### **BALANCES & TEST SERVICE 2023**

PARCEL SCALES/PLATFORM SCALES

### IoT-Line Precision platform scale KERN DS









## Precision industrial scale with laboratory accuracy, ideal for the various possibilities of Industrie 4.0 applications

### Features

STANDARD

- · High-capacity precision balance, ideal for high volume or heavy samples to be weighed with a high degree of accuracy
- · User guidance step by step on display by Yes/No dialogue
- · Numerical subtraction of tare weight for known container weight. Useful for checking fill-levels
- · Precise counting: The automatic reference weight optimisation of reference weight gradually improves the average piece weight value
- 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
- KERN Universal Port (KUP): permits the connection of an external KUP interface adapter, such as, for example, RS-232, USB, Bluetooth or Ethernet, for the exchange of data and control commands, without any installation outlay, for details see page 8/9

- KERN Communication Protocol (KCP): The KCP permits searching and remote control of the balance using external control devices or computers
- Standardised, simplified concept of operation
- · Protective working cover included with delivery

### **Technical data**

- Large backlit LCD display, digit height 21 mm
- Weighing plate dimensions, stainless steel M×D×H 228×228×95 mm
- W×D×H 308×318×75 mm
- W×D×H 500×400×125 mm, see larger picture
- Dimensions of display device W×D×H 225×115×60 mm
- Permissible ambient temperature -10 °C/40 °C

OPTION

### Accessories

- · Protective working cover over the display device, scope of delivery: 5 items, KERN DE-A12S05
- 11 Stand to elevate display device, height of stand approx. 480 mm, for models with weighing plate size **A**, **B**,
- KERN DE-A10 for models with weighing plate size II,
- KERN DS-A03
- Mount to fasten the display device to the platform, for models with weighing plate size B, C, KERN DE-A11N
- Wall mount for display device, KERN DS-A02
- 2 Set for underfloor weighing, consists of platform, bow, hook, only for models with weighing plate 11, KERN DS-A01
- External data interface RS-232, Interface cable included, KERN YKUP-01
- · External data interface USB, Interface cable included, KERN YKUP-03
- Extension-Box, KERN YKUP-13
- Further details, plenty of further accessories and suitable printers see Accessories

	CAL EXT	RUP	KCP PROTOCOL	GLP PRINTER	PCS	SUM			-√+ ⊙ Ͽ୬ TOL		B H	DMS	1 DAY	ET	• 6004 • RS 232	USB	UNDER	DAkkS +3 DAYS
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Model	Weighing capacity [Max]	Readability [d]	Smallest part weight [Normal]	Cable length of display device	Net weight approx.	Resolution	Weighing plate	Option DAkkS Calibr. Certificate DAkkS
KERN	kg	g	g/piece	m	kg	Points		KERN
DS 3K0.01S	3	0,01	0,1	2	4,2	300.000	A	963-127
DS 5K0.05S	5	0,05	0,1	2	4,2	100.000	A	963-127
DS 8K0.05	8	0,05	0,5	2	8	160.000	В	963-128
DS 10K0.1S	10	0,1	1	2	4,2	100.000	A	963-128
DS 16K0.1	16	0,1	1	2	8	160.000	В	963-128
DS 20K0.1	20	0,1	1	2	8	200.000	A	963-128
DS 30K0.1	30	0,1	1	2	8	300.000	В	963-128
DS 30K0.1L	30	0,1	1	0,6	10	300.000	C	963-128
DS 36K0.2	36	0,2	1	0,6	10	180.000	В	963-128
DS 36K0.2L	36	0,2	1	0,6	10	180.000	C	963-128
DS 60K0.2	60	0,2	2	0,6	10	300.000	C	963-129
DS 65K0.5	60	0,2	2	0,6	10	300.000	C	963-129
DS 100K0.5	100	0,5	5	0,6	10	200.000	C	963-129
DS 150K1	150	1	10	0,6	10	150.000	C	963-129

## **BALANCES & TEST SERVICE 2023**

KERN PICTOGRAMS



## Network interface:

Ethernet network



CAL INT

### Adjusting program CAL:

Internal adjusting:

weight (motordriven)

For quick setting up of the balance's accuracy. External adjusting weight required

Quick setting up of the balance's

accuracy with internal adjusting



## 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 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

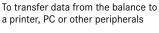
### USB data interface:

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\_ (optocoupler, digital I/O): SWITCH

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



MOVE

The type of protection is shown in the pictogram.





KCP

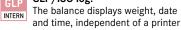
# For connecting the scale to an



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



connection



The balance displays weight, date



PRINTER

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:** Å

Internal memory for complete recipes RECIPE 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 %)

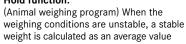
### Weighing units: B

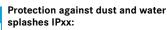
Can be switched to e.g. nonmetric UNIT units. See balance model. Please refer to KERN's website for more details



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: M--



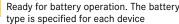


### Suspended weighing: UNDER

BATT

Load support with hook on the underside of the balance

### **Battery operation:**





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



**ISO** 

+4 DAYS

1 DAY

2 DAYS

### DAkkS calibration possible (DKD):

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

rations is shown in days in the pictogram

is shown in days in the pictogram

The time required for DAkkS calibration is shown in days in the pictogram

Factory calibration (ISO):

Package shipment:

Pallet shipment:



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