

School balance KERN EMS



Entry level model in the low-cost range with large weighing plate

Features

- Especially suitable for use in schools and universities, for example for biology, chemistry, physics
- Large, shock proof weighing plate made of plastic
- Particularly flat design
- Ergonomically optimised key pad with large keys and a high-contrast LCD display
- Secure and non-slip positioning with rubber feet
- Adjusting program CAL for quick setting of the balance accuracy, external test weights at an additional price, see *Test weights*
- **A** Draught shield standard for models with weighing plate size **A**, weighing space W×D×H 145×145×65 mm
- Suitable for common school LIMS systems

Technical data

- Large LCD display, digit height 25 mm
- Dimensions weighing surface **A** \varnothing 105 mm, plastic, with conductive lacquer
- **B** W×D 175×190 mm, plastic
- Overall dimensions W×D×H 200×280×63 mm
- Optional battery operation, 9 V block not included in scope of delivery, operating time up to 40 h
- Mains adapter external, standard
- Net weight approx. 1,4 kg
- Permissible ambient temperature 5 °C/35 °C

Accessories

- **B** Stainless steel weighing plate, only for models with weighing plate size **B**, KERN EMS-A01

STANDARD



OPTION



Model	Weighing capacity [Max] g	Readability [d] g	Reproducibility g	Linearity g	Weighing plate	Option DAkkS Calibr. Certificate DAkkS KERN
EMS 300-3	300	0,001	0,002	± 0,005	A	963-127
EMS 3000-2	3000	0,01	0,02	± 0,05	B	963-127
EMS 6K0.1	6000	0,1	0,1	± 0,3	B	963-128
EMS 12K0.1	12000	0,1	0,1	± 0,3	B	963-128
EMS 6K1	6000	1	1	± 3	B	963-128
EMS 12K1	12000	1	1	± 3	B	963-128



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.



KERN Universal Port (KUP):

allows the connection of external KUP 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



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:

The balance displays weight, date and time, independent 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



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, USA

C) EU, CH, GB, USA, 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



Verification possible:

The time required for verification 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



Wolflabs

Wolf Laboratories Limited

www.wolflabs.co.uk

Tel: 01759 301142

Fax: 01759 301143

sales@wolflabs.co.uk



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