



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

Features

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

Reference scale KERN CFS:

- This professional KERN CFS counting scale, which can also be used as a stand-alone scale, meets even the highest demands for accuracy, weighing range and volume of items, by connecting it to a high-capacity weighing bridge (up to 999,999 pieces)
- **Programmable using numerical key pad:**
 - required reference quantity
 - known reference weight

- **Memory (PLU) for 100 items** with additional text
- **Fill-to-target function:** Programmable target weight. An acoustic and visual signal will be displayed when the target value is reached
- **Precise counting:** The automatic optimisation of reference weight gradually improves the average value of the piece weight
- For additional information see page 84

Quantity scale KERN KFP:

- The high-accuracy quantity counting takes place on the weighing platform (= weighing bridge) KERN KFP
- **Stainless steel weighing plate**, painted steel base
- **Aluminium singlepoint load cell** (1 x 3000 e), IP65 protection
- For additional information see page 121

Counting system KERN CCS



Technical data

CFS:

- Large backlit LCD displays, digit height 20 mm
 - Overall dimensions WxDxH 320x350x125 mm
 - Dimensions of weighing plate, stainless steel
 - 1 CFS 300-3 Ø 80 mm
 - CFS 3K-5, CFS 6K0.1 WxD 294x225 mm
- Net weight approx. 3,8 kg

KFP:

- Dimensions of weighing plate (stainless steel) WxDxH
 - A 230x230x100 mm
 - B 300x240x100 mm
 - C 400x300x128 mm
 - D 500x400x137 mm
 - E 650x500x142 mm
- Connection cable approx. 1,5 m

Accessories

- **Reference scale** also available separately, details see page 88, KERN CFS 300-3, KERN CFS 3K-5, KERN CFS 6K0.1
- **Rechargeable battery pack internal**, operating time up to 70 h without backlight, charging time approx. 14 h, not for models with CFS 300-3, KERN GAB-A04
- **Signal lamp** for visual support of weighing with tolerance range. Three-colour LED (yellow, green, red). Overall dimensions WxDxH 100x180x300 mm, KERN CFS-A03
- **Y cable** for parallel connection of two terminal devices to the RS-232 interface on the balance, e.g. signal lamp and printer, KERN CFS-A04
- **Suitable printers** see page 138

3 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



Model	Quantity scale	Weighing range [Max] kg	Read-out [d] g	Weighing plate	Reference scale	Weighing range [Max] g	Read-out [d] g	Min. piece weight [Counting] g/piece	Option	
									DKD Calibr. Certificate	
KERN	KFP				CFS				DKD KERN	
CCS 6K-6	KFP 6V20M	6	2	A	CFS 300-3	300	0,001	0,005	962-128-127	
CCS 10K-6	KFP 15V20M	15	5	B	CFS 300-3	300	0,001	0,005	962-128-127	
CCS 30K0.01	KFP 30V20M	30	10	C	CFS 3K-5	3000	0,01	0,05	962-128-127	
CCS 30K0.1	KFP 30V20M	30	10	C	CFS 6K0.1	6000	0,1	0,1	962-128-128	
CCS 60K0.01	KFP 60V20M	60	20	C	CFS 3K-5	3000	0,01	0,05	962-129-127	
CCS 60K0.01L	KFP 60V20LM	60	20	D	CFS 3K-5	3000	0,01	0,05	962-129-127	
CCS 60K0.1	KFP 60V20M	60	20	C	CFS 6K0.1	6000	0,1	0,1	962-129-128	
CCS 60K0.1L	KFP 60V20LM	60	20	D	CFS 6K0.1	6000	0,1	0,1	962-129-128	
CCS 150K0.01	KFP 150V20M	150	50	D	CFS 3K-5	3000	0,01	0,05	962-129-127	
CCS 150K0.01L	KFP 150V20LM	150	50	E	CFS 3K-5	3000	0,01	0,05	962-129-127	
CCS 150K0.1	KFP 150V20M	150	50	D	CFS 6K0.1	6000	0,1	0,1	962-129-128	
CCS 150K0.1L	KFP 150V20LM	150	50	E	CFS 6K0.1	6000	0,1	0,1	962-129-128	
CCS 300K0.1	KFP 300K20M	300	100	E	CFS 6K0.1	6000	0,1	0,1	962-129-128	
CCS 300K0.01	KFP 300V20M	300	100	E	CFS 3K-5	3000	0,01	0,05	962-129-127	

■ New model

KERN Pictograms



Internal adjusting (CAL): Quick setting of the balance's accuracy with internal adjusting weight (motordriven).



Adjusting program (CAL): For quick setting of the balance's accuracy. External adjusting weight required.



Memory: Balance contains memories, e.g. for item data, weighing data, tare weights etc. PLU.



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 peripheral devices. High tolerance against electromagnetic disturbance.



USB data interface: To connect the balance to a printer, PC or other peripheral devices.



Bluetooth data interface: To transfer data from the balance to a printer, PC or other peripheral devices.



Control outputs (optocoupler, digital I/O): to connect relays, signal lamps, valves, etc.



Interface for second balance: for direct connection of a second balance.



Network interface: For connecting the scale to an Ethernet network. With KERN products you can also use a universal RS-232/LAN converter.



GLP/ISO record keeping: of weighing data with date, time and identification-no. Only with printers from KERN.



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



Recipe level A: Separate memory for the weight of the tare container and the recipe ingredients (net total).



Recipe level B: Internal memory for complete recipes with name and target value of the recipe ingredients. User guidance through displays.



Recipe level C: Internal memory for complete recipes with name and target value of the recipe ingredients. User guidance through displays. Additional convenient functions, such as bar-code and back calculation functions.



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



Weighing units: Can be switched to e. g. non-metric units at the touch of a key. See balance model. Please refer to KERN's website for more details.



Weighing with tolerance range: Upper and lower limiting can be programmed individually, e.g. dosing/sorting and portioning.



Vibration-free weighing: (Animal weighing program) Vibrations are filtered out so that a stable weight is obtained.



Spray and dust protection IPxx: The type of protection is shown by the pictogram. For details see the glossary.



Stainless steel: the balance is protected against corrosion.



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.



Mains adapter: 230V/50Hz in standard version for Germany. On request GB, AUS or USA version.



Power supply: integrated in balance. 230V/50Hz in Germany. More standards e. g. GB, AUS, USA on request.



Strain gauges: Electrical resistor on an elastic deforming body.



Tuning fork principle: A resonating body is electromagnetically excited, causing it to oscillate.



Electromagnetic force compensation: Coil in a permanent magnet. For the most accurate weighings.



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.



DKD calibration possible: The time required for DKD calibration is shown in days in the pictogram.



Package shipment: The time required to manufacture the product internally is shown in days in the pictogram.



Pallet shipment: The time required to manufacture the product internally is shown in days in the pictogram.



Warranty: The warranty period is shown in the pictogram.

Precision is our business

To ensure the high precision of your balance KERN offers you the the appropriate test weight package for your balance, consisting of the test weight, box and DKD certificate, as proof of its accuracy ... the best pre-requisite for proper balance calibration.

In the extensive KERN test weight range, you will find test weights in the international OIML error limit classes: E1, E2, F1, F2, M1, M2, M3 with weights from 1 mg - 2000 kg.

The KERN DKD calibration laboratory for electronic balances and weights has been accredited by DKD since 1994 and today is one of the most modern and best-equipped DKD calibration laboratories for balances, test weights and force-measurement in Europe.

(DKD = German Calibration Service)

Thanks to the high level of automation, we can carry out DKD calibration of balances, test weights and force-measuring devices 24 hours a day, 7 days a week.

Range of services:

- DKD calibration of balances with a maximum load of up to 6 t
- DKD calibration of weights in the range of 1 mg – 500 kg
- Database supported management of checking equipment and reminder service
- Calibration of force-measuring devices
- DKD calibration certificates in the following languages
D, GB, F, I, E, NL, PL

Do you have questions about your scale, the corresponding test weight or the calibration service? Your KERN specialist dealer will be pleased to assist you.

Your KERN specialist dealer: