Counting system KERN CCS

Counting system to count the smallest parts in large quantities, maximum number of parts which can be displayed is 999,999

Features

- The highly accurate KERN CCS counting system can replace a whole range of individual balances, efficiently and at a reasonable price

Reference scale KERN CFS

- This professional counting scale, which can also be used as a stand-alone scale, meets the highest demands for accuracy, weighing capacity and volume of items, by being connected to a high-capacity weighing bridge
- Programmable using numerical key pad:
  - required reference quantity
  - known reference weight
- Three displays for weight display, reference weight, total pieces
- Memory (PLU) for 100 items with additional text, reference weight and tare weight, e.g. of a container
- Fill-to-target function: Target count or target weight can be programmed. When the target weight is reached there is an audible and visual signal
- Precise counting: The automatic reference weight optimisation of reference weight gradually improves the average piece weight value
- Draught shield standard for models with [d] = 0,001 g, weighing space W×D×H 155×141×80 mm
- Protective working cover included with delivery

Quantity scale KERN KFP/KERN KFU/ KERN KIP

- The high-accuracy quantity counting takes place on the weighing platform (= weighing bridge) . In this way even the smallest of parts can be counted in large volumes

Stainless steel platform KERN KFP-V20 IP65

- Weighing plate stainless steel, painted steel base
- Aluminium singlepoint load cell, protection against dust and water splashes
- for models with weighing plate size A – E

Weighing bridge KERN KFP-V20 IP67

- Weighing bridge made of non-slip corrugated steel plate, lacquered
- 4 load cells, alloy steel, silicone-coated, IP67
- for models with weighing plate size F

U-shaped weighing bridge KERN KFU-V20

- Load range: painted steel
- 4 load cells, alloy steel, silicone-coated, IP67
- for models with weighing plate size G

Weighing bridge KERN KIP-V20M IP67

- Lacquered steel weighing bridge, weighing plate size 1500×1500×130 mm corrugated steel plate. Extremely resistant to bending due to material thickness
- 4 load cells, alloy steel, silicone-coated, IP67
- for models with weighing plate size H, I, J

Counting system KERN CCS

Technical data

Reference scale KERN CFS
- Weighing plate dimensions, stainless steel
  - ① [d] = 0,001 g: ∅ 80 mm
  - [d] ≥ 0,01 g: W×D 295×225 mm
- Overall dimensions W×D×H
  315×350×100 mm
- Net weight
  - [d] = 0,001 g: approx. 2,6 kg
  - [d] ≥ 0,01 g: approx. 3,4 kg

Quantity platforms, KERN KFP-V20 IP65
- Weighing plate dimensions, stainless steel
  - Ⓐ W×D×H 230×230×100 mm
  - Ⓑ W×D×H 300×240×110 mm
  - Ⓒ W×D×H 400×300×120 mm
  - Ⓓ W×D×H 500×400×137 mm
  - Ⓔ W×D×H 650×500×142 mm

Bulk weighing bridges, KFP-V20 IP67
- Weighing plate dimensions, coated metal
  - Ⓕ W×D×H 1500×1250×80 mm

Bulk pallet load handling, KERN KFU-V20
- Weighing plate dimensions, coated metal
  - Ⓖ W×D×H 840×1190×90 mm

Quantity platforms, KERN KIP-V20M
- Weighing plate dimensions, coated metal
  - Ⓗ W×D×H 1000×1000×108 mm
  - Ⓘ W×D×H 1200×1500×108 mm
  - Ⓙ W×D×H 1500×1500×108 mm
- Connection cable approx.
  - Ⓐ – Ⓔ 1,5 m
  - Ⓕ – Ⓙ 1,5 m

Accessories

- Protective working cover, scope of delivery 5 items, KERN CFS-A02S05
- ② ESD drain to protect against electrostatic discharge e.g. for electrostatically-charged weighing objects or people who work with the scale, KERN YGR-01
- ③ Internal rechargeable battery pack, operating time up to 70 h without backlight, charging time approx. 14 h, KERN GAB-A04
- ④ Signal lamp for visual support of weighing with tolerance range, KERN CFS-A03
- ⑤ 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
- Further details, plenty of further accessories and suitable printers see *Accessories*

STANDARD: CAL EXT | MEMORY | RS 232 | KCP PROTOCOL | PCS | SUM | TOL | MULTI | DMS | 2 DAYS | 2 DAYS

OPTION: ACCU | DAkkS +3 DAYS

Model	Weighing capacity Quantity scale [Max]	Readability Quantity scale [d]	Weighing plate	Weighing capacity Reference scale [Max]	Readability Reference scale [d]	Counting resolution	Smallest part weight [Normal]	Option DAkkS Calibr. Certificate DAkkS
KERN	kg	g		g	g	Points	g/piece	KERN
CCS 6K-6	6	0,2	Ⓐ	300	0,001	1.200.000	0,05	962-128-127
CCS 10K-6	15	0,5	Ⓑ	300	0,001	3.000.000	0,05	962-128-127
CCS 30K0.01.	30	1	Ⓒ	3000	0,01	600.000	0,5	962-128-127
CCS 30K0.1.	30	1	Ⓒ	6000	0,1	300.000	1	962-128-128
CCS 60K0.01.	60	2	Ⓒ	3000	0,01	1.200.000	0,5	962-129-127
CCS 60K0.01L.	60	2	Ⓓ	3000	0,01	1.200.000	0,5	962-129-127
CCS 60K0.1.	60	2	Ⓒ	6000	0,1	600.000	1	962-129-128
CCS 60K0.1L.	60	2	Ⓓ	6000	0,1	600.000	1	962-129-128
CCS 150K0.01	150	5	Ⓓ	3000	0,01	3.000.000	0,5	962-129-127
CCS 150K0.01L	150	5	Ⓔ	3000	0,01	3.000.000	0,5	962-129-127
CCS 150K0.1.	150	5	Ⓓ	6000	0,1	1.500.000	1	962-129-128
CCS 150K0.1L	150	5	Ⓔ	6000	0,1	1.500.000	1	962-129-128
CCS 300K0.01	300	10	Ⓔ	3000	0,01	6.000.000	0,5	962-129-127
CCS 300K0.1	300	10	Ⓔ	6000	0,1	3.000.000	1	962-129-128
CCS 600K-2U*	600	200	Ⓖ	3000	0,01	12.000.000	0,5	962-130-127
CCS 600K-2L	600	200	Ⓕ	3000	0,01	12.000.000	0,5	962-130-127
CCS 600K-1S	600	200	Ⓗ	6000	0,1	6.000.000	1	962-130-127
CCS 600K-1	600	200	Ⓘ	6000	0,1	6.000.000	1	962-130-127
CCS 1T-1U	1500	500	Ⓖ	6000	0,1	15.000.000	1	962-130-128
CCS 1T-4S	1500	500	Ⓗ	6000	0,1	15.000.000	1	962-130-128
CCS 1T-4	1500	500	Ⓘ	6000	0,1	15.000.000	1	962-130-128
CCS 1T-1L	1500	500	Ⓕ	6000	0,1	15.000.000	1	962-130-128
CCS 3T-1*	3000	1000	Ⓕ	6000	0,1	30.000.000	1	962-132-128
CCS 3T-3	3000	1000	Ⓘ	6000	0,1	30.000.000	1	962-132-128
CCS 3T-3L	3000	1000	Ⓙ	6000	0,1	30.000.000	1	962-132-128

⚠ * ONLY WHILE STOCKS LAST

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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:
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.

KERN Universal Port (KUP):
allows the connection of external KUP interface adapters, e.g. RS-232, RS-485, SB, Bluetooth, WLAN, Analogue, Ethernet etc. for the exchange of data and control commands, without installation effort

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
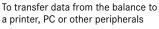
USB data interface:
To connect the balance to a printer, PC or other peripherals

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:
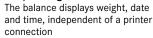For connecting the scale to an Ethernet network

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 weight, date and time, independent of a printer connection

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

Piece counting:
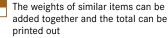Reference quantities selectable. Display can be switched from piece to weight

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:
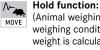Determining the deviation in % from the target value (100 %)

Weighing units:
Can be switched to e.g. nonmetric units. 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 plug-in power supply:
with universal input and optional input socket 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

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
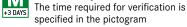Coil inside a permanent magnet. For the most accurate weighings

Weighing principle: Single cell technology:
Advanced version of the force compensation principle with the highest level of precision
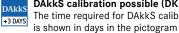
Verification possible:
The time required for verification is specified in the pictogram

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