

Analytical Balances KERN ACS · ACJ



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

### Analytical Balances KERN ACS · ACJ



#### 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	Verification MID KERN	DAkkS 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

**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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