Compact laboratory balance KERN 440



The classic balance in the laboratory

Features

- 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
- **Ring-shaped draught shield** standard, only for models with weighing plate size **I**, weighing space Ø×H 90×40 mm

Technical data

- Backlit LCD display, digit height 15 mm
- Dimensions weighing surface
 - A Ø 81 mm
 - B Ø 105 mm
 - C W×D 130×130 mm
- W×D 150×170 mm, see larger pictureWeighing plate material
 - plastic, with conductive lacquer
 , O, O stainless steel
- Optional battery operation, 9 V block not included, operating time up to 12 h, AUTO-OFF function to preserve the battery
- Overall dimensions W×D×H 165×230×80 mm
- Net weight approx. 0,95 kg
- Permissible ambient temperature 5 °C/35 °C







Accessories

- Protective working cover, can be re-ordered, standard, scope of delivery: 5 items, for models with weighing plate size
 KERN 440-210-002S05
 KERN 440-330-002S05
 KERN 440-450-002S05
 KERN 440-530-002S05
- Rechargeable battery pack internal, operating time up to 20 h without backlight, charging time approx. 10 h, KERN FCB-A01
- Individual header data: the free software SHM-01 can be used to print 4 header lines on the printout when using printers 911-013, YKN-01, YKB-01N, YKE-01 and YKC-01 (in combination with YKI-02)
- Hook for underfloor weighing, optional, KERN 440-A01
- **RS-232/Ethernet adapter** for connection to an IP-based Ethernet network, KERN YKI-01
- Further details, plenty of further accessories and suitable printers see *Accessories*

| STANDARD | | | | | OPTION | |
|------------------------|------------|--------|---------------|-------|--------|------------------|
| CAL EXT RS 232 PRINTER | PCS RECIPE | /0 💌 🗎 | MOVE UNDER BA | 1 DAY | ACCU | DAkkS +3 days |

| Model | Weighing range | Readout | Reproducibility | Linearity | Weighing plate | Option |
|---------|----------------|---------|-----------------|-----------|----------------|---------------------------|
| | | | | | | DAkkS Calibr. Certificate |
| | [Max] | [d] | | | | DKD |
| KERN | g | g | g | g | | KERN |
| 440-21A | 60 | 0,001 | 0,001 | ± 0,003 | A | 963-127 |
| 440-33N | 200 | 0,01 | 0,01 | ± 0,02 | В | 963-127 |
| 440-35N | 400 | 0,01 | 0,01 | ± 0,03 | В | 963-127 |
| 440-35A | 600 | 0,01 | 0,01 | ± 0,03 | В | 963-127 |
| 440-43N | 400 | 0,1 | 0,1 | ± 0,2 | C | 963-127 |
| 440-45N | 1000 | 0,1 | 0,1 | ± 0,2 | C | 963-127 |
| 440-47N | 2000 | 0,1 | 0,1 | ± 0,2 | C | 963-127 |
| 440-49N | 4000 | 0,1 | 0,1 | ± 0,3 | D | 963-127 |
| 440-49A | 6000 | 0,1 | 0,1 | ± 0,3 | D | 963-128 |
| 440-51N | 4000 | 1 | 1 | ± 2 | D | 963-127 |
| 440-53N | 6000 | 1 | 1 | ± 2 | D | 963-128 |

KERN Pictograms:



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.



Memory: Balance memory capacity, e.g. for article data, weighing data, tare weights, PLU etc.



Alibi memory: Electronic archiving of weighing results, complying with the 2014/31/EU standard.



Data interface RS-232: 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. High tolerance against electromagnetic disturbance.



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.



WLAN 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.



Interface for second balance: For direct connection of a second balance.



Network interface: For connecting the scale



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



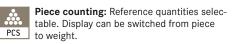
Wireless data transfer: between the weighing unit and the evaluation unit using an integrated radio module.



GLP/ISO log: The balance displays the weight, date and time, regardless of a printer connection.



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



Recipe level A: Separate memory for the weight of the tare container and the recipe RECIPE ingredients (net total).



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



Recipe level C: Internal memory for complete recipes with name and target value of the recipe ingredients. User guidance through display, multiplier function, adjustment of recipe when dosages are exceeded or barcode recognition.



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

Weighing units: Can be switched to e.g. non-

metric units at the touch of a key. See balance

Weighing with tolerance range: Upper and

lower limiting values can be programmed indivi-

dually for e.g. dosing, sorting and portioning.

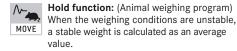
model. Please refer to KERN's website for

Percentage determination: Determining <u>70</u> the deviation in % from the target value PERCENT (100 %).

more details.

S UNIT





a stable weight is calculated as an average value. Protection against dust and water splashes **666** IPxx: The type of protection is shown in the IP



ATEX explosion protection: Suitable for use in hazardous industrial environments, in which there is explosion danger. The ATEX marking is specified for each device.

Stainless steel: The balance is protected against corrosion.



Suspended weighing: Load support with hook on the underside of the balance.

Battery operation: Ready for battery operation. The battery type is specified BATT for each device.

KERN – Precision is our business

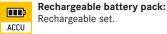
To ensure the high precision of your balance KERN offers you the the appropriate test weight in the international OIML error limit classes E1-M3 from 1 mg - 2500 kg. In combination with a DAkkS calibration certificate the best pre-requisite for proper balance calibration.

The KERN DAkkS calibration laboratory today is one of the most modern and best-equipped DAkkS calibration laboratories for balances, test weights and forcemeasurement 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, GB, FR, IT, ES, NL, PL · Conformity evaluation and reverification of balances and test weights
 - SOHN GmbH is under license. Other trademarks and trade names are those of their respective owner



Universal mains adapter: with universal input and optional input socket adapters for MULTI A) EU, GB B) EU, GB, CH, USA C) EU, GB, CH, USA, AUS

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



Power supply: Integrated in balance. 230V/50Hz standard EU. More standards e.g. GB, USA or AUS on request.



Weighing principle: Strain gauge 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.

<u>آ</u>بوا SC TECH



Verification possible:

The time required for verification is specified +3 DAYS in the pictogram.



DAkkS calibration possible (DKD): The time required for DAkkS 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.



Warranty: The warranty period is shown in the pictogram.

Your KERN specialist dealer:



INOX

pictogram.