BALANCES & TEST SERVICE 2023

ANALYTICAL BALANCES

Analytical balances KERN ABS-N · ABJ-NM · ACS · ACJ



KERN ACS/ACJ with standard data interface RS-232 and USB data interface

The bestseller in analytical balances, with high-quality single-cell weighing system, also with EC type approval [M]

Features

- KERN ABJ-NM, ACJ: Automatic internal adjustment in the case of a change in temperature ≥ 2 °C or timecontrolled every 4 h, guarantees high degree of accuracy and makes the balance independent of its location of use
- KERN ABS-N, ACS: Adjusting program CAL for quick setting of the balance accuracy using an external test weight at an additional price, see *test weights*
- Dosage aid: High stability mode and other filter settings can be selected
- Simple recipe weighing and documenting with a combined tare/print function. In addition, the ingredients for the recipe are numbered automatically and printed out with their corresponding number and nominal weight
- Automatic data output to the PC/printer each time the balance is steady
- Identification number: 4 digits, printed on calibration protocol freely programmable
- Protective working cover included with delivery

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Technical data

- Large LCD display, digit height 14 mm
- Dimensions weighing surface, stainless
- steel, Ø 91 mm • Weighing space W×D×H 174×162×227 mm
- Overall dimensions (incl. draught shield)
 W×D×H 213×333×338 mm
- Net weight approx. 6 kg
- Permissible ambient temperature 10 °C/30 °C



Accessories

- Protective working cover, scope of delivery 5 items, KERN ACS-A02S05
- Set for density determination of liquids and solids with density ≤/≥ 1, the density is indicated directly on the display, KERN YDB-03
- Iniser to neutralise electrostatic charge, KERN YBI-01A
- KERN ABS-N/ABJ-NM: Data interface RS-232, interface cable included, approx. 1,5 m, KERN ACS-A01
- I Weighing table to absorb vibrations and oscillations, which would otherwise distort the weighing result, KERN YPS-03
- 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)





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	540700%	
	← GLP		0/ 0	-√+ B <u>⊥</u>			FACTORY	
CAL INT CAL EXT RS 232					SC TECH 1 DAY	RS 232 +3 DAYS	H +3 DAYS	
ABJ-NM/ ABS-N/ ACS/ACJ ACI ACS		rcs Recire	PERCENT		SCIECH I DAT	ABS-N/ ABJ-NM	ACJ	
Model	Weighing	Readability	Verification	Minimal load	Reproduci-	Linearity		Option
Woder	capacity	Readability	value	Willinnan load	bility	Linearity	Verification	DAkkS Calibr. Certificate
	[Max]	[d]	[e]	[Min]	Sincy		MD	DAkkS
KERN	g	mg	mg	mg	mg	mg	KERN	KERN
ABS 80-4N	82	0,1		-	0,2	± 0,3	-	963-101
ABS 120-4N	120	0,1	_	_	0,2	± 0,3	_	963-101
ABS 220-4N	220	0,1	-	-	0,2	± 0,3	-	963-101
ABS 320-4N	320	0,1	-	-	0,2	± 0,3	-	963-101
					· · · · ·	· · · · · · · · · · · · · · · · · · ·		
ACS 80-4	82	0,1	-	-	0,2	± 0,3	-	963-101
ACS 100-4	120	0,1	-	-	0,2	± 0,3	-	963-101
ACS 200-4	220	0,1	-	-	0,2	± 0,3	-	963-101
ACS 300-4	320	0,1	-	-	0,2	± 0,3	-	963-101
ABJ 80-4NM	82	0,1	-	-	0,2	± 0,3	-	963-101
ABJ 120-4NM	120	0,1	-	-	0,2	± 0,3	-	963-101
ABJ 220-4NM	220	0,1	-	-	0,2	± 0,3	-	963-101
ABJ 320-4NM	320	0,1	-	-	0,2	± 0,3	-	963-101
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.								
ACJ 80-4M	82	0,1	1	10	0,2	± 0,3	965-201	963-101
ACJ 100-4M	120	0,1	1	10	0,2	± 0,3	965-201	963-101
ACJ 200-4M	220	0,1	1	10	0,2	± 0,3	965-201	963-101
ACJ 300-4M	320	0,1	1	10	0,2	± 0,3	965-201	963-101



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KERN PICTOGRAMS





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.



• 888. •

RS 232

• 1998. •

RS 485

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



To connect the balance to a printer, PC or other peripherals. Suitable for data transfer over large distances. Network in bus topology is possible

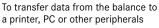
USB data interface:

To connect the balance to a printer, PC or other peripherals



USB

Bluetooth* data interface:





0^0

SWITCH

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

license. Other trademarks and trade names are those of their respective owner

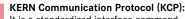
mLab



KCP

Network interface: For connecting the scale to an

Ethernet network



It is a standardized interface command PROTOCOL 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





PRINTER

The balance displays weight, date and time, independent of a printer connection

GLP/ISO log:

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



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

Recipe level A:

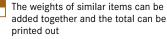
The weights of the recipe ingredients RECIPE can be added together and the total weight of the recipe can be printed out



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



Totalising level A:



Determining the deviation in % from

Percentage determination:

the target value (100 %)

%

B

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

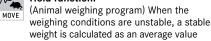


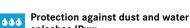
*The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by KERN & SOHN GmbH is under

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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

Hold function: M--





splashes IPxx: The type of protection is shown in the pictogram.

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

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



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



Weighing principle: Tuning fork A resonating body is electromagnetically excited, causing it to oscillate



Weighing principle: Electromagnetic force compensation

Coil inside a permanent magnet. For the most accurate weighings



Weighing principle: Single cell technology:

Advanced version of the force compensation principle with the highest level of precision



Verification possible: The time required for verification is +3 DAYS specified in the pictogram



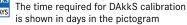
DAkkS calibration possible (DKD):

The time required for internal shipping prepa-

The time required for internal shipping prepa-

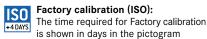
rations is shown in days in the pictogram

rations is shown in days in the pictogram



Package shipment:

Pallet shipment:



1 DAY

2 DAYS

() +33(0)3 20 55 19 11 () +32(0)16 73 55 72