## Analytical balance KERN ALS-A · ALJ-A



# Precision and price down to a point, with external and internal adjustment

### Features

- I only ALJ-A: Automatic internal adjustment in the case of a change in temperature > 1,5 °C
- I only ALS-A: Adjusting program CAL for quick setting of the balance accuracy, external test weights at an additional price, see page 133
- 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
- **Percentage determination:** makes it possible to store a given weight value (100%) and to determine deviations from this target value

• Weighing with tolerance range, ideal for portion division, dispensing, grading

## Technical data

- Backlit LCDdisplay, digit height 17 mm
- $\bullet$  Dimensions of weighing plate Ø 80 mm
- Overall dimensions (incl. draft shield): 210x340x330 mm
- Weighing space WxDxH 160x140x205 mm
- Net weight approx. 5,7 kg
- Permissible ambient temperature 5 °C / 35 °C





#### Accessories

- Protective working cover, KERN ALJ-A01
- **Ioniser** to neutralise electrostatic charge, see page 132, KERN YBI-01
- Weighing table to absorb vibrations and oscillations, which would otherwise distort the weighing result, see page 132, KERN YPS-01
- Set for density determination of liquids and solids, KERN ALT-A02
- Suitable printers see page 130

| SIANDARD |         |          |                      |     |         |      |     |      | OPTION |              |       |                |         |
|----------|---------|----------|----------------------|-----|---------|------|-----|------|--------|--------------|-------|----------------|---------|
|          |         | • 6884.• | GLP                  |     | %       | C    |     | ^-–  |        | N <b>N</b> S |       | <b>3</b> YEARS | DKD     |
| CAL INT  | CAL EXT | RS 232   | PROTOCOL             | PCS | PERCENT | UNIT | TOL | MOVE | 230 V  | FORCE        | 1 DAY | WARRANTY       | +3 DAYS |
| 1        | 2       |          | only with<br>printer |     |         |      |     |      |        |              |       |                |         |

| Model      | Weighing<br>range | Read-<br>out | Repro-<br>duci- | Linea-<br>rity | Option<br>DKD Calibr. Certificate |
|------------|-------------------|--------------|-----------------|----------------|-----------------------------------|
|            | [Max]             | [d]          | bility          |                | DKD                               |
| KERN       | g                 | mg           | mg              | mg             | 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                           |
|            |                   |              |                 |                |                                   |
| ALJ 160-4A | 160               | 0,1          | 0,1             | ± 0,3          | 963-101                           |
| ALJ 250-4A | 250               | 0,1          | 0,1             | ± 0,3          | 963-101                           |
| ALJ 310-4A | 310               | 0,1          | 0,1             | ± 0,3          | 963-101                           |

# **KERN** Pictograms



balance's accuracy with internal adjusting weight (motordriven). Data interface RS-232: To connect the

Internal adjusting (CAL): Quick setting of the



balance to a printer, PC or network Network interface: For connecting the scale to



an Ethernet network. With KERN products you can also use a universal RS-232/LAN converter.



Net-total weighing: weight of tare cup and weight of components memorized in two separate stores.



Weighing with tolerance range: Upper and lower limiting can be programmed individually, e.g. dosing/sorting and portioning. Stainless steel: the balance is protected against



corrosion.

Rechargeable battery pack: rechargeable set.

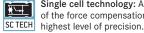


ACCU

Strain gauges: Electrical resistor on an elastic



deforming body.



Single cell technology: Advanced version of the force compensation principle with the



Package shipment: The time required to manufacture the product internally is shown in days in the pictogram.



To ensure the high level of precision of your balance, KERN offers the appropriate test weight package for your balance. This consists of the test weight, box and DKD calibration certificate, as proof of its accuracy. The best way to ensure proper balance calibration.

In the extensive KERN test weight range, you will find test weights in the international OIML error limit classes: E1, E2, F1, F2, M1, M2, and M3 with weights from 1 mg to 2000 kg.

The KERN DKD calibration laboratory for electronic balances and weights has been accredited by DKD since 1994 and today is one of the most modern and best-equipped DKD calibration laboratories for balances, test weights and force-measurement in Europe. (DKD = German Calibration Service ~ UKAS)

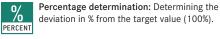
# Your KERN specialist dealer:

Adjusting program (CAL): For quick setting of the balance's accuracy. External adjusting CAL EXT weight required.

Control outputs (optocoupler, \_\_\_\_\_ digital I/O) to connect relays, signal lamps, SWITCH valves, etc.



GLP/ISO record keeping: of weighing data with date, time and identification-no. Only with printers from KERN.



Vibration-free weighing: (Animal weighing Mprogram) Vibrations are filtered out so that MOVE a stable weight is obtained.

Suspended weighing: load support with hook Ē on the underside of the balance. UNDER

Mains adapter: 230V/50Hz in standard version for Germany. On request GB, AUS or 230 V USA version.

Tuning fork principle: A resonating body is  $((\mathbf{U}))$ electromagnetically excited, causing it to T-FORK oscillate.



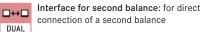
Verification possible: The time required for verification is specified in the pictogram.

#### Pallet shipment:

The time required to manufacture the product DAYS internally is shown in days in the pictogram.



Memory: Balance contains memories, e.g. for item data, weighing data, tare weights etc. PLU





UNIT

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

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

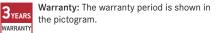
Spray and dust protection IPxx: 666 The type of protection is shown by the IP pictogram. For details see the glossary.

|      | Battery operation:<br>Ready for battery operation.The battery type |
|------|--------------------------------------------------------------------|
| BATT | is specified for each device.                                      |

Power supply: integrated in balance. 230V/50Hz in Germany. 230 V More standards e. g. GB, AUS, USA on request.

Electromagnetic force compensation: Coil in N a permanent magnet. For the most accurate FORCE weighings.

DKD calibration possible: The time required DKD for DKD calibration is shown in days in the +3 DAYS pictogram.



Thanks to the high level of automation, we can carry out DKD calibration of balances, test weights and force-measuring devices 24 hours a day, 7 days a week.

## Range of services:

- DKD calibration of balances with a maximum load of up to 6000 kg
- DKD calibration of weights in the range of 1 mg 500 kg
- Database supported management of checking equipment and reminder service
- Calibration of force-measuring devices
- DKD calibration certificates in the following languages D, GB, F, I, E, NL, PL

Do you have questions about your scale, the corresponsing test weight or the calibration service ? Your KERN specialist dealer will be pleased to assist you.

KERN - Professional measuring. Measuring technology and testing services from a single source









