

IoT-Line Bench scale KERN FKB



High resolution bench scale with large weighing range and robust stainless steel weighing plate

#### Features

- Thanks to the high resolution of up to 360.000 points it is ideal for high-precision weighing in the industrial field
- Robust plastic die-cast housing: maintains the stability, protects the weighing technology elements and is robust enough to cope with everyday use
- PRE-TARE function for manual subtraction of a known container weight, useful for checking fill-levels
- Industry 4.0: The integrated KERN Universal Port (KUP) allows the connection of external KUP interface adapters such as RS-232, USB,

Bluetooth, WLAN, 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 YKUP-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 details see page 8/9
- Freely programmable weighing unit, e.g. display direct in special units such as length of wire g/m, surface weight g/m<sup>2</sup>, or else
- Level indicator and levelling feet for precise levelling of the scale, fitted as standard
  Protective working cover included with delivery

# **BALANCES & TEST SERVICE 2023**

BENCH SCALES



#### IoT-Line Bench scale KERN FKB



#### **Technical data**

- Large backlit LCD display, digit height 25 mm
- Dimensions weighing surface, stainless steel, WxD 340×240 mm
- Overall dimensions W×D×H
   350×390×120 mm
- Optional battery operation,  $4{\times}1.5$  V AA not included in scope of delivery, operating time up to 20 h
- Net weight approx. 7 kg

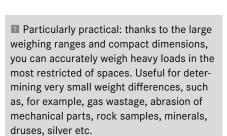
STANDARD

 Permissible ambient temperature -10 °C/40 °C



### Accessories

- Protective working cover, scope of delivery 5 items, KERN FKB-A02S05
- Internal rechargable battery pack, operating time up to 48 h without backlight, charging time approx. 8 h, KERN YKR-01
- External data interface USB, Interface cable included, KERN YKUP-03
- External data interface RS-232, Interface cable included, KERN YKUP-01
- Bluetooth interface adapter, KERN YKUP-06
- WiFi interface adapter, KERN YKUP-05
- External data interface Ethernet, KERN YKUP-04
- Extension-Box, KERN YKUP-13
- Tare pan made from stainless steel, overall dimensions W×D×H, 400×300×45 mm, KERN RFS-A02
- Further details, plenty of further accessories and suitable printers see *Accessories*



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CAL EX	KUP	PROTOCOL	PRINTER	PCS	SUM	PERCENT	UNIT	TOL	MOVE	UNDER	BATT	MULTI	DMS	1 DAY	ET	RS 232	USB	BT 4.0	LAN	WIFI	ACCU	+3 DAYS

Model	Weighing ca- pacity [Max]	Readability [d]	Reproducibility	Linearity	Smallest part weight [Normal]	Resolution	Option DAkkS Calibr. Certificate DAkkS		
KERN	kg	g	g	g	g/piece	Points	KERN		
FKB 6K0.02	6	0,02	0,04	± 0,2	0,2	300.000	963-128		
FKB 8K0.05	8	0,05	0,05	± 0,5	0,5	300.000	963-128		
FKB 8K0.1	8	0,1	0,05	± 0,5	0,5	160.000	963-128		
FKB 15K0.5	15	0,5	0,1	± 0,3	10	320.000	963-128		
FKB 16K0.05	16	0,05	0,1	± 1	0,5	80.000	963-128		
FKB 16K0.1	16	0,1	0,1	± 1	1	160.000	963-128		
FKB 30K1	30	1	0,2	± 2	20	360.000	963-128		
FKB 36K0.1	36	0,1	0,2	± 2	1	180.000	963-128		
FKB 36K0.2	36	0,2	0,5	± 5	2	325.000	963-128		
FKB 65K0.2	65	0,2	1	± 10	2	30.000	963-129		
FKB 65K1	65	1	1	± 10	20	65.000	963-129		

# **BALANCES & TEST SERVICE 2023**

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



# Easy Touch:

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.



• 888. •

RS 232

• 1998. •

RS 485

#### KERN Universal Port (KUP):

allows the connection of external KUP PCS interface adapters, e.g. RS-232, RS-485, SB, Bluetooth, WLAN, Analogue, Ethernet etc. for the exchange of data and control commands, without installation effort

#### Data interface RS-232:

To connect the balance to a printer, PC or network



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

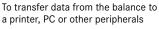
#### USB data interface:

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



USB

# Bluetooth\* data interface:





## WiFi data interface:

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

**Control outputs** \_0^0\_ SWITCH

(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:

license. Other trademarks and trade names are those of their respective owner

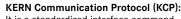
For direct connection of a second balance



KCP

#### Network interface: For connecting the scale to an

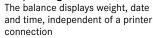
Ethernet network



It is a standardized interface command PROTOCOL 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: GLP

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



PRINTER

Reference quantities selectable. Display can be switched from piece to weight

### Recipe level A:

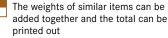
The weights of the recipe ingredients can be added together and the total weight of the recipe can be printed out



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



**Totalising level A:** 



Determining the deviation in % from

Percentage determination:

the target value (100 %)

%

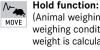
# B

Weighing units: Can be switched to e.g. nonmetric UNIT 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



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#### Protection against dust and water splashes IPxx:

The type of protection is shown in the pictogram.

Suspended weighing: Load support with hook on the UNDER

#### **Battery operation:**

underside of the balance

Ready for battery operation. The battery BATT 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, USA C) EU, CH, GB, USA, AUS

#### Plug-in power supply:

230V/50Hz in standard version for EU, CH. 230 V 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

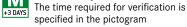


### Weighing principle: Single cell technology:

Advanced version of the force compensation principle with the highest level of precision



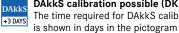
# Verification possible:



Factory calibration (ISO):

Package shipment:

Pallet shipment:



**ISO** 

1 DAY

2 DAYS

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

The time required for Factory calibration

The time required for internal shipping prepa-

The time required for internal shipping prepa-

rations is shown in days in the pictogram

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is shown in days in the pictogram