


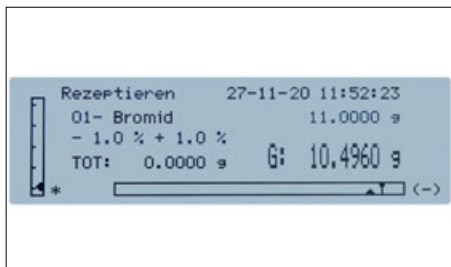
Analytical balances KERN ALS-A · ALJ-A



**KERN ALJ 200-5DA** with optional ionisor , see Accessories. High-precision semi-microbalance. Thanks to its precision, this model is suitable to calibrate pipettes.

Tip: To avoid evaporation, we recommend affordable capillary tubes. (cf. standard 8655)

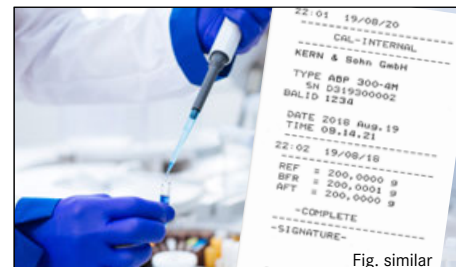
Analytical balance with high weighing capacity, graphic display and convenient recipe function – now also available as single-range semi-microbalance with incredibly high resolution



Convenient recipe-weighing: with the recipe database, in which up to 99 recipes can be stored, each with up to 20 recipe ingredients with name and target value



Clear printout with date and time. In addition, the components of the mixture are numbered automatically and printed out with the name and weight



- GLP/ISO record keeping professional, detailed GLP Protocol, so that the balance is completely compliant with the relevant standard requirements in accordance with ISO, GLP and GMP

Analytical balances KERN ALS-A · ALJ-A



**Features**

- NEW: KERN ALJ 210-5A ! Semi-micro model with only one weighing range and incredibly high resolution. Ideal when weighing heavy loads over the entire weighing range with the finest readability. Particularly advantageous: an ioniser for neutralising electrostatic charge is already fitted as standard
- Rapid and efficient operation thanks to the graphics display. Simple, clear user interface on the display in the following languages: DE, EN, FR, IT, ES, PT
- KERN ALJ-A03: Ionizer to neutralise electrostatic charge for fixed installation in the analytical balance. Particularly convenient handling as you no longer need a separate device. Simply enable the ionizer fan at the push of a button. Suitable for all models, see *Accessories* on the right. Already fitted as standard in the KERN ALJ 210-5A model Adjusting program CAL for quick setting of the balance accuracy using an external *test weight*
- Short stabilisation time: steady weight values within approx. 4 s (models with [d] = 0,1 mg), 6 | 10 s (models with [d] = 0,01 | 0,1 mg) under laboratory conditions
- Weighing with tolerance range (checkweighing): Input of an upper/lower limit value. A visual signal assists with portioning, dispensing or grading
- Dosage aid: high stability mode and other filter settings can be selected

- Internal memory for complete recipes with name and target value of the recipe ingredients. User guidance through Display.
- Ergonomically optimised keypad for left and righthanded users
- Large glass draught shield with 3 sliding doors for easy access to the items being weighed.
- Compact size, practical for small spaces
- Protective working cover included with delivery

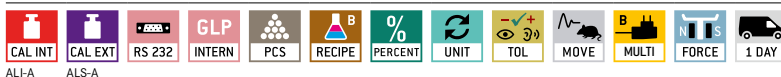
**Technical data**

- Backlit LCD display, digit height 15 mm
- Dimensions weighing surface, stainless steel, Ø 80 mm
- Overall dimensions (incl. draught shield) W×D×H 210×340×330 mm
- Weighing space W×D×H 160×140×205 mm
- Net weight 7 kg
- Permissible ambient temperature 5 °C/35 °C

**Accessories**

- Protective working cover, scope of delivery: 5 items, KERN ALJ-A01S05
- Protective dust cover, KERN ABS-A08
- **1** Draft shield rear panel with integrated ionizer to neutralise electrostatic charge. Is fitted in place of the existing glass rear panel of the draft shield. Suitable for all models in the range, please order at the time you order your balance (not necessary with model ALJ 210-5A, as it is already installed as standard), the scope of delivery is the rear panel, ionizer, Universal plug-in power supply. Factory Option, KERN ALJ-A03
- **2** Set for density determination of liquids and solids with density ≤/≥ 1, the density is indicated directly on the display, KERN YDB-03
- **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
- Equipment qualification: compliant qualification concept which includes the following validation services: Installation Qualification (IQ), Operating Qualification (OQ), Further details see 208
- Further details, plenty of further accessories and suitable printers see *Accessories*

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	
							MD KERN		DAkkS KERN	
ALS 160-4A	160	0,1	-	-	0,1	± 0,3	-	-	963-101	
ALS 250-4A	250	0,1	-	-	0,1	± 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.

ALJ 210-5A <b>NEW</b>	210	0,01	-	-	0,05	± 0,1	-	-	963-101	
ALJ 200-5DA	82   220	0,01   0,1	-	-	0,04   0,1	± 0,1   0,2	-	-	963-101	
ALJ 160-4A	160	0,1	-	-	0,1	± 0,3	-	-	963-101	
ALJ 160-4AM	160	0,1	1	10	0,2	± 0,3	965-201	-	963-101	
ALJ 250-4A	250	0,1	-	-	0,1	± 0,3	-	-	963-101	
ALJ 250-4AM	250	0,1	1	10	0,2	± 0,3	965-201	-	963-101	
ALJ 310-4A	310	0,1	-	-	0,1	± 0,3	-	-	963-101	
ALJ 500-4A	510	0,1	-	-	0,2	± 0,4	-	-	963-101	

**NEW** New model

## Pictograms

<p><b>Internal adjusting:</b> Quick setting up of the balance's accuracy with internal adjusting weight (motordriven)</p>	<p><b>KERN Communication Protocol (KCP):</b> 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</p>	<p><b>Suspended weighing:</b> Load support with hook on the underside of the balance</p>
<p><b>Adjusting program CAL:</b> For quick setting up of the balance's accuracy. External adjusting weight required</p>	<p><b>GLP/ISO log:</b> The balance displays serial number, user ID, weight, date and time, regardless of a printer connection</p>	<p><b>Battery operation:</b> Ready for battery operation. The battery type is specified for each device</p>
<p><b>Easy Touch:</b> Suitable for the connection, data transmission and control through PC or tablet.</p>	<p><b>GLP/ISO log:</b> With weight, date and time. Only with KERN printers.</p>	<p><b>Rechargeable battery pack:</b> Rechargeable set</p>
<p><b>Memory:</b> Balance memory capacity, e.g. for article data, weighing data, tare weights, PLU etc.</p>	<p><b>Piece counting:</b> Reference quantities selectable. Display can be switched from piece to weight</p>	<p><b>Universal plug-in power supply:</b> with universal input and optional input socket adapters for A) EU, CH, GB; B) EU, CH, GB, USA; C) EU, CH, GB, USA, AUS</p>
<p><b>Alibi memory:</b> Secure, electronic archiving of weighing results, complying with the 2014/31/EU standard.</p>	<p><b>Recipe level A:</b> The weights of the recipe ingredients can be added together and the total weight of the recipe can be printed out</p>	<p><b>Plug-in power supply:</b> 230V/50Hz in standard version for EU, CH. On request GB, USA or AUS version available</p>
<p><b>Data interface RS-232:</b> To connect the balance to a printer, PC or network</p>	<p><b>Recipe level B:</b> Internal memory for complete recipes with name and target value of the recipe ingredients. User guidance through display</p>	<p><b>Integrated power supply unit:</b> Integrated in balance. 230V/50Hz standard EU. More standards e.g. GB, USA or AUS on request</p>
<p><b>RS-485 data interface:</b> To connect the balance to a printer, PC or other peripherals. Suitable for datatransfer over large distances. Network in bus topology is possible</p>	<p><b>Totalising level A:</b> The weights of similar items can be added together and the total can be printed out</p>	<p><b>Weighing principle: Strain gauges:</b> Electrical resistor on an elastic deforming body</p>
<p><b>USB data interface:</b> To connect the balance to a printer, PC or other peripherals</p>	<p><b>Percentage determination:</b> Determining the deviation in % from the target value (100 %)</p>	<p><b>Weighing principle: Tuning fork:</b> A resonating body is electromagnetically excited, causing it to oscillate</p>
<p><b>Bluetooth* data interface:</b> To transfer data from the balance to a printer, PC or other peripherals</p>	<p><b>Weighing units:</b> Can be switched to e.g. nonmetric units. See balance model. Please refer to KERN's website for more details</p>	<p><b>Weighing principle: Electromagnetic force compensation:</b> Coil inside a permanent magnet. For the most accurate weighings</p>
<p><b>WiFi data interface:</b> To transfer data from the balance to a printer, PC or other peripherals</p>	<p><b>Weighing with tolerance range:</b> (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</p>	<p><b>Weighing principle: Single cell technology:</b> Advanced version of the force compensation principle with the highest level of precision</p>
<p><b>Control outputs (optocoupler, digital I/O):</b> To connect relays, signal lamps, valves, etc.</p>	<p><b>Hold function:</b> (Animal weighing program) When the weighing conditions are unstable, a stable weight is calculated as an average value</p>	<p><b>Verification possible:</b> The time required for verification is specified in the pictogram</p>
<p><b>Analogue interface:</b> to connect a suitable peripheral device for analogue processing of the measurements</p>	<p><b>Protection against dust and water splashes IPxx:</b> The type of protection is shown in the pictogram.</p>	<p><b>DAKkS calibration possible (DKD):</b> The time required for DAKkS calibration is shown in days in the pictogram</p>
<p><b>Interface for second balance:</b> For direct connection of a second balance</p>		<p><b>Factory calibration (ISO):</b> The time required for Factory calibration is shown in days in the pictogram</p>
<p><b>Network interface:</b> For connecting the scale to an Ethernet network</p>		<p><b>Package shipment:</b> The time required for internal shipping preparations is shown in days in the pictogram</p>
		<p><b>Pallet shipment:</b> The time required for internal shipping preparations is shown in days in the pictogram</p>

\*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 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 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, EN, FR, IT, ES, NL, PL
- Conformity evaluation and reverification of balances and test weights

## Your KERN specialist dealer: