quick setting up of the balance's accuracy with internal adjusting weight (motordriven)
- 
**Adjusting program CAL:**  
 For quick setting up of the balance's accuracy. External adjusting weight required
- 
**Easy Touch:**  
 Suitable for the connection, data transmission and control through PC or tablet.
- 
**Memory:**  
 Balance memory capacity, e.g. for article data, weighing data, tare weights, PLU etc.
- 
**Alibi memory:**  
 Secure, electronic archiving of weighing results, complying with the 2014/31/EU standard.
- 
**KERN Universal Port (KUP):**  
 allows the connection of external KUP interface adapters, e.g. RS-232, RS-485, SB, Bluetooth, WLAN, Analogue, Ethernet etc. for the exchange of data and control commands, without installation effort
- 
**Data interface RS-232:**  
 To connect the balance to a printer, PC or network
- 
**RS-485 data interface:**  
 To connect the balance to a printer, PC or other peripherals. Suitable for data transfer over large distances. Network in bus topology is possible
- 
**USB data interface:**  
 To connect the balance to a printer, PC or other peripherals
- 
**Bluetooth\* data interface:**  
 To transfer data from the balance to a printer, PC or other peripherals
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**WiFi data interface:**  
 To transfer data from the balance to a printer, PC or other peripherals
- 
**Control outputs (optocoupler, digital I/O):**  
 To connect relays, signal lamps, valves, etc.
- 
**Analogue interface:**  
 to connect a suitable peripheral device for analogue processing of the measurements
- 
**Interface for second balance:**  
 For direct connection of a second balance
- 
**Network interface:**  
 For connecting the scale to an Ethernet network
- 
**KERN Communication Protocol (KCP):**  
 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
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**GLP/ISO log:**  
 The balance displays weight, date and time, independent of a printer connection
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**GLP/ISO log:**  
 With weight, date and time. Only with KERN printers.
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**Piece counting:**  
 Reference quantities selectable. Display can be switched from piece to weight
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**Recipe level A:**  
 The weights of the recipe ingredients can be added together and the total weight of the recipe can be printed out
- 
**Recipe level B:**  
 Internal memory for complete recipes with name and target value of the recipe ingredients. User guidance through display
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**Totalising level A:**  
 The weights of similar items can be added together and the total can be printed out
- 
**Percentage determination:**  
 Determining the deviation in % from the target value (100 %)
- 
**Weighing units:**  
 Can be switched to e.g. nonmetric units. See balance model. Please refer to KERN's website for more details
- 
**Weighing with tolerance range:**  
 (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
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**Hold function:**  
 (Animal weighing program) When the weighing conditions are unstable, a stable weight is calculated as an average value
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**Protection against dust and water splashes IPxx:**  
 The type of protection is shown in the pictogram.
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**Suspended weighing:**  
 Load support with hook on the underside of the balance
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**Battery operation:**  
 Ready for battery operation. The battery type is specified for each device
- 
**Rechargeable battery pack:**  
 Rechargeable set
- 
**Universal plug-in power supply:**  
 with universal input and optional input socket adapters for  
 A) EU, CH, GB  
 B) EU, CH, GB, USA  
 C) EU, CH, GB, USA, AUS
- 
**Plug-in power supply:**  
 230V/50Hz in standard version for EU, CH. On request GB, USA or AUS version available
- 
**Integrated power supply unit:**  
 Integrated in balance. 230V/50Hz standard EU. More standards e.g. GB, USA or AUS on request
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**Weighing principle: Strain gauges**  
 Electrical resistor on an elastic deforming body
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**Weighing principle: Tuning fork**  
 A resonating body is electromagnetically excited, causing it to oscillate
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**Weighing principle: Electromagnetic force compensation**  
 Coil inside a permanent magnet. For the most accurate weighings
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**Weighing principle: Single cell technology:**  
 Advanced version of the force compensation principle with the highest level of precision
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**Verification possible:**  
 The time required for verification is specified in the pictogram
- 
**DAkkS calibration possible (DKD):**  
 The time required for DAkkS calibration is shown in days in the pictogram
- 
**Factory calibration (ISO):**  
 The time required for Factory calibration is shown in days in the pictogram
- 
**Package shipment:**  
 The time required for internal shipping preparations is shown in days in the pictogram
- 
**Pallet shipment:**  
 The time required for internal shipping preparations is shown in days in the pictogram

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