## **KERN BALANCES & TEST SERVICES CATALOGUE 2019**

# KERN

## Precision balances KERN PLS · PLJ



Range of precision balances with enormous weighing capacities - ideal for heavy tare containers or large samples

## Features

- KERN PLJ 2000-3A: High-quality milligram balance with enormous weighing capacity up to 2100 g – ideal for large samples or heavy tare containers
- Ergonomically optimised keypad for left and righthanded users
- KERN PLJ: 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
- KERN PLS: **Adjusting program CAL** for quick setting of the balance accuracy, external test weights at an additional price, see *Test weights*
- **Draught shield** standard for models with weighing plate size **I**, weighing space  $\emptyset \times H$  60×150 mm
- Protective working cover included with delivery

STANDARD										OPTION	FACTORY		
	• 6553. •	GLP		A	%	-√+ ⊙ ?)	Ē	ВЩ		N S		DAkkS	Μ
CAL INT CAL EXT	RS 232	PRINTER	PCS	RECIPE	PERCENT	TOL	UNDER	MULTI	DMS	FORCE	1 DAY	+3 DAYS	+3 DAYS
PLI PLS							2		4	0			PLI-M







## **Technical data**

- Backlit LCD display, digit height 17 mm
- Dimensions weighing surface, stainless steel
  ▲ Ø 80 mm
- 🖪 Ø 110 mm
- Ø 160 mm, see larger picture
- W×D 200×175 mm
- II KERN PLS/PLJ-F: Strain gauge
- EXERN PLS/PLJ-A: Force compensation
- Permissible ambient temperature KERN PLS, PLJ: 5 °C/35 °C KERN PLJ-M: 15 °C/30 °C

### Accessories

- **Protective working cover**, scope of delivery: 5 items, KERN PLJ-A01S05
- B Hook for underfloor weighing, KERN PLJ-A02
- Set for density determination of liquids and solids with density ≤/≥ 1 for models with [d] = 0,001 g, KERN ALT-A02
   [d] = 0,01 g, KERN PLT-A01
- **RS-232/Ethernet adapter** for connection to an IP-based Ethernet network, KERN YKI-01
- FACTORY Further details, plenty of further accessories and suitable printers see *Accessories*

Model	Weighing	Readability	Verification	Minimal	Linearity	Weighing	Quality		Option			
	capacity		value	load		plate	code		Verification		DAkkS Calibr. Certificate	
	[Max]	[d]	[e]	[Min]					MU		DAkkS	
KERN	g	g	g	g	g		ĹITY		KERN		KERN	
PLS 420-3F	420	0,001	-	-	± 0,004	В	BA		-		963-127	
PLS 720-3A	720	0,001	-	-	± 0,002	В	BC		-		963-127	
PLS 1200-3A	1200	0,001	-	-	± 0,003	В	BC		-		963-127	
PLS 4200-2F	4200	0,01	-	-	± 0,04	C	BA		-		963-127	
PLS 6200-2A	6200	0,01	-	-	± 0,03	C	BC		-		963-128	
PLS 8000-2A	8200	0,01	-	-	± 0,04	С	BC		-		963-128	
PLS 20000-1F	20000	0,1	-	-	± 0,4	D	BA		-		963-128	
PLJ 420-3F	420	0,001	-	-	± 0,003	В	BA		-		963-127	
PLJ 720-3A	720	0,001	-	-	± 0,002	В	CC		-		963-127	
PLJ 1200-3A	1200	0,001	-	-	± 0,003	В	CC		-		963-127	
PLJ 2000-3A	2100	0,001	-	-	± 0,004	A	CC		-		963-127	
PLJ 3000-2FM*	3100	0,01	-	-	± 0,03	С	BA		-		963-127	
PLJ 4200-2F	4200	0,01	-	-	± 0,04	С	BA		-		963-127	
PLJ 6200-2A	6200	0,01	-	-	± 0,03	С	CC		-		963-128	
Note	: For applica	tions that re	quire verifica	tion, please	order verific	ati on at the	same time, i	nitial verificat	ion at a later	date is	not possible.	
Verification at the factory, we need to know the full address of the location of use.												
PLJ 720-3AM	720	0,001	0,01	0,02	± 0,002	В	CC		965-216		963-127	
PLJ 6200-2AM	6200	0,01	0,1	0,5	± 0,03	С	CC		965-217		963-128	

\* ONLY WHILE STOCKS LAST!

