IoT-Line Compact Laboratory Balance KERN PCB

IoT ready
BASIC
Easy Touch

The standard in the laboratory, ideal for a wide range of applications for Industry 4.0

Features

- Compatible with school-specific software solutions such as, for example, Vernier ® or LabQuest ®. Thanks to the KERN School Protocol, as part of technical experiments, weighing data can be transferred to a PC, laptop, etc. for evaluation and display using the USB data interface
- Industry 4.0: The integrated KERN Universal Port (KUP) allows the connection of external KUP interface adapters such as RS-232, USB, Bluetooth, WIFI, Analogue, Ethernet etc. The outstanding advantage here is that the KUP interface adapters are simply plugged in, i.e. retrofitting interfaces is conveniently possible without opening the scale housing or complicated installation. The interface adapters enable convenient transmission of weighing data to networks, PCs, smartphones, tablets, laptops, printers etc. In addition, control commands and data inputs can also be sent to the scale via the connected devices.
  Tip: with the KERN KUP-13 extension box, up to three KUP interface adapters can be operated in parallel on the scale.
- KERN Communication Protocol (KCP):
  The KCP permits searching and remote control of the balance using external control devices or computers
- For further information on KUP and KCP
  see page 20/21
- Standardised, simplified concept of operation
- 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
- Weighing with tolerance range (checkweighing): a visual and audible signal helps with portioning, dispensing or grading
- Freely programmable weighing unit, e.g. display direct in special units such as length of thread g/m, paper weight g/m^2, or similar
- A special Anti-Shock system between the weighing plate and weighing cell reduces vibrations during the weighing process and in this way ensures rapid, reliable weighing results
- A Ring-shaped draught shield standard, only for models with weighing plate size A, weighing space Ø×H 90×40 mm
- Protective working cover included with delivery

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A


B


C

Technical data

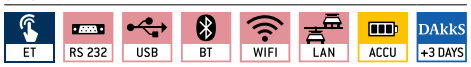
- Backlit LCD display, digit height 21 mm
- Dimensions weighing surface
  - A ⌀ 82 mm
  - B ⌀ 105 mm
  - C W×D 130×130 mm
  - D W×D 150×170 mm, see larger picture
- Weighing plate material
  - A plastic, with conductive lacquer
  - B, C, D stainless steel
- Overall dimensions (without draught shield) W×D×H 163×245×65 mm
- Optional battery operation, 4×1.5 V AA not included in scope of delivery, operating time up to 20 h, AUTO-OFF function to preserve the battery
- Permissible ambient temperature -10 °C/40 °C

Accessories

- Protective working cover, scope of delivery: 5 items, KERN YBA-A12S05
- Internal rechargeable battery pack, operating time up to 48 h without backlight, charging time approx. 8 h, KERN YKR-01
- External data interface RS-232, interface cable included, KERN KUP-01
- External data interface USB, interface cable included, KERN KUP-03
- Interface adapter Ethernet, KERN KUP-04
- Interface adapter WiFi, KERN KUP-05
- Bluetooth interface adapter, KERN KUP-06
- Extension box for connecting up to three interfaces in parallel, KERN KUP-13
- Software BalanceConnection, for flexible recording or transmission of measured values, in particular also to Microsoft® Excel or Access as well as transfer of this data to other Apps and programs, for more details see internet, scope of supplies: 1 CD, 1 license, KERN SCD-4.0
- Further details, plenty of further accessories and suitable printers see *Accessories*

STANDARD

OPTION



Model	Weighing capacity [Max]	Readability [d]	Reproducibility	Linearity	Resolution	Weighing plate	Options DAkkS Calibr. Certificate DAkkS
KERN	g	g	g	g	Points		KERN
PCB 200-3	200	0,001	0,001	± 0,005	200.000	A	963-127
PCB 300-3	360	0,001	0,001	± 0,005	360.000	A	963-127
PCB 300-2	300	0,01	0,01	± 0,02	30.000	B	963-127
PCB 1000-2	1200	0,01	0,01	± 0,03	120.000	C	963-127
PCB 3000-2	3600	0,01	0,01	± 0,05	360.000	C	963-127
PCB 2000-1	2000	0,1	0,1	± 0,2	20.000	C	963-127
PCB 6000-1	6000	0,1	0,1	± 0,3	60.000	D	963-128
PCB 10000-1	10000	0,1	0,1	± 0,3	100.000	D	963-128
PCB 6000-0	6000	1	1	± 2	6.000	D	963-128

BALANCES & TEST SERVICE 2024

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

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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