



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

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 KIP-V20M IP67

- Lacquered steel weighing bridge, 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 **F, G, H**

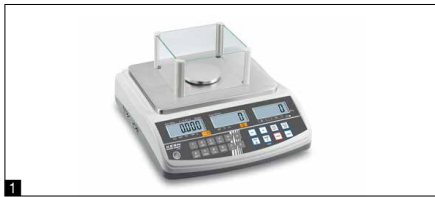
Weighing bridge KERN KFP-V20 IP67

- Weighing bridge painted steel, Weighing plate screwed on from the top
- 4 load cells, alloy steel, silicone-coated, IP67
- For models with weighing plate size **I**

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 **J**

Counting System KERN CCS



Technical data

Reference scale KERN CFS

- Weighing plate dimensions, stainless steel
[d] = 0,001 g: \varnothing 80 mm
[d] \geq 0,01 g: WxD 295x225 mm
- Overall dimensions WxDxH 315x350x100 mm
- Net weight
[d] = 0,001 g: approx. 2,6 kg
[d] \geq 0,01 g: approx. 3,4 kg

Quantity platforms, KERN KIP-V20 IP65

- Weighing plate dimensions, stainless steel
A WxDxH 230x230x103 mm
B WxDxH 300x240x105 mm
C WxDxH 400x300x114 mm
D WxDxH 500x400x124 mm
E WxDxH 650x500x136 mm

Quantity platforms, KERN KIP-V20M

- Weighing plate dimensions, coated metal
F WxDxH 1000x1000x108 mm
G WxDxH 1200x1500x108 mm
H WxDxH 1500x1500x108 mm

Bulk weighing bridges, KERN KFP-V20 IP67

- Weighing plate dimensions, coated metal
I WxDxH 1500x1250x80 mm

Bulk pallet load handling, KERN KFU-V20

- Weighing plate dimensions, coated metal
J WxDxH 840x1190x90 mm

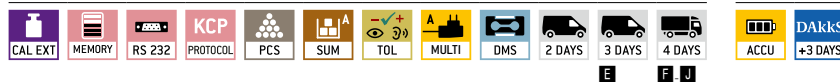
Connection cable approx.

- A** - **E** 2,5 m
F - **J** 5 m

Accessories

- Protective working cover, scope of delivery: 5 items, KERN CFS-A02S05
- **2** Suitable for models with weighing plate size **A** - **E**: ESD drain to protect against electrostatic discharge e.g. for electrostatically-charged weighing objects or people who work with the scale, KERN YGR-01
- Internal rechargeable battery pack, operating time up to 70 h without backlight, charging time approx. 14 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 and printer, KERN CFS-A04
- Further details, plenty of further accessories and suitable printers see *Accessories*

STANDARD



OPTION

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

I * ONLY WHILE STOCKS LAST

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

CAL EXT
Adjusting program CAL
 For quick setting up of the balance's accuracy. External adjusting weight required

ET
EasyTouch
 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
Alibi memory
 Secure, electronic archiving of weighing results, complying with the 2014/31/EU standard.

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

RS 232
RS-232 Data interface
 To connect the balance to a printer, PC or network

RS 485
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
USB Data interface
 To connect the balance to a printer, PC or other peripherals

BT
Bluetooth* Data interface
 To transfer data from the balance to a printer, PC or other peripherals

WIFI
WIFI Data interface
 To transfer data from the balance to a printer, PC or other peripherals

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

ANALOG
Analogue interface
 to connect a suitable peripheral device for analogue processing of the measurements

DUAL
Interface for second balance
 For direct connection of a second balance

LAN
Network interface
 For connecting the scale to an Ethernet network

KCP PROTOCOL
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 INTERN
GLP/ISO log intern
 The balance displays weight, date and time, independent of a printer connection

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

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

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

SUM
Totalising level A
 The weights of similar items can be added together and the total can be printed out

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

UNIT
Weighing units
 Can be switched to e.g. nonmetric units. See balance model. Please refer to KERN's website for more details

TOL
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

MOVE
Hold function
 (Animal weighing program)
 When the weighing conditions are unstable, a stable weight is calculated as an average value

IP
Protection against dust and water splashes IPxx
 The type of protection is shown in the pictogram

UNDER
Suspended weighing
 Load support with hook on the underside of the balance

BATT
Battery operation
 Ready for battery operation. The battery type is specified for each device

ACCU
Rechargeable battery pack
 Rechargeable set

MULTI
Universal plug-in power supply
 with universal input and optional input socket adapters for
 A) EU, CH, GB
 B) EU, CH, GB, US
 C) EU, CH, GB, US, AUS

230 V
Plug-in power supply
 230V/50Hz in standard version for EU, CH. On request GB, USA or AUS version available

230 V
Integrated power supply unit
 Integrated in balance. 230V/50Hz standard EU. More standards e.g. GB, USA or AUS on request

DMS
Weighing principle Strain gauges
 Electrical resistor on an elastic deforming body

T-FORK
Weighing principle Tuning fork
 A resonating body is electromagnetically excited, causing it to oscillate

FORCE
Weighing principle Electromagnetic force compensation
 Coil inside a permanent magnet. For the most accurate weighings

SC TECH
Weighing principle Single cell technology
 Advanced version of the force compensation principle with the highest level of precision

M +3 DAYS
Conformity Assessment
 The time required for conformity assessment is specified in the pictogram

DAkkS +3 DAYS
DAkkS calibration possible (DKD)
 The time required for DAkkS calibration is shown in days in the pictogram

ISO +4 DAYS
Factory calibration (ISO)
 The time required for Factory calibration is shown in days in the pictogram

1 DAY
Package shipment
 The time required for internal shipping preparations is shown in days in the pictogram

2 DAYS
Pallet shipment
 The time required for internal shipping preparations is shown in days in the pictogram

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