# **KERN BALANCES & TEST SERVICES 2022**

# IP protected bench scale KERN FFN









# All-round bench scale, protected by stainless steel and IP65 rating, also with EC type approval [M]

# Features

- Il Ideal for the ever-increasing hygienic requirements in the food, pharmaceutical and chemical industries
- Your support in a HACCP-compliant quality system
- 2 Ideal for the robust industrial applications
- I Protection against dust and water splashes IP65 (only when using rechargeable battery pack
- High mobility: thanks to rechargeable battery operation, compact, lightweight construction, it is suitable for the use in several locations (kitchen, sales office, cafeteria, Food industry-Laboratory etc.)
- · Stainless steel design of the housing and weighing plate. Its smooth surfaces make it simple to clean
- · Recessed grips on the underside of the scale for easy transportation

# STANDARD

FFN 6K2IPM

FFN 15K5IPM

FFN 25K10IPM

STANDARD						OPTION	FACTORY	
T	C	666		B			DAkkS	Μ
CAL EXT	UNIT	IP 65	ACCU	MULTI	DMS	1 DAY	+3 DAYS	+3 DAYS
		0						

6

15

25

5									
Model	Weighing capacity	Readability	Verification value	Minimal load		Option			
						Verification		DAkkS Calibr. Certificate	
	[Max]	[d]	[e]	[Min]		MIII		DAkkS	
KERN	kg	g	g	g		KERN		KERN	
FFN 1K-4N	1,5	0,2	-	-		-		963-127	
FFN 3K0.5IPN	3	0,5	-	-		-		963-127	
FFN 6K1IPN	6	1	-	-		-		963-128	
FFN 15K2IPN	15	2	-	-		-		963-128	
FFN 25K5IPN	25	5	-	-		-		963-128	
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.									
FFN 1K-4NM	1,5	0,5	0,5	10		965-227		963-127	
FFN 3K1IPM	3	1	1	20		965-227		963-127	

2

5

10

40

100

200

# **Technical data**

- Large backlit LCD display, digit height 25 mm • Dimensions weighing surface, stainless
- steel, W×D 230×190 mm
- Overall dimensions W×D×H 230×300×130 mm
- Internal rechargeable battery pack, operating time up to 50 h without backlight, charging time approx. 12 h
- Net weight approx. 4,0 kg
- Permissible ambient temperature KERN FFN-N: 0 °C/40 °C KERN FFN-NM: -10 °C/40 °C

# Accessories

965-228

965-228

965-228

963-128

963-128

963-128

 Tare pan made from stainless steel. Ideal for weighing loose small parts as well as fruit, vegetables, etc., KERN RFS-A02

2

5

10

# **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:

• 6550.• 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.

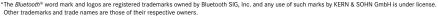
· Volume determination and measuring of magnetic susceptibility (magnetic

· 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

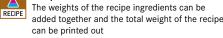
with computers, industrial controllers and other

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



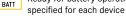
Protection against dust and water splashes IPxx:

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:

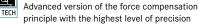
Pallet shipment:

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: