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

### Industrial platform scale KERN IFB



## High-resolution industrial scale in heavy version with EC type approval [M], now also up to [Max] 600 kg

### Features

- · Tough industry standard suitable for use in harsh industrial applications
- 11 Platform: weighing plate stainless steel, painted steel base, silicone-coated aluminium load cell, protection against dust and water splashes IP65
- · Benchtop stand incl. wall mount for display device as standard
- · Protective working cover included with delivery

### **Technical data**

- · Large backlit LCD display, digit height 52 mm
- Weighing plate dimensions, stainless steel W×D×H

▲ 230×230×110 mm, ■ 300×240×110 mm ☑ 400×300×128 mm, ☑ 500×400×130 mm 🖪 650×500×142 mm, 🖪 800×600×200 mm Dimensions of display device W×D×H

- 230×230×360 mm
- Cable length of display device approx. 3 m
- Permissible ambient temperature -10 °C/40 °C





### Accessories

- · Protective working cover, scope of delivery: 5 items, KERN KFB-A02S05
- Stand to elevate display device, for models with weighing plate size
  - A-E: Height of stand approx. 330 mm, KERN IFB-A01
- D-E: 2 Height of stand approx. 600 mm, KERN IFB-A02
- A-E: Height of stand approx. 800 mm, Stand to elevate display device Column KERN BFS-A07
- Internal rechargeable battery pack, operating time up to 35 h, without backlight, charging time approx. 12 h, must be ordered at purchase, KERN KFB-A01
- · Bluetooth data interface for wireless data transfer to PC or tablets, must be ordered at purchase, not in combination with verification, KERN KFB-A03
- · Analogue module, must be ordered at purchase, not possible in combination with signal lamp 0-10 V: KERN KFB-A04 4-20 mA: KERN KFB-A05
- · Signal lamp for visual support of weighing with tolerance range, only in combination with, KERN CFS-A03
- · Y-cable for parallel connection of two terminal devices to the RS-232 interface on the scale, e.g. signal lamp and printer, KERN CFS-A04

| STANDARD |                   |                 |                |     |     |                    |      |                     |  |     |       |        | OPTION |                  | FACTORY |        |      |              |
|----------|-------------------|-----------------|----------------|-----|-----|--------------------|------|---------------------|--|-----|-------|--------|--------|------------------|---------|--------|------|--------------|
| CAL EXT  | • 600 •<br>RS 232 | KCP<br>PROTOCOL | GLP<br>PRINTER | PCS | SUM | -√+<br>⊙ Ͽ୬<br>TOL | MOVE | <b>000</b><br>IP 65 |  | DMS | 1 DAY | 2 DAYS | ET     | DAkkS<br>+3 DAYS | BT 2.0  | ANALOG | ACCU | H<br>+3 DAYS |
|          |                   |                 |                |     |     |                    |      | 1                   |  |     |       | E      |        |                  |         |        | 3    | IFB-M        |

| Model         | Weighing Readability |                            | Verification   | Minimal load                    | I Net weight    | Weighing      |                |                 |         | Option            |           |
|---------------|----------------------|----------------------------|----------------|---------------------------------|-----------------|---------------|----------------|-----------------|---------|-------------------|-----------|
|               | capacity             |                            | value          |                                 |                 | plate         |                | Verifica        | tion    | DAkkS Calibr. Cer | rtificate |
|               | [Max]                | [d]                        | [e]            | [Min]                           | approx.         |               |                | MIII            |         | DAkkS             |           |
| KERN          | kg                   | g                          | g              | g                               | kg              |               |                | KERN            |         | KERN              |           |
| IFB 3K-4      | 3                    | 0,1                        | -              | -                               | 4,6             | A             |                | -               | -       | 963-127           |           |
| IFB 6K-4S     | 6                    | 0,2                        | -              | -                               | 4,6             | A             |                | -               | -       | 963-128           |           |
| IFB 6K-4      | 6                    | 0,2                        | -              | -                               | 5               | В             |                | -               | -       | 963-128           |           |
| IFB 10K-4     | 15                   | 0,5                        | -              | -                               | 5               | В             |                | -               | -       | 963-128           |           |
| IFB 10K-4L    | 15                   | 0,5                        | -              | -                               | 8               | C             |                | -               |         | 963-128           |           |
| IFB 30K-3     | 30                   | 1                          | -              | -                               | 8               | C             |                | -               |         | 963-128           |           |
| IFB 60K-3     | 60                   | 2                          | -              | -                               | 8               | C             |                | -               |         | 963-129           |           |
| IFB 60K-3L    | 60                   | 2                          | -              | -                               | 11              | D             |                | -               |         | 963-129           |           |
| IFB 100K-3    | 150                  | 5                          | -              | -                               | 11              | D             |                | -               |         | 963-129           |           |
| IFB 100K-3L   | 150                  | 5                          | -              | -                               | 20              | E             |                | -               |         | 963-129           |           |
| IFB 300K-2    | 300                  | 10                         | -              | -                               | 20              | E             |                | -               |         | 963-129           |           |
| IFB 600K-2    | 600                  | 20                         | -              | -                               | 44              | F             |                | -               |         | 963-130           |           |
|               | Dual                 | -range balance             | e switches aut | omatically to t                 | the next larges | t weighing ca | pacity [Max] a | and readibility | / [d]   |                   |           |
| IFB 6K-3SM    | 3   6                | 1   2                      | 1   2          | 20   40                         | 4,6             | A             |                | 965-228         |         | 963-128           |           |
| IFB 6K1DM     | 3   6                | 1   2                      | 1   2          | 20   40                         | 5               | В             |                | 965-228         |         | 963-128           |           |
| IFB 15K2DM    | 6   15               | 2   5                      | 2   5          | 40   100                        | 5               | В             |                | 965-228         |         | 963-128           |           |
| IFB 15K2DLM   | 6   15               | 2   5                      | 2   5          | 40   100                        | 8               | С             |                | 965-228         |         | 963-128           |           |
| IFB 30K5DM    | 15   30              | 5   10                     | 5   10         | 100   200                       | 8               | С             |                | 965-228         |         | 963-128           |           |
| IFB 60K10DM   | 30   60              | 10   20                    | 10   20        | 200   400                       | 8               | С             |                | 965-229         |         | 963-129           |           |
| IFB 60K10DLM  | 30   60              | 10   20                    | 10   20        | 200   400                       | 11              | D             |                | 965-229         |         | 963-129           |           |
| IFB 150K20DM  | 60   150             | 20   50                    | 20   50        | 400   1000                      | 11              | D             |                | 965-229         |         | 963-129           |           |
| IFB 150K20DLM | 60   150             | 20   50                    | 20   50        | 400   1000                      | 20              | E             |                | 965-229         |         | 963-129           |           |
| IFB 300K50DM  | 150   300            | 50   100                   | 50   100       | 1000   2000                     | 20              | E             |                | 965-229         |         | 963-129           |           |
| IFB 600K-1M   | 300   600            | 100   200                  | 100   200      | 2000   4000                     | 44              | F             |                | 965-230         |         | 963-130           |           |
| Note: F       | or application       | s that require<br>Verifica |                | ease order ver<br>tory, we need |                 |               |                |                 | date is | not possible.     |           |

## **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.

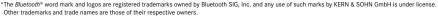
· Volume determination and measuring of magnetic susceptibility (magnetic

· 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

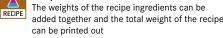
with computers, industrial controllers and other

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



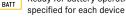
Protection against dust and water splashes IPxx:

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:

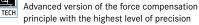
Pallet shipment:

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: