



Counting system to count the smallest parts in the largest quantities, counting resolution up to 999,999 points

#### 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 range 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 (verifiable), reference weight, total pieces
- **Memory (PLU)** for 100 items with additional text, reference weight and tare weight, e.g. of a container
- **Audible Fill-to-target:** target quantity or target weight can be programmed, e. g. for checkweighing. When the target value is reached, a signal will sound

- **Precise counting:** The automatic reference weight optimisation of reference weight gradually improves the average piece weight value
- **Protective working cover** included with delivery

#### Quantity scale KERN KFP-V20 IP65

- The high-accuracy quantity counting takes place on the weighing platform (= weighing bridge) KERN CCS. In this way even the smallest of parts can be counted in large volumes
- **Weighing plate stainless steel**, painted steel base, for models with weighing plate size **A – E**
- **Aluminium singlepoint load cell** (1×3000 e), protection against dust and water splashes IP65

#### Technical data

##### CFS

- Overall dimensions W×D×H 320×350×180 mm
- Dimensions weighing surface, stainless steel
  - ▮ CFS 300-3: Ø 80 mm
- CFS 3K-5, CFS 6K0.1: W×D 300×225 mm
- Net weight approx. 2,6 kg

##### KFP/KFU

- Weighing plate dimensions W×D×H, stainless steel
  - ▮ A 230×230×110 mm
  - ▮ B 300×240×110 mm
  - ▮ C 400×300×128 mm
  - ▮ D 500×400×137 mm
  - ▮ E 650×500×135 mm
  - ▮ F 1000×1000×80 mm
  - ▮ G 1500×1250×80 mm
  - ▮ H 1500×1500×80 mm
  - ▮ I 840×1300×90 mm
- Connection cable approx.
  - ▮ A – E 2,5 m
  - ▮ F – I 5 m

# Counting system KERN CCS



## Accessories

- **Protective working cover**, scope of delivery: 5 items, KERN CFS-A02S05
- **Rechargeable battery pack internal**, operating time up to 60 h without backlight, charging time approx. 12 h, KERN GAB-A04
- **Signal lamp** for visual support of weighing with tolerance range, KERN CFS-A03
- **Y-cable** for parallel connection of two terminal devices to the RS-232 interface on the scale, e.g. signal lamp or barcode reader and printer, KERN CFS-A04
- Further details, plenty of further accessories and suitable printers see *Accessories*

Information on other high-capacity bulk balances, such as, for example, pallet scales, drive-through scales or floor scales is available on request, for information on other counting systems with the KERN CFS reference balance (d = 0.1 g), please refer to the website

### STANDARD



### OPTION



with [Max] >600 kg

Model	Weighing range Quantity scale [Max] kg	Readout Quantity scale [d] g	Weighing plate	Weighing range Reference scale [Max] g	Readout Reference scale [d] g	Smallest part weight [Normal] g/piece	Counting resolution Points	Options	
								DAKKS Calibr. Certificate	DKD KERN
CCS 6K-6	6	0,2	A	300	0,001	0,05	1.200.000	962-128-127	
CCS 10K-6	15	0,5	B	300	0,001	0,05	3.000.000	962-128-127	
CCS 30K0.01.	30	1	C	3000	0,01	0,5	600.000	962-128-127	
CCS 30K0.1.	30	1	C	6000	0,1	1	300.000	962-128-128	
CCS 60K0.01.	60	2	C	3000	0,01	0,5	1.200.000	962-129-127	
CCS 60K0.01L.	60	2	D	3000	0,01	0,5	1.200.000	962-129-127	
CCS 60K0.1.	60	2	C	6000	0,1	1	600.000	962-129-128	
CCS 60K0.1L.	60	2	D	6000	0,1	1	600.000	962-129-128	
CCS 150K0.01	150	5	D	3000	0,01	0,5	3.000.000	962-129-127	
CCS 150K0.01L	150	5	E	3000	0,01	0,5	3.000.000	962-129-127	
CCS 150K0.1.	150	5	D	6000	0,1	1	1.500.000	962-129-128	
CCS 150K0.1L	150	5	E	6000	0,1	1	1.500.000	962-129-128	
CCS 300K0.01	300	10	E	3000	0,01	0,5	6.000.000	962-129-127	
CCS 300K0.1	300	10	E	6000	0,1	1	3.000.000	962-129-128	
CCS 600K-2	600	20	F	3000	0,01	0,5	12.000.000	962-130-127	
CCS 600K-2L	600	20	G	3000	0,01	0,5	12.000.000	962-130-127	
CCS 600K-2U	600	20	I	3000	0,01	0,5	12.000.000	962-130-127	
CCS 1T-1	1500	500	F	6000	0,1	1	15.000.000	962-130-128	
CCS 1T-1L	1500	500	G	6000	0,1	1	15.000.000	962-130-128	
CCS 1T-1U	1500	500	I	6000	0,1	1	15.000.000	962-130-128	
CCS 3T-1	3000	1000	G	6000	0,1	1	30.000.000	962-132-128	
CCS 3T-1L	3000	1000	H	6000	0,1	1	30.000.000	962-132-128	

# KERN Pictograms

 <b>Internal adjusting:</b> Quick setting up of the balance's accuracy with internal adjusting weight (motordriven)	 <b>GLP/ISO log:</b> The balance displays serial number, user ID, weight, date and time, regardless of a printer connection	 <b>Suspended weighing:</b> Load support with hook on the underside of the balance
 <b>Adjusting program CAL:</b> For quick setting up of the balance's accuracy. External adjusting weight required	 <b>GLP/ISO log:</b> With weight, date and time. Only with KERN printers	 <b>Battery operation:</b> Ready for battery operation. The battery type is specified for each device
 <b>Memory:</b> Balance memory capacity, e.g. for article data, weighing data, tare weights, PLU etc.	 <b>Piece counting:</b> Reference quantities selectable. Display can be switched from piece to weight	 <b>Rechargeable battery pack:</b> Rechargeable set
 <b>Alibi memory:</b> Secure, electronic archiving of weighing results, complying with the 2014/31/EU standard.	 <b>Recipe level A:</b> The weights of the recipe ingredients can be added together and the total weight of the recipe can be printed out	 <b>Universal mains adapter:</b> with universal input and optional input socket adapters for A) EU, GB B) EU, GB, CH, USA C) EU, GB, CH, USA, AUS
 <b>Data interface RS-232:</b> To connect the balance to a printer, PC or network	 <b>Recipe level B:</b> Internal memory for complete recipes with name and target value of the recipe ingredients. User guidance through display	 <b>Mains adapter:</b> 230V/50Hz in standard version for EU. On request GB, USA or AUS version available
 <b>RS-485 data interface:</b> To connect the balance to a printer, PC or other peripherals. Suitable for data transfer over large distances. Network in bus topology is possible	 <b>Recipe level C:</b> Internal memory for complete recipes with name and target value of the recipe ingredients. User guidance through display, multiplier function, adjustment of recipe when dosages are exceeded or barcode recognition	 <b>Power supply:</b> Integrated in balance. 230V/50Hz standard EU. More standards e.g. GB, USA or AUS on request
 <b>USB data interface:</b> To connect the balance to a printer, PC or other peripherals	 <b>Totalising level A:</b> The weights of similar items can be added together and the total can be printed out	 <b>Weighing principle: Strain gauges</b> Electrical resistor on an elastic deforming body
 <b>Bluetooth* data interface:</b> To transfer data from the balance to a printer, PC or other peripherals	 <b>Percentage determination:</b> Determining the deviation in % from the target value (100 %)	 <b>Weighing principle: Tuning fork</b> A resonating body is electromagnetically excited, causing it to oscillate
 <b>WLAN data interface:</b> To transfer data from the balance to a printer, PC or other peripherals	 <b>Weighing units:</b> 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	 <b>Weighing principle: Electromagnetic force compensation</b> Coil inside a permanent magnet. For the most accurate weighings
 <b>Control outputs (optocoupler, digital I/O):</b> To connect relays, signal lamps, valves, etc.	 <b>Weighing with tolerance range:</b> (Check-weighing) 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	 <b>Weighing principle: Single cell technology</b> Advanced version of the force compensation principle with the highest level of precision
 <b>Interface for second balance:</b> For direct connection of a second balance	 <b>Hold function:</b> (Animal weighing program) When the weighing conditions are unstable, a stable weight is calculated as an average value	 <b>Verification possible:</b> The time required for verification is specified in the pictogram +3 DAYS
 <b>Network interface:</b> For connecting the scale to an Ethernet network	 <b>Protection against dust and water splashes IPxx:</b> The type of protection is shown in the pictogram.	 <b>DAkkS calibration possible (DKD):</b> The time required for DAkkS calibration is shown in days in the pictogram +3 DAYS
 <b>Wireless data transfer:</b> between the weighing unit and the evaluation unit using an integrated radio module	 <b>Stainless steel:</b> The balance is protected against corrosion	 <b>Package shipment:</b> The time required for internal shipping preparations is shown in days in the pictogram 1 DAY
 <b>KERN Communication Protocol (KCP):</b> 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		 <b>Pallet shipment:</b> The time required for internal shipping preparations is shown in days in the pictogram 2 DAYS

## 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 balance calibration.

The KERN DAkkS calibration laboratory today is one of the most modern and best-equipped DAkkS calibration laboratories for balances, test weights and force-measurement in Europe.

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.

### Range of services:

- 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, GB, FR, IT, ES, NL, PL
- Conformity evaluation and reverification of balances and test weights

## Your KERN specialist dealer: