## KERN BALANCES \& TEST SERVICES CATALOGUE 2019

## Parcel scale KERN DE-D



The long lasting story of success with dust and spray protected display device



## Features

- High mobility: thanks to battery operation/ rechargeable battery operation (optional), compact, lightweight construction, it is suitable for the use in several locations (production, warehouse, dispatch department etc.)
- Display device flexible positioning, e.g. free-standing or mounted to the wall
- 1 Display device: plastic, protection against dust and water splashes IP65
- Weighing plate stainless steel, painted steel base
- PRE-TARE function for manual subtraction of a known container weight, useful for checking fill-levels
- With the recipe function you can weigh the different ingredients of a mixture. As a check, you can also call up the total weight of all the ingredients
- Freely programmable weighing unit, e.g. display direct in special units such as length of thread $\mathrm{g} / \mathrm{m}$, paper weight $\mathrm{g} / \mathrm{m}^{2}$, or similar

- Protective working cover included with delivery


## Technical data

- Large backlit LCD display, digit height 25 mm
- Weighing plate dimensions, stainless steel $W \times D \times H$
A $318 \times 308 \times 75 \mathrm{~mm}$
B $318 \times 308 \times 88 \mathrm{~mm}$ C. $522 \times 406 \times 98 \mathrm{~mm}$, see larger picture D $522 \times 403 \times 83 \mathrm{~mm}$ E $650 \times 500 \times 89 \mathrm{~mm}$
- Dimensions of display device, $W \times \mathrm{D} \times \mathrm{H}$ $225 \times 110 \times 45 \mathrm{~mm}$
- Optional battery operation, 9 V block not included, operating time up to 12 h
- Permissible ambient temperature $5^{\circ} \mathrm{C} / 35^{\circ} \mathrm{C}$



## Accessories

- Protective working cover over the display device, scope of delivery: 5 items, KERN DE-A12S05


## - Rechargeable battery pack internal,

operating time up to 30 h without backlight, charging time approx. 10 h , KERN NDE-A02

- Mount to fasten the display device to the platform, KERN DE-A11N
- Wall mount for display device, KERN DE-A13
- 2 Stand to elevate display device, height of stand approx. 480 mm , KERN DE-A10
- Individual header data: the free software SHM-01 can be used to print header lines on the printout when using printers YKN-01 and YKB-01N
- Further details, plenty of further accessories and suitable printers see Accessories


