

Precision Balances KERN PNS · PNJ



The new standard in the laboratory with robust tuning fork weighing system, also with optional verification

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 applications which require verification, such as gold and jewellery purchasing
- High-quality tuning fork weighing system for rapid display of the weight, very precise dispensing and a high level of mechanical robustness
- 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 **A**, Weighing space W×D×H 172×171×160 mm
- Protective working cover included with delivery

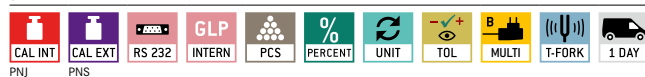
Technical data

- Large LCD display, digit height 16,5 mm
- Dimensions weighing surface, stainless steel
 - A** \varnothing 140 mm
 - B** W×D 190×190 mm
- Overall dimensions W×D×H
 - A** 196×293×266 mm
 - B** 196×293×89 mm
- Permissible ambient temperature 5 °C/40 °C

Accessories

- Protective working cover, scope of delivery 5 items, KERN PNJ-A01S05
- **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), for details see page 230
- Further details, plenty of further accessories and suitable printers see *Accessories*

STANDARD



OPTION



FACTORY

Model	Weighing capacity [Max]	Readability [d]	Verification value [e]	Minimal load [Min]	Linearity	Weighing plate	Net weight kg	Options	
								Verification M II KERN	DAkkS Calibr. Certificate DAkkS KERN
KERN PNS 600-3	620	0,001	-	-	± 0,004	A	2,2	-	963-103
PNS 3000-2	3200	0,01	-	-	± 0,02	B	2,8	-	963-127
PNS 12000-1	12000	0,1	-	-	± 0,2	B	2,8	-	963-128
Note: For devices that require verification (conformity assessment according to NAWI 2014/31/EU), please include the verification when placing your order. The initial verification is not possible after delivery. Please inform the full address of the location of use for the initial verification.									
PNJ 600-3M	620	0,001	0,01	0,02	± 0,004	A	4,2	965-216	963-103
PNJ 3000-2M	3200	0,01	0,1	0,5	± 0,02	B	3,6	965-216	963-127
PNJ 12000-1M	12000	0,1	1	5	± 0,2	B	3,8	965-217	963-128

CAL INT
Internal adjusting
 Quick setting up of the balance's accuracy with internal adjusting weight (motordriven)

CAL EXT
Adjusting program CAL
 For quick setting up of the balance's accuracy. External adjusting weight required

ET
EasyTouch
 Suitable for the connection, data transmission and control through PC or tablet

MEMORY
Memory
 Balance memory capacity, e.g. for article data, weighing data, tare weights, PLU etc.

ALIBI
Alibi memory
 Secure, electronic archiving of weighing results, complying with the 2014/31/EU standard.

KUP
KERN Universal Port (KUP)
 allows the connection of external KUP interface adapters, e.g. RS-232, RS-485, SB, Bluetooth, WIFI, Analogue, Ethernet etc. for the exchange of data and control commands, without installation effort

RS 232
RS-232 Data interface
 To connect the balance to a printer, PC or network

RS 485
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
USB Data interface
 To connect the balance to a printer, PC or other peripherals

BT
Bluetooth* Data interface
 To transfer data from the balance to a printer, PC or other peripherals

WIFI
WIFI Data interface
 To transfer data from the balance to a printer, PC or other peripherals

SWITCH
Control outputs
 (optocoupler, digital I/O)
 To connect relays, signal lamps, valves, etc.

ANALOG
Analogue interface
 to connect a suitable peripheral device for analogue processing of the measurements

DUAL
Interface for second balance
 For direct connection of a second balance

LAN
Network interface
 For connecting the scale to an Ethernet network

KCP PROTOCOL
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

GLP INTERN
GLP/ISO log intern
 The balance displays weight, date and time, independent of a printer connection

GLP PRINTER
GLP/ISO log Printer
 With weight, date and time. Only with KERN printers.

PCS
Piece counting
 Reference quantities selectable. Display can be switched from piece to weight

RECIPE A
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 B
Recipe level B
 Internal memory for complete recipes with name and target value of the recipe ingredients. User guidance through display

SUM A
Totalising level A
 The weights of similar items can be added together and the total can be printed out

PERCENT
Percentage determination
 Determining the deviation in % from the target value (100 %)

UNIT
Weighing units
 Can be switched to e.g. nonmetric units. See balance model. Please refer to KERN's website for more details

TOL
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

MOVE
Hold function
 (Animal weighing program)
 When the weighing conditions are unstable, a stable weight is calculated as an average value

IP
Protection against dust and water splashes IPxx
 The type of protection is shown in the pictogram

UNDER
Suspended weighing
 Load support with hook on the underside of the balance

BATT
Battery operation
 Ready for battery operation. The battery type is specified for each device

ACCU
Rechargeable battery pack
 Rechargeable set

MULTI
Universal plug-in power supply
 with universal input and optional input socket adapters for
 A) EU, CH, GB
 B) EU, CH, GB, US
 C) EU, CH, GB, US, AUS

230 V
Plug-in power supply
 230V/50Hz in standard version for EU, CH. On request GB, USA or AUS version available

230 V
Integrated power supply unit
 Integrated in balance. 230V/50Hz standard EU. More standards e.g. GB, USA or AUS on request

DMS
Weighing principle Strain gauges
 Electrical resistor on an elastic deforming body

T-FORK
Weighing principle Tuning fork
 A resonating body is electromagnetically excited, causing it to oscillate

FORCE
Weighing principle Electromagnetic force compensation
 Coil inside a permanent magnet. For the most accurate weighings

SC TECH
Weighing principle Single cell technology
 Advanced version of the force compensation principle with the highest level of precision

M +3 DAYS
Conformity Assessment
 The time required for conformity assessment is specified in the pictogram

DAkkS +3 DAYS
DAkkS calibration possible (DKD)
 The time required for DAkkS calibration is shown in days in the pictogram

ISO +4 DAYS
Factory calibration (ISO)
 The time required for Factory calibration is shown in days in the pictogram

1 DAY
Package shipment
 The time required for internal shipping preparations is shown in days in the pictogram

2 DAYS
Pallet shipment
 The time required for internal shipping preparations is shown in days in the pictogram

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