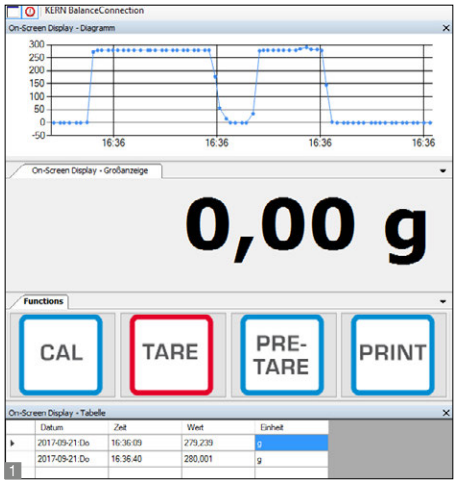
Digital platform KERN KDP



Universal weighing platforms for flexible connection into process chains

Features

- Industry 4.0 process chains: these weighing platforms can be easily integrated into your process chain. All recorded values can be easily transferred and processed further in your system as digital data and data that has already been compared using the many interfaces available. This saves cost, time and resources and ensures even more effective working
- Connecting the balance with a tablet or PC offers the advantage of being able to use the apps and programs which are on that device. These apps and programs are usually already tailored to your needs, are easy and convenient to use and can often be expanded as needed. This offers you the maximum level of flexibility when displaying, processing and saving the recorded weighing data
- **Searching and remote control of the balance** using external control devices or computers with the KERN Communication Protocol (KCP). KCP is a standardised interface command structure for KERN balances and other instruments which allows you to recall and manage all relevant parameters and device functions. You can therefore simply connect KERN devices with KCP to computers, industrial control systems and other digital systems. In a large number of cases the KCP is compatible with the MT-SICS protocol
- **PRE-TARE function** for manual subtraction of a known container weight, useful for checking fill-levels
- **Freely programmable weighing unit**, e.g. display direct in special units such as length of thread g/m, paper weight g/m², or similar
- **Level indicator and levelling feet** for precise levelling of the scale, fitted as standard, to give the most accurate weighing result
- **Draught shield** standard for models with weighing plate size A, weighing space W×D×H 146×146×80 mm
- Included with delivery:
  1 **Software BalanceConnection** for adjusting and managing the KERN KDP, for large-format display of the values collected on the PC as well as transfer of this data to other Apps and programs

Technical Data

- Dimensions weighing surface
  A ⌀ 105 mm
  B WxD 160×160 mm, see larger picture
- Weighing plate material
  A plastic, with conductive lacquer
  B stainless steel
- Overall dimensions W×D×H 165×166×75 mm (without draught shield)
- Cable length approx. 1,2 m
- Net weight approx. 1,2 kg
- Permissible ambient temperature 5 °C / 35 °C

Accessories

- **Bluetooth data interface** for wireless data transfer to PC or tablets, must be ordered at purchase, KERN KDP-A03
- **WiFi interface** for wireless connection of the balance to networks and WiFi capable devices, such as tablets, laptops or smartphones, must be ordered at purchase, please ask for delivery time, KERN KDP-A01

STANDARD: CAL EXT · USB · KCP PROTOCOL · B MULTI · DMS · 1 DAY
OPTION: DAkkS +3 DAYS
FACTORY: BT 4.0 · WLAN

Model KERN	Weighing capacity [Max] g	Read-out [d] g	Reproducibility g	Linearity g	Weighing plate mm		Options DAkkS Calibr. Certificate DAkkS KERN	
KDP 300-3	350	0,001	0,002	± 0,005	A		963-127	
KDP 3000-2	3500	0,01	0,02	± 0,05	B		963-127	
KDP 10K-4	10000	0,1	0,1	± 0,3	B		963-128	
KDP 10K-3	10000	1	1	± 3	B		963-128	

Pictograms

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

CAL EXT
Adjusting program CAL:
For quick setting up of the balance's accuracy. External adjusting weight required

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

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

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

RS 232
Data interface RS-232:
To connect the balance to a printer, PC or network

RS 485
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
USB data interface:
To connect the balance to a printer, PC or other peripherals

BT
Bluetooth* data interface:
To transfer data from the balance to a printer, PC or other peripherals

WLAN
WLAN data interface:
To transfer data from the balance to a printer, PC or other peripherals

SWITCH
Control outputs (optocoupler, digital I/O):
To connect relays, signal lamps, valves, etc.

ANALOG
Analogue interface:
to connect a suitable peripheral device for analogue processing of the measurements

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

LAN
Network interface:
For connecting the scale to an Ethernet network

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

*The *Bluetooth*® 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.

KCP PROTOCOL
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 INTERN
GLP/ISO log:
The balance displays serial number, user ID, weight, date and time, regardless of a printer connection

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

PCS
Piece counting:
Reference quantities selectable. Display can be switched from piece to weight

A RECIPE
Recipe level A:
The weights of the recipe ingredients can be added together and the total weight of the recipe can be printed out

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

C RECIPE
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

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

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

UNIT
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

TOL
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

MOVE
Hold function:
(Animal weighing program) When the weighing conditions are unstable, a stable weight is calculated as an average value

IP
Protection against dust and water splashes IPxx:
The type of protection is shown in the pictogram.

INOX
Stainless steel:
The balance is protected against corrosion

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

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

ACCU
Rechargeable battery pack:
Rechargeable set

A MULTI
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

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

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

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

T-FORK
Weighing principle: Tuning fork:
A resonating body is electromagnetically excited, causing it to oscillate

N S FORCE
Weighing principle: Electromagnetic force compensation
Coil inside a permanent magnet. For the most accurate weighings

SC TECH
Weighing principle: Single cell technology:
Advanced version of the force compensation principle with the highest level of precision

M +3 DAYS
Verification possible:
The time required for verification is specified in the pictogram

DAkkS +3 DAYS
DAkkS calibration possible:
The time required for DAkkS calibration is shown in days in the pictogram

1 DAY
Package shipment:
The time required for internal shipping preparations is shown in days in the pictogram

2 DAYS
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 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 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

Your KERN specialist dealer: