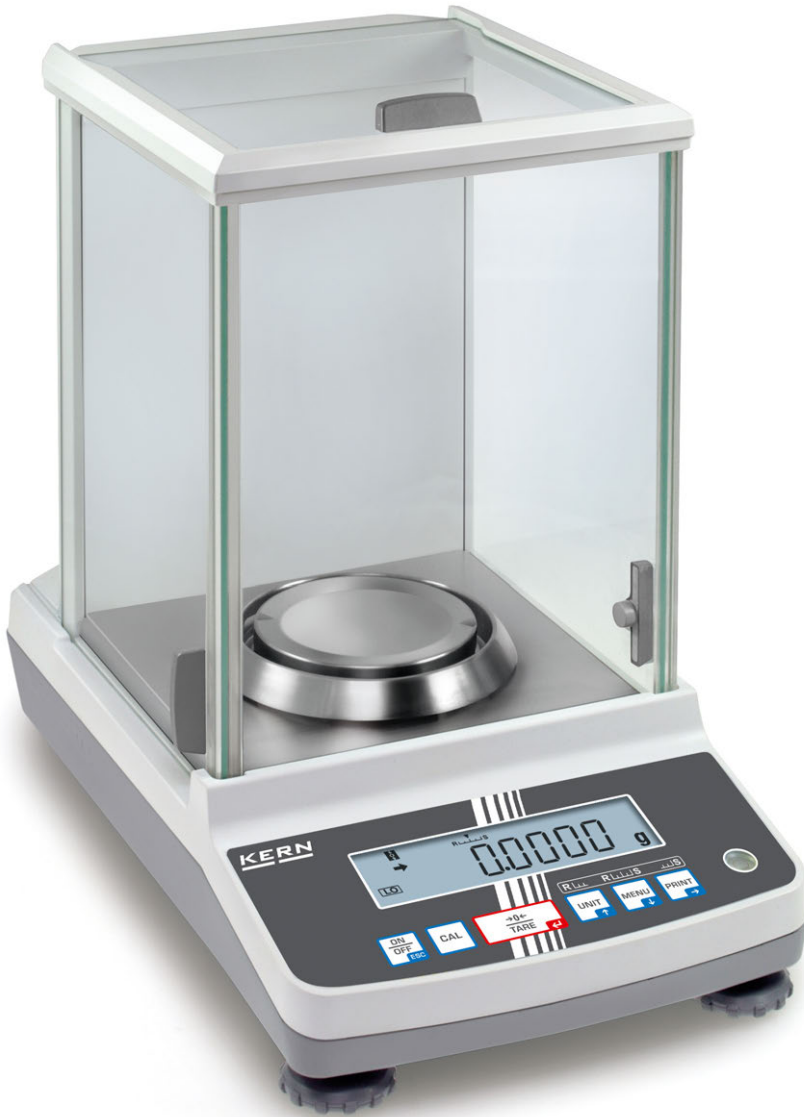


Analytical balance KERN ABS-N · ABJ-NM · ACS · ACJ



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

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

Features

- **ABJ-NM: Automatic internal adjustment** in the case of a change in temperature $\geq 2\text{ }^{\circ}\text{C}$ or timecontrolled every 4 h, guarantees high degree of accuracy and makes the balance independent of its location of use
- **ABS-N: Adjusting program CAL** for quick setting of the balance accuracy using an external test weight
- **ACS** identical to ABS-N, **ACJ** identical to KERN ABJ-NM, but with RS-232 and USB data interface integrated as standard
- **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
- ABJ-NM, ACJ have OIML certification
- **Protective working cover** included with delivery

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



Technical data

- Large LCD display, digit height 14 mm
- Dimensions weighing surface, stainless steel, \varnothing 91 mm
- Overall dimensions (incl. draught shield) W×D×H 210×340×325 mm
- Weighing space W×D×H 174×162×227 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
- **1 Set for density determination** of liquids and solids with density \leq/\geq 1, the density is indicated directly on the display, KERN YDB-03
- **2 Ionizer** 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
- **3 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
- Further details, plenty of further accessories and suitable printers see *Accessories*



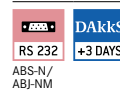
Single-cell advanced technology:

- **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



FACTORY



Model	Weighing capacity [Max] g	Readability [d] mg	Verification value [e] mg	Minimal load [Min] mg	Reproducibility mg	Linearity mg	Option			
							Verification	DAkkS Calibr. Certificate		
KERN							MT		DAkkS	
							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	
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.										
ABJ 80-4NM	82	0,1	1	10	0,2	± 0,3	965-201		963-101	
ABJ 120-4NM	120	0,1	1	10	0,2	± 0,3	965-201		963-101	
ABJ 220-4NM	220	0,1	1	10	0,2	± 0,3	965-201		963-101	
ABJ 320-4NM	320	0,1	1	10	0,2	± 0,3	965-201		963-101	
ACS 80-4	NEW 82	0,1	-	-	0,2	+/- 0,3	-		963-101	
ACS 100-4	NEW 120	0,1	-	-	0,2	+/- 0,3	-		963-101	
ACS 200-4	NEW 220	0,1	-	-	0,2	+/- 0,3	-		963-101	
ACS 300-4	NEW 320	0,1	-	-	0,2	+/- 0,3	-		963-101	
ACJ 80-4M	NEW 82	0,1	1	10	0,2	+/- 0,3	965-201		963-101	
ACJ 100-4M	NEW 120	0,1	1	10	0,2	+/- 0,3	965-201		963-101	
ACJ 200-4M	NEW 220	0,1	1	10	0,2	+/- 0,3	965-201		963-101	
ACJ 300-4M	NEW 320	0,1	1	10	0,2	+/- 0,3	965-201		963-101	

NEW New model

Pictograms

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

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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: