



# 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  $W \times D \times H$
- A 230×230×110 mm, B 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
- 3 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



















































Model   Weighing capacity   Max					1		F		[3]	IFD-IVI		
Max	Model	Weighing	Readability	Verification	Minimal load	Net weight	Weighing		Option			
KERN   Kg   g   g   g   g   kg   KERN   KE		, ,					plate		Verifica	tion	DAkkS Calibr. Ce	ertificate
FB 3K-4			[d]	[e]	[Min]				MIII		DAkkS	
IFB 6K-4S	KERN	kg	g	g	g	kg			KERN		KERN	
IFB 6K-4	IFB 3K-4	3	0,1	-	-	4,6	Α		-	-	963-127	
IFB 10K-4	IFB 6K-4S	6	0,2	-	-	4,6	Α		-	-	963-128	
IFB 10K-4L	IFB 6K-4	6	0,2	-	-	5	В		-	-	963-128	
IFB 30K-3	IFB 10K-4	15	0,5	-	-	5	В		-	-	963-128	
IFB 60K-3	IFB 10K-4L	15	0,5	-	-	8	C		-		963-128	
IFB 60K-3L	IFB 30K-3	30	1	-	-	8	C		-		963-128	
IFB 100K-3	IFB 60K-3	60	2	-	-	8	С		-		963-129	
FB 100K-3L	IFB 60K-3L	60	2	-	-	11	D		-		963-129	
IFB 300K-2	IFB 100K-3	150	5	-	-	11	D		-		963-129	
FB 600K-2	IFB 100K-3L	150	5	-	-	20	E		-		963-129	
Dual-range balance switches automatically to the next largest weighing capacity [Max] and readibility [d]	IFB 300K-2	300	10	-	-	20	E		-		963-129	
IFB 6K-3SM	IFB 600K-2			-	-		_				963-130	
FB 6K1DM		Dua	l-range balanc	e switches aut	tomatically to t	the next larges	st weighing ca	pacity [Max] a	and readibility	y [d]		
IFB 15K2DM         6   15         2   5         2   5         40   100         5         B         965-228         963-128           IFB 15K2DLM         6   15         2   5         2   5         40   100         8         D         965-228         963-128           IFB 30K5DM         15   30         5   10         5   10         100   200         8         D         965-228         963-128           IFB 60K10DM         30   60         10   20         10   20         200   400         8         D         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 6K-3SM	3   6	1   2	1   2	20   40	4,6	Α		965-228		963-128	
IFB 15K2DLM         6   15         2   5         2   5         40   100         8         G         965-228         963-128           IFB 30K5DM         15   30         5   10         5   10         100   200         8         G         965-228         963-128           IFB 60K10DM         30   60         10   20         10   20         200   400         8         G         965-229         963-129           IFB 60K10DLM         30   60         10   20         10   20         20   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 6K1DM	3   6	1   2	1   2	20   40	5	В		965-228		963-128	
IFB 30K5DM         15   30         5   10         5   10         100   200         8         G         965-228         963-128           IFB 60K10DM         30   60         10   20         10   20         200   400         8         G         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 15K2DM	6   15	2   5	2   5	40   100	5	В		965-228		963-128	
IFB 60K10DM         30   60         10   20         10   20         200   400         8         G         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         B         965-229         963-129           IFB 300K50DM         150   300         50   100         50   100         1000   2000         20         B         965-229         963-129	IFB 15K2DLM	6   15	2   5	2   5	40   100	8	C		965-228		963-128	
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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         965-229         963-129           IFB 300K50DM         150   300         50   100         50   100         1000   2000         20         965-229         963-129	IFB 60K10DM	30   60	10   20	10   20	200   400	8	С		965-229		963-129	
IFB 150K20DLM         60   150         20   50         20   50         400   1000         20         Image: Example of the control of the c	IFB 60K10DLM	30   60	10   20	10   20	200   400	11	D		965-229		963-129	
<b>IFB 300K50DM</b> 150   300   50   100   50   100   1000   2000   20	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 600K-1M   300   600   100   200   100   200   2000   4000   44   II   965-230   963-130	IFB 300K50DM	150   300	50   100	50   100	1000   2000	20	Е		965-229		963-129	
	IFB 600K-1M	300   600	100   200	100   200	2000   4000	44	F		965-230		963-130	

Note: For applications that require verification, please order verification at the same time, initial verification at a later date is not possible. Verification at the factory, we need to know the full address of the location of use.

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## **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, tablet or smartphone.



#### 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:

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 serial number, user ID, weight, date and time, regardless 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 at the touch of a key. 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

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### 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 mains adapter:

with universal input and optional input socket adapters for A) EU, CH, GB; B) EU, CH, GB, USA; C) EU, CH, GB, USA, AUS



#### Mains adapter:

230V/50Hz in standard version for EU, CH. On request GB, USA or AUS version available



#### Power supply:

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

## KERN - Precision is our business

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.

## . . .

- 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
- Volume determination and measuring of magnetic susceptibility (magnetic characteristics) for test weights
- Database supported management of checking equipment and reminder service
- Calibration of force-measuring devices
- DAkkS calibration certificates in the following languages DE, EN, FR, IT, ES, NL, PL
- $\boldsymbol{\cdot}$  Conformity evaluation and reverification of balances and test weights

## Your KERN specialist dealer:

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