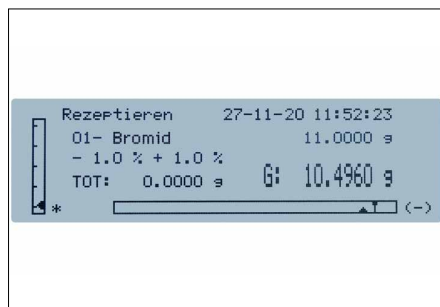


Analytical Balances KERN ALS-A · ALJ-A



KERN ALJ 200-5DA with optional ioniser **1**, see *accessories*. High-precision semi-micro analytical balance. Thanks to its high level of precision, it is ideal for calibrating pipettes
 Note: To prevent evaporation we recommend economical capillary tubes (see standard 8655)

Analytical balances with a large weighing range, graphics display and user-friendly recipe weighing function – also as single-range semi-micro balance with unbelievably high resolution



Convenient recipe-weighing: with the recipe database, 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

- ALJ 210-5A: Semi-micro model with just one weighing range with unbelievably high resolution, ideal where heavy items need to be weighed with the most accurate readout across the entire weighing range. **1** Particularly advantageous: the ioniser KERN ALJ-A03 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: Automatic internal adjustment, guarantees high degree of accuracy and makes the balance independent of its location of use
- KERN ALS: Adjusting program CAL for quick setting of the balance accuracy using an external test weight at an additional price, see *Test Weights*
- Short stabilisation time: steady weight values within approx. 4 s (Models with [d] = 0,1 mg) 10 s; 6 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. Weighing space W×D×H 160×170×225 mm
- Compact size, practical for small spaces
- Protective working cover included with delivery

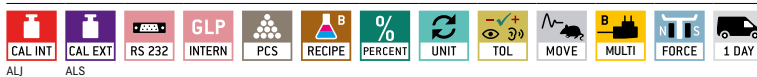
Technical data

- Backlit LCD graphic display, digit height 15 mm
- Dimensions weighing surface, stainless steel, \varnothing 80 mm
- Overall dimensions W×D×H 210×340×330 mm
- Net weight approx. 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** Evaporation trap, minimises faults through evaporation when using pipettes for small volumes of 10 μ l to 10 ml, KERN ALJ-A02
- **2** Draught shield rear panel with integrated ioniser to neutralise electrostatic charge. Particularly convenient handling as you no longer need a separate device. Simply enable the ionizer fan at the push of a button. Is fitted in place of the existing glass rear panel of the draught shield. Please order at the time you order your balance, the scope of delivery is the rear panel, ionizer, Universal plug-in power supply. Factory Option, KERN ALJ-A03
- **3** Set for density determination of liquids and solids with density $\leq/\geq 1$, the density is indicated directly on the display, KERN YDB-03
- Weighing table to absorb vibrations and oscillations, which would otherwise distort the weighing result, KERN YPS-03
- Equipment qualification: compliant qualification concept which includes the following validation services, Installation Qualification (IQ), Operating Qualification (OQ)
- 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	Options	
							Verification M1 KERN	DAKKS Calibr. Certificate DAKKS KERN
KERN								
ALS 160-4A	160	0,1	-	-	0,1	$\pm 0,3$	-	963-101
ALS 250-4A	250	0,1	-	-	0,1	$\pm 0,3$	-	963-101
ALJ 210-5A	210	0,01	-	-	0,05	$\pm 0,1$	-	963-101
ALJ 160-4A	160	0,1	-	-	0,1	$\pm 0,3$	-	963-101
ALJ 250-4A	250	0,1	-	-	0,1	$\pm 0,3$	-	963-101
ALJ 310-4A	310	0,1	-	-	0,1	$\pm 0,3$	-	963-101
ALJ 500-4A	510	0,1	-	-	0,2	$\pm 0,4$	-	963-101

Multi-range balance, with increasing load it switches automatically to the next largest weighing range [Max] and readout [d] and when the load is fully removed, the balance switches back to the lower range

ALJ 200-5DA	82 220	0,01 0,1	-	-	0,04 0,1	$\pm 0,1 0,2$	-	963-101
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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.

ALJ 160-4AM	160	0,1	1	10	0,1	$\pm 0,3$	965-201	963-101
ALJ 250-4AM	250	0,1	1	10	0,1	$\pm 0,3$	965-201	963-101

1 ONLY WHILE STOCKS LAST



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

EasyTouch
 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.

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

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 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

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

Network interface
 For connecting the scale to an Ethernet network

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

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

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

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

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

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

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

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

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

Suspended weighing
 Load support with hook on the 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, US
 C) EU, CH, GB, US, 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

Conformity Assessment
 The time required for conformity assessment is specified in the pictogram

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

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

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

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

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