

Analytical Balances KERN ACS · ACJ

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USB data interfaces and RS-232 for transferring weighing data to the PC, tablet, printer or USB

The bestseller in analytical balances, with high-quality single-cell weighing system, verification optional

Features

- KERN ACJ: Automatic internal adjustment in the case of a change in temperature \geq or timecontrolled every , guarantees high degree of accuracy and makes the balance independent of its location of use
- KERN 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, \varnothing 91 mm
- Weighing space W×D×H 174×162×227 mm
- Overall dimensions W×D×H 213×333×338 mm
- Net weight approx. 7 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** Ioniser to neutralise electrostatic charge, KERN YBI-01A
- **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, plenty of further accessories and suitable printers see *Accessories*



4 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



| Model | Weighing capacity [Max] | Readability [d] | Verification value [e] | Minimal load [Min] | Reproducibility | Linearity | Options | |
|-----------|-------------------------|-----------------|------------------------|--------------------|-----------------|-----------|--------------|---------------------------|
| | | | | | | | Verification | DAkkS Calibr. Certificate |
| KERN | g | mg | mg | mg | mg | mg | KERN | KERN |
| ACS 80-4 | 82 | 0,1 | - | - | 0,2 | $\pm 0,3$ | - | 963-101 |
| ACS 100-4 | 120 | 0,1 | - | - | 0,2 | $\pm 0,3$ | - | 963-101 |
| ACS 200-4 | 220 | 0,1 | - | - | 0,2 | $\pm 0,3$ | - | 963-101 |
| ACS 300-4 | 320 | 0,1 | - | - | 0,2 | $\pm 0,3$ | - | 963-101 |

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.

| | | | | | | | | |
|------------|-----|-----|---|----|-----|-----------|---------|---------|
| ACJ 80-4M | 82 | 0,1 | 1 | 10 | 0,2 | $\pm 0,3$ | 965-201 | 963-101 |
| ACJ 100-4M | 120 | 0,1 | 1 | 10 | 0,2 | $\pm 0,3$ | 965-201 | 963-101 |
| ACJ 200-4M | 220 | 0,1 | 1 | 10 | 0,2 | $\pm 0,3$ | 965-201 | 963-101 |
| ACJ 300-4M | 320 | 0,1 | 1 | 10 | 0,2 | $\pm 0,3$ | 965-201 | 963-101 |

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

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