

Industrial platform scale KERN IOC



Allround platform scale with a wide range of communication options and EC type approval [M] – now also available as high-resolution version with fine display



• Verification plug, for verified balances this enables you to separate the display device and platform without affecting the verification, e.g. for installing the scale in a packing and dispatch table, pit frame etc. at a later date. Please order this at the same time as you purchase your scale, see accessories



Practical Flip/Flop display device: flexible positioning e.g. free-standing or screwed to the wall (optional). By rotating the upper housing shell you can determine the angle of the display as well as the cable outlet.

Conversion of the display device, Factory Option for an additional cost, delivery time + 2 working days, KERN KIB-M01, see Accessories on the right, please indicate when placing your order

## **KERN BALANCES & TEST SERVICES 2022**



## Features

- Industry 4.0: A wide range of (optional) data interfaces allows that it is easy to transfer weighing data to tablets, laptops, PCs, networks, Smartphones, printers, etc.
- High mobility: thanks to rechargeable battery operation (optional), compact, lightweight construction, it is suitable for the use in several locations (laboratory, production, quality control, commissioning etc.)
- Platform: weighing plate stainless steel, painted steel base, silicone-coated aluminium load cell, protection against dust and water splashes IP65
- Level indicator and levelling feet for precise levelling of the scale, fitted as standard, to give the most accurate weighing result
- 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.

## Technical data

- Large LCD display, digit height 25 mm
- Weighing plate dimensions W×D×H
- ▲ 300×240×110 mm
- 300×300×110 mm
- C 400×300×110 mm
- 500×400×120 mm, see larger picture
- 650×500×150 mm ■ 800×600×200 mm
- Dimensions of display device W×D×H
  268×115×80 mm
- Permissible ambient temperature -10  $^{\circ}\text{C}/\text{40}\ ^{\circ}\text{C}$

## Accessories

- Protective working cover, scope of delivery: 5 items, KERN EOC-A01S05
- Stand to elevate display device, height of stand approx. 330 mm, KERN EOC-A05
- Mount to fasten the display device to the platform, can be retrofitted, KERN EOC-A03 Benchtop stand incl. wall mount for display device, KERN EOC-A04
- Internal rechargeable battery pack, operating time up to 26 h with backlight, charging time approx. 3 h, KERN KFB-A01
- USB data interface, for transferring weighing to the PC, printer etc., KERN KIB-A03
- Bluetooth data interface for wireless data transfer to PC or tablets, must be ordered at purchase, not possible in combination with verification, KERN KIB-A04
- WiFi interface for wireless connection of the balance to networks and WiFi capable devices, such as tablets, laptops or smartphones, continuous data transfer, must be ordered at purchase, KERN KIB-A10

- Ethernet data interface, must be ordered at purchase, KERN KIB-A02
- Alibi memory, including USB interface for exporting weighing results to external data storage media, such as, for example, USB sticks, hard drives, etc., KERN KIB-A01
- Signal lamp, including interface, for visual support of weighing with tolerance range, must be ordered at purchase, KERN KIB-A06
- Verification plug, please order this at the same time as you purchase your scale, KERN KIB-A12
- Conversion of the display device, Factory Option, delivery time + 2 working days, KERN KIB-M01
- Note: In addition to the RS 232 data interface integrated as standard, only one further data interface can be fitted and operated

STANDARD	OPTION	FACTORY
Image: Calexit rs 232    KCP    GLP    Image: Calexit rs 232    PROTOCOL    PRINTER    PCS    SUM    PERCENT    TOL    MOVE    IP 65    MULT    DMS    1 DAY    2 DAYS	ET ACCU DAkkS	ALIBI USB BT4.0 WIFI LAN +3 DA
G		

Model	Weighing	Readability	Verification	Minimal load	Weighing plate			Option	
	capacity		value				Verification	DAkkS Calibr. Certificate	
	[Max]	[d]	[e]	[Min]			MU	DAkkS	
KERN	kg	g	g	g			KERN	KERN	
	Dual-ra	nge balance swit	ches automatical	lly to the next lar	gest weighing ca	pacity [Max] a	and readibility [d]		
IOC 6K-4 🔤	3   6	0,1   0,2	-	-	В			963-128	
IOC 10K-4	6   15	0,2   0,5	-	-	А			963-128	
IOC 10K-4L	6   15	0,2   0,5	-	-	C			963-128	
IOC 30K-4 🛛 🔤	15   30	0,5   1	-	-	С			963-128	
IOC 60K-3	30   60	1   2	-	-	С			963-129	
IOC 60K-3L	30   60	1   2	-	-	D			963-129	
IOC 100K-3	60   150	2   5	-	-	D			963-129	
IOC 100K-3L	60   150	2   5	-	-	E			963-129	
IOC 300K-3 🛛 🔤	150   300	5   10	-	-	E			963-129	
IOC 600K-2	300   600	10   20	-	-	F			963-130	
IOC 6K-3M	3   6	1   2	1   2	20   40	В		965-228	963-128	
IOC 10K-3M	6   15	2   5	2   5	40   100	А		965-228	963-128	
IOC 10K-3LM	6   15	2   5	2   5	40   100	С		965-228	963-128	
IOC 30K-3M	15   30	5   10	5   10	100   200	С		965-228	963-128	
IOC 60K-2M	30   60	10   20	10   20	200   400	C		965-229	963-129	
IOC 60K-2LM	30   60	10   20	10   20	200   400	D		965-229	963-129	
IOC 100K-2M	60   150	20   50	20   50	400   1000	D		965-229	963-129	
IOC 100K-2LM	60   150	20   50	20   50	400   1000	E		965-229	963-129	
IOC 300K-2M	150   300	50   100	50   100	1000   2000	E		965-229	963-129	
IOC 600K-1M	300   600	100   200	100   200	2000   4000	F		965-230	963-130	

## **KERN BALANCES & TEST SERVICES 2022**

#### **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: 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.

#### Data interface RS-232:

• 6558.• To connect the balance to a printer, PC or RS 232 network



## **RS-485 data interface:**

To connect the balance to a printer, PC or other peripherals. Suitable for datatransfer 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:

**KERN – Precision is our business** 

For direct connection of a second balance



balance calibration.

ment in Europe

Range of services:

characteristics) for test weights

· Calibration of force-measuring devices

## Network interface:

For connecting the scale to an Ethernet network

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

The KERN DAkkS calibration laboratory today is one of the most modern and bestequipped DAkkS calibration laboratories for balances, test weights and force-measure-

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.

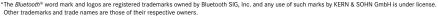
· Volume determination and measuring of magnetic susceptibility (magnetic

· Conformity evaluation and reverification of balances and test weights

· Database supported management of checking equipment and reminder service

· DAkkS calibration certificates in the following languages DE, EN, FR, IT, ES, NL, PL

· 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





KCP

PROTOCOL

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

#### **Piece counting:**

connection

digital systems GLP/ISO log:

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

**KERN Communication Protocol (KCP):** 

It is a standardized interface command set for

KERN balances and other instruments, which

devices featuring KCP are thus easily integrated

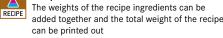
with computers, industrial controllers and other

The balance displays serial number, user ID,

weight, date and time, regardless of a printer

allows retrieving and controlling all relevant parameters and functions of the device. KERN

#### Recipe level A:



#### Recipe level B:

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

#### **Totalising level A:**

Η' The weights of similar items can be added SUM 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 UNIT 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 MOVE conditions are unstable, a stable weight is calculated as an average value



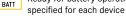
Protection against dust and water splashes IPxx:

The type of protection is shown in the pictogram.

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

#### **Battery operation:**







Ready for battery operation. The battery type is

Rechargeable battery pack: Rechargeable set



### Universal plug-in power supply:

with universal input and optional input socket MULTI 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

1	DMS

## 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:

DAkkS calibration possible (DKD):

is shown in days in the pictogram

Factory calibration (ISO):

Package shipment:

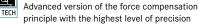
Pallet shipment:

The time required for DAkkS calibration

The time required for Factory calibration

The time required for internal shipping preparations

The time required for internal shipping preparations



#### Verification possible: The time required for verification is specified in the pictogram

М +3 DAYS

DAkkS

+3 DAYS

**ISO** 

+4 DAYS

1 DAY

ò

2 DAYS

Your KERN specialist dealer:



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