# Counting system KERN CCA



High-resolution counting system with EC type approval to count the smallest parts in large quantities, maximum number of parts which can be displayed is 999,999

## **Features**

- The highly accurate KERN CCA counting system can replace a whole range of individual balances, efficiently and at a reasonable price
- Thanks to EC type approval, it is also suitable for use in verified applications
- The balances are connected to one another with an RS-232 Y-cable, which also allows you to connect an end unit, such as, for example, signal lamps, barcode scanners or printers

# Reference scale KERN

- · This precision balance, which can be used as an individual balance, also fulfils the highest demands through connection with a high-capacity weighing bridge
- Programmable using numerical key pad:
- required reference quantity
- known reference weight
- · Easy to use: All primary functions have their own key on the keypad

- · Automatic internal adjustment, time-controlled every 2 h, guarantees high degree of accuracy and makes the balance independent of its location
- Capacity display: A bargraph display lights up to show how much of the weighing range is still available
- USB data interface for transferring weighing data to the PC, printer etc. Can only be used in combination with KERN DBS-A02 accessories
- · Draught shield standard, Weighing space W×D×H 134×128×80 mm,134×128×80 mm
- · Protective working cover included with delivery

# Quantity scale KERN IFS

- · The high-accuracy quantity counting takes place on the weighing platform (= weighing bridge) KERN CCA. In this way even the smallest of parts can be counted in large volumes
- · Tough industry standard suitable for use in harsh industrial applications
- · Ergonomic display device with large keypad and high-contrast LCD display for easy entry and reading of, e.g., tare weights, reference weights, limit values etc.

- · Three displays for weight display, reference weight, total pieces
- 100 item memories for master data such as reference weight, reference quantity, container weight (PRE-TARE) etc.
- · Precise counting: The manual reference weight optimisation gradually improves the average value of the piece weight
- · Totalising of pieces when counting
- · Printout with date and time
- Aluminium singlepoint load cell (1×3000 e), protection against dust and water splashes IP65
- Protective working cover included with delivery

# **Technical data**

# Reference scale KERN EWJ

- Overall dimensions (incl. draught shield) W×D×H 220×340×321 mm
- · Dimensions of weighing surface, stainless steel, Ø 120 mm
- · Net weight 3,2 kg
- · Connection cable approx. 1,5 m

# Quantity scale KERN IFS

- · Dimensions of weighing plate
- 300×240×110 mm
- B 400×300×120 mm © 500×400×140 mm
- D 650×500×140 mm

## Accessories

- II Signal lamp for visual support of weighing with tolerance range, only in combination with CCA-A02, KERN CFS-A03
- · Y-cable, RS-232, KERN CCA-A02

# Reference scale KERN EWJ

- · Protective working cover, scope of delivery: 5 items, KERN EWJ-A04S05
- Internal rechargable battery pack, operating time up to 15h without backlight, charging time approx. 4h, KERN KFB-A01

# Quantity scale KERN IFS

- · Protective working cover, scope of delivery: 5 items, KERN KFB-A02S05
- · Internal rechargable battery pack, operating time up to 18 h without backlight, charging time approx. 12 h, Factory Option, KERN KFB-A01
- · Further details, plenty of further accessories and suitable printers see Accessories















































ACTORY	
	M
ACCU	+3 DAYS
FS	

Model	Weighing capacity	Readability	Weighing	Weighing capacity	Readability	Counting	Smallest part		Optio	n
	Quantity scale	Quantity scale	plate	Reference scale	Reference scale	resolution	weight		Verification	
	[Max]	[d]		[Max]	[d]		[Normal]		MIII	
KERN	kg	g		g	g	Points	g/piece		KERN	
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.										
CCA 6K-5M	3 6	1 2	Α	600	0,01	30.000	0,2		965-228-216	
CCA 10K-5M	6 15	2 5	Α	600	0,01	75.000	0,2		965-228-216	
CCA 30K-5M	15 30	5 10	В	600	0,01	150.000	0,2		965-228-216	
CCA 60K-5M	30 60	10 20	В	600	0,01	300.000	0,2		965-229-216	
CCA 100K-5M	60   150	20 50	C	600	0,01	750.000	0,2		965-229-216	
CCA 300K-5M	150 300	50   100	D	600	0,01	1.500.000	0,2		965-229-216	

# KERN BALANCES & TEST SERVICES CATALOGUE 2021



# **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



#### 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



# $\label{thm:continuous} \mbox{Weighing principle: Single cell technology:}$

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 best-equipped 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
  Conformity evaluation and reverification of balances and test weights

# Your KERN specialist dealer:

<sup>\*</sup>The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by KERN & SOHN GmbH is under license. Other trademarks and trade names are those of their respective owners.