# **KERN BALANCES & TEST SERVICES CATALOGUE 2019**

PROTOCOL



Protection against dust and water splashes IPxx:

The type of protection is shown in the pictogram.

## Pictograms

#### Internal adjusting:

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

#### Adjusting program CAL:

For quick setting up of the balance's accuracy. External adjusting weight required



CAL EXT

#### Easy Touch:

Suitable for the connection, data transmission and control through PC, tablet or smartphone Memory:

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

Alibi memory: Secure, electronic archiving of weighing results,

#### ALIBI

complying with the 2014/31/EU standard.



• 6534 •

## 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 RS 485 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



## WLAN 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.

ANALOG

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

For direct connection of a second balance

Interface for second balance:



Analogue interface:

Network interface: For connecting the scale to an Ethernet network



LAN

#### Wireless data transfer:

between the weighing unit and the evaluation unit using an integrated radio module

\*The Bluetooth<sup>®</sup> 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 bestequipped 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



PCS

GLP/ISO log:

The balance displays serial number, user ID, weight, date and time, regardless of a printer connection

**KERN Communication Protocol (KCP):** 

It is a standardized interface command set for

KERN balances and other instruments, which

parameters and functions of the device. KERN

allows retrieving and controlling all relevant

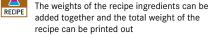


With weight, date and time. Only with KERN PRINTER printers

## Piece counting:

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

#### Recipe level A: **Å**^



### Recipe level B:

Internal memory for complete recipes with name and target value of the recipe ingredients. User guidance through display

> name and target value of the recipe ingredients. User guidance through display, multiplier

function, adjustment of recipe when dosages

#### **Recipe level C:** Internal memory for complete recipes with



# are exceeded or barcode recognition Totalising level A:

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

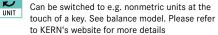


TOL

Percentage determination:

Determining the deviation in % from the target value (100 %)

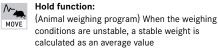
#### Weighing units: C



#### Weighing with tolerance range: ○ 3)

(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

#### Hold function:



devices featuring KCP are thus easily integrated ΙΝΟΧ with computers, industrial controllers and other Suspended weighing: Load support with hook on the underside of the

666

IP

balance

The balance is protected against corrosion

#### **Battery operation:**

Stainless steel:

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



Rechargeable battery pack: Rechargeable set



Universal mains adapter:

C) EU, CH, GB, USA, AUS

MULTI

with universal input and optional input socket adapters for A) EU, CH; B) EU, CH, GB, USA;



230V/50Hz in standard version for EU. On 230 V request GB, USA or AUS version available

#### Power supply:



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



#### Weighing principle: Strain gauges Electrical resistor on an elastic deforming body



s T

#### Weighing principle: Tuning fork: A resonating body is electromagnetically

excited, causing it to oscillate

## Weighing principle: Electromagnetic force

Weighing principle: Single cell technology:

The time required for verification is specified in

The time required for DAkkS calibration is

The time required for internal shipping

The time required for internal shipping

preparations is shown in days in the pictogram

preparations is shown in days in the pictogram

Advanced version of the force compensation

compensation FORCE Coil inside a permanent magnet. For the most accurate weighings

Verification possible:

Package shipment:

Pallet shipment:

the pictogram

SC TECH

## principle with the highest level of precision

DAkkS calibration possible:

shown in days in the pictogram

Μ +3 DAYS

DAkkS

+3 DAYS

1 DAY

2 DAYS

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