| Model <br> KERN | Weighing capacity [Max] kg | Readability <br> [d] <br> g | Reproducibility g | Linearity <br> g | Smallest part weight [Normal] g/piece | Cable length approx. m | Net weight approx. kg | $\begin{aligned} & \text { Weighing } \\ & \text { plate } \end{aligned}$ | Option |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  | DAkkS KERN |  |
| Dual-range balance switches automatically to the next largest weighing capacity [Max] and readibility [d] |  |  |  |  |  |  |  |  |  |  |
| DE 6K1D | 3\|6 | 1\|2 | 1\|2 | $\pm 3$ \| 6 | 40 | - | 4,8 | A | 963-128 |  |
| DE 15K2D | 6\|15 | $2 \mid 5$ | $2 \mid 5$ | $\pm 6 \mid 15$ | 100 | - | 4,8 | A | 963-128 |  |
| DE 35K5D | 15\|35 | 5 \| 10 | 5 \| 10 | $\pm 15 \mid 30$ | 100 | - | 4,8 | A | 963-128 |  |
| DE 35K5DL | 15 \| 35 | 5\|10 | 5\|10 | $\pm 15$ \| 30 | 100 | - | 16 | C | 963-128 |  |
| DE 60K10D | $30 \mid 60$ | 10\|20 | 10\|20 | $\pm 30 \mid 60$ | 200 | - | 4,8 | A | 963-129 |  |
| DE 60K10DL | $30 \mid 60$ | 10\|20 | 10 \| 20 | $\pm 30 \mid 60$ | 200 | - | 16 | C | 963-129 |  |
| DE 150K20D | 60 \| 150 | 20 \| 50 | 20 \| 50 | $\pm 60 \mid 150$ | 400 | - | 5,0 | A | 963-129 |  |
| DE 150K20DL | 60 \| 150 | 20\|50 | 20\|50 | $\pm 60 \mid 150$ | 400 | - | 16 | C | 963-129 |  |
| DE 150K20DXL | 60 \| 150 | 20\|50 | 20\|50 | $\pm 60 \mid 150$ | 400 | - | 28 | E | 963-129 |  |
| DE 300K50D | 150 \| 300 | 50 \| 100 | 50 \| 100 | $\pm 150 \mid 300$ | 2000 | - | 16 | C | 963-129 |  |
| DE 300K50DL | 150 \| 300 | 50 \| 100 | 50\|100 | $\pm 150 \mid 300$ | 2000 | - | 28 | E | 963-129 |  |
|  |  |  |  |  |  |  |  |  |  |  |
| DE 6K0.5A | 6 | 0,5 | 0,5 | $\pm 1,5$ | 10 | - | 4,8 | A | 963-128 |  |
| DE 12K1A | 12 | 1 | 1 | $\pm 3$ | 20 | - | 4,8 | A | 963-128 |  |
| DE 24K2A | 24 | 2 | 2 | $\pm 6$ | 40 | - | 4,8 | A | 963-128 |  |
| DE 60K5A | 60 | 5 | 5 | $\pm 15$ | 100 | - | 4,8 | A | 963-129 |  |
| DE 120K10A | 120 | 10 | 10 | $\pm 30$ | 200 | - | 5,0 | A | 963-129 |  |
| Dual-range balance with high resolution readability |  |  |  |  |  |  |  |  |  |  |
| DE 15K0.2D | 6\|15 | 0,2 \| 0,5 | 0,2 \| 0,5 | $\pm 0,8 \mid 2$ | 4 | - | 4,0 | B | 963-128 |  |
| DE 60K1D | 30\|60 | 1\| 2 | 1\| 2 | $\pm 4 \mid 8$ | 20 | - | 7 | B | 963-129 |  |
| DE 60K1DL | $30 \mid 60$ | 1\|2 | 1\|2 | $\pm 4$ \| 8 | 20 | - | 15 | D | 963-129 |  |
| DE 150K2D | 60 \| 150 | 2\|5 | 2\|5 | $\pm 8 \mid 20$ | 40 | - | 7 | B | 963-129 |  |
| DE 150K2DL | 60 \| 150 | $2 \mid 5$ | 2\|5 | $\pm 8 \mid 20$ | 40 | - | 15 | D | 963-129 |  |
| DE 300K5DL | 150 \| 300 | $5 \mid 10$ | 5\|10 | $\pm 20 \mid 40$ | 100 | - | 15 | D | 963-129 |  |

## 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
Easy Touch:
Suitable for the connection, data transmission
and control through PC, tablet or smartphone

## 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.

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. 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

## 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

Interface for second balance:
For direct connection of a 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
*The Bluetooth ${ }^{\text {® }}$ word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by KERN \& SOHN GmbH is under license. Other trademarks and trade names are those of their respective owners.

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:

The balance displays serial number, user ID, weight, date and time, regardless of a printer connection

GLP/ISO log:
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

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

Percentage determination:
Determining the deviation in \% from the target value ( $100 \%$ )

## 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

## 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.

## 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 for each device

## 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) $\mathrm{EU}, \mathrm{CH}, \mathrm{GB}, \mathrm{USA}, \mathrm{AUS}$

## Mains adapter:

$230 \mathrm{~V} / 50 \mathrm{~Hz}$ in standard version for EU. On
request GB, USA or AUS version available

## Power supply:

Integrated in balance. $230 \mathrm{~V} / 50 \mathrm{~Hz}$ 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

## 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

## 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 $1 \mathrm{mg}-2500 \mathrm{~kg}$. 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 $1 \mathrm{mg}-2500 \mathrm{~kg}$
- 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

