KERN BALANCES & TEST SERVICES CATALOGUE 2019

KERN

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
- Protective working cover included with delivery

Technical data

- Backlit LCD display, digit height 15 mm
- Dimensions weighing surface
- A Ø 81 mm
- 🖪 Ø 105 mm
- C W×D 130×130 mm
- W×D 150×170 mm, see larger picture
- Weighing plate material
- Overall dimensions (without draught shield)
 W×D×H 165×230×80 mm
- Optional battery operation, 9 V block not included, operating time up to 20 h, AUTO-OFF function to preserve the battery
- Net weight approx. 0,95 kg
- Permissible ambient temperature 5 °C/35 °C





Accessories

- Protective working cover, scope of delivery: 5 items, for models with weighing plate size
 KERN 440-210-002S05
 KERN 440-330-002S05
 - C KERN 440-450-002S05
 - KERN 440-530-002S05
- Internal rechargable battery pack, operating time up to 20 h without backlight, charging time approx. 10 h, KERN FCB-A01
- Hook for underfloor weighing, KERN 440-A01
- RS-232/Ethernet adapter for connection to an IP-based Ethernet network, KERN YKI-01
- 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)
- Further details, plenty of further accessories and suitable printers see *Accessories*

STANDARD					OPTION	
CAL EXT RS 232 PRINTER	PCS RECIPE		BATT MULTI	DMS 1 DAY	ACCU	DAkkS +3 DAYS

Model	Weighing capacity	Readability	Reproducibility	Linearity	Weighing plate	Option
						DAkkS Calibr. Certificate
	[Max]	[d]				DAkkS
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

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Internal adjusting:

Quick setting up of the balance's accuracy with CAL INT internal adjusting weight (motordriven)

Adjusting program CAL:

For quick setting up of the balance's accuracy. External adjusting weight required



CAL EXT

Easy Touch:

Suitable for the connection, data transmission and control through PC, tablet or smartphone Memory:

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

Alibi memory: Secure, electronic archiving of weighing results,

complying with the 2014/31/EU standard.



Data interface RS-232:

• 6550 • To connect the balance to a printer, PC or RS 232 network

RS-485 data interface:

• 6534 • To connect the balance to a printer, PC or other RS 485 peripherals. Suitable for data transfer over large distances. Network in bus topology is possible



USB data interface:

Bluetooth* data interface:

To connect the balance to a printer, PC or other peripherals

₿ BT

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.

Analogue interface:

to connect a suitable peripheral device for analogue processing of the measurements



ANALOG

For direct connection of a second balance

Interface for second balance:



Network interface: For connecting the scale to an Ethernet network



Wireless data transfer:

between the weighing unit and the evaluation unit using an integrated radio module

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KERN – Precision is our business

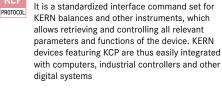
To ensure the high precision of your balance KERN offers you the the appropriate test weight in the international OIML error limit classes E1-M3 from 1 mg - 2500 kg. In combination with a DAkkS calibration certificate the best pre-requisite for proper balance calibration.

The KERN DAkkS calibration laboratory today is one of the most modern and bestequipped DAkkS calibration laboratories for balances, test weights and force-measurement 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.

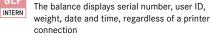
Range of services:

- · 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



KERN Communication Protocol (KCP):

GLP/ISO log:

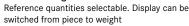




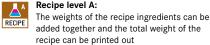
With weight, date and time. Only with KERN PRINTER printers

Piece counting:

PCS



Recipe level A:



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



User guidance through display, multiplier function, adjustment of recipe when dosages are exceeded or barcode recognition

name and target value of the recipe ingredients.

Totalising level A:

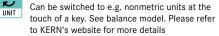
The weights of similar items can be added SUM together and the total can be printed out



Percentage determination:

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

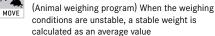
Weighing units: C

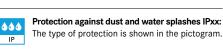


Weighing with tolerance range: ⊙ ີ 🤊 ୬ TOL

(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

M--Hold function:





KERN

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 BATT specified for each device



INOX

Rechargeable battery pack: Rechargeable set



Universal mains adapter:

with universal input and optional input socket adapters for A) EU, CH; B) EU, CH, GB, USA; C) EU, CH, GB, USA, AUS

Mains adapter:

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



Power supply: Integrated in balance. 230V/50Hz standard EU.

DMS

Weighing principle: Strain gauges Electrical resistor on an elastic deforming body

More standards e.g. GB, USA or AUS on request



Weighing principle: Tuning fork: A resonating body is electromagnetically

excited, causing it to oscillate

Weighing principle: Electromagnetic force

Weighing principle: Single cell technology:

Advanced version of the force compensation

principle with the highest level of precision

The time required for DAkkS calibration is

The time required for internal shipping

The time required for internal shipping

preparations is shown in days in the pictogram

preparations is shown in days in the pictogram

compensation FORCE Coil inside a permanent magnet. For the most accurate weighings

SC TECH

s T

Verification possible:

DAkkS calibration possible:

shown in days in the pictogram

Μ +3 DAYS

DAkkS

+3 DAYS

1 DAY

2 DAYS

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Gamle Drammensvei 107

Your KERN specialist dealer:

The time required for verification is specified in the pictogram

Package shipment:

Pallet shipment: