

SYSTEM SOLUTIONS INDUSTRY 4.0, EASYTOUCH





KERN Pictograms



Internal adjustingQuick 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



EasyTouch

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, WIFI, Analogue, Ethernet etc. for the exchange of data and control commands, without installation



RS-232 Data interface

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 intern The balance displays weight, date and time independent of a printer connection



GLP/ISO log PrinterWith 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 recipés 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 operationReady 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, US C) EU, CH, GB, US, 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



Conformity Assessment

The time required for conformity assessment 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

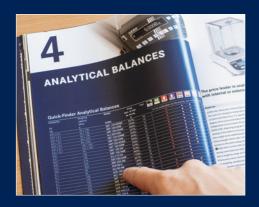
The time required for internal shipping preparations is shown in days in the pictogram

KERN Models A-Z

440	30
572	34
A	
ABP	50-51
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ABT-NM	
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ADB/ADJ	
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	_ 122-125
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KERN Quick-Finder

How I quickly find the product I am looking for

Ahead of each product group allows you to base the search for a certain target group on weighing data you need such as readout, weighing capacity and main features for each model.

And it's as simple as that – find the product you want in 2 steps:

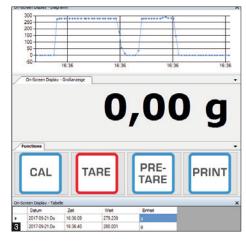
- 1. Go to the product group index on page 3
- 2. Pick the appropriate product group and find the product you want using the Quick-Finder











Robust industrial platform scale with digital weighing transmitter, ideal for varied range of applications for Industry 4.0

Features

- With this combination of platform 1 (KERN KFP V20 IP65) and digital weighing transmitter (KERN YKV-01) your weighing processes are ready for the requirements of Industry 4.0. Simply install the platform, connect the digital weighing transmitter to the network and start weighing
- · For rapid transfer of weighing data to connected networks, computers, etc.
- · USB and RS-232 data interface standard, Power supply via USB interface
- Transfer formats are freely configurable
- · Digital weighing transmitter with standard ethernet data interface on request
- · Functions: Weighing, taring
- · Internal resolution 16 million divisions

- Measuring frequency 10 Hz
- · Easy configuration using the software supplied
- KERN YKV-01: Robust plastic die-cast housing
- 2 KERN YKV-01: Suitable for wall mounting and DIN track mount (optional)
- · included with the delivery:
- Industrial platform KERN KFP
- Digital weighing transmitter KERN YKV-01
- 2 DIN rail mounting bracket for KERN YKV
- Configuration software for adjusting and managing the KERN KGP, for large-format display of the values collected on the PC as well as transfer of this data to other Apps and programs. The displayed result can therefore be converted to any format for communication with the different user programs, such as, for example, e.g. SAP, Oracle etc.

Technical data

- · Weighing plate material: stainless steel
- KERN YKV-01: Overall dimensions W×D×H 100×140×36 mm
- Permissible ambient temperature -10 °C/40 °C

Accessories

- Bluetooth data interface, KERN YKV-A02, € 98,-
- WiFi interface, KERN YKV-A01, € 98,-
- · Ethernet data interface on request
- 3 Software BalanceConnection, for flexible recording or transmission of measured values, in particular also to Microsoft® Excel or Access as well as transfer of this data to other Apps and programs, for more details see internet, scope of supplies: 1 CD, 1 license, KERN SCD-4.0, € 210,-

























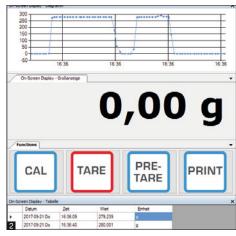


Model	Weighing capacity	Readability	Weighing plate W×D×H	Cable length	Net weight	Price excl. of VAT	Opti DAkkS Calib i	
KEDNI	[Max]	[d]		approx.	approx.	ex works	DAkkS	
KERN	kg	g	mm	m	kg	€	KERN	€
KGP 6K-4	6	0,2	230×230×103	2,5	6	440,-	963-128	118,-
KGP 6K-4L	6	0,2	300×240×105	2,5	10	460,-	963-128	118,-
KGP 10K-4	15	0,5	300×240×105	2,5	6	460,-	963-128	118,-
KGP 10K-4L	15	0,5	400×300×114	2,5	10	500,-	963-128	118,-
KGP 30K-3	30	1	300×240×105	2,5	6	460,-	963-128	118,-
KGP 30K-3L	30	1	400×300×114	2,5	10	520,-	963-128	118,-
KGP 60K-3	60	2	400×300×114	2,5	10	540,-	963-129	146,-
KGP 60K-3L	60	2	500×400×124	2,5	14	600,-	963-129	146,-
KGP 100K-3	150	5	500×400×124	2,5	14	600,-	963-129	146,-
KGP 100K-3L	150	5	650×500×136	2,5	22	820,-	963-129	146,-
KGP 300K-2L	300	10	650×500×136	2.5	22	870	963-129	146









Modern digital weighing transmitter for the rapid recording of weighing data and forwarding it to the most varied output channels such as tablets, networks, SPS controllers, etc. – ideal for operating balances in systems or conveyors

Features

- With this digital weighing transmitter your
 weighing processes are ready for the requirements of Industry 4.0. Simply connect a weighing
 platform or measuring cell, integrate the digital
 weighing transmitter into the network and
 start weighing
- For rapid transfer of weighing data to connected networks, computers, etc.
- USB and RS-232 data interface standard,
 Power supply via USB interface
- · Transfer formats are freely configurable
- Functions: Weighing, taring
- Measuring frequency 10 Hz
- · Easy configuration using the software supplied
- Robust plastic die-cast housing
- I Suitable for wall mounting and DIN track mount
- · Compatible with all KERN weighing platforms

- · Included with the delivery:
- Digital weighing transmitter KERN YKV
- USB cable incl. mains plug
- DIN rail mounting bracket
- Configuration software for adjusting and managing, for large-format display of the values collected on the PC as well as transfer of this data to other Apps and programs. The displayed result can therefore be converted to any format for communication with the different user programs, such as, for example, SAP, Oracle etc.

Technical data

- Overall dimensions W×D×H 100×140×36 mm
- · Net weight approx. 0,35 kg
- Permissible ambient temperature -10 °C/40 °C

Accessories

- Bluetooth data interface, KERN YKV-A02, € 98,-
- WiFi interface, KERN YKV-A01, € 98,-
- 2 Software BalanceConnection, for flexible recording or transmission of measured values, in particular also to Microsoft® Excel or Access as well as transfer of this data to other Apps and programs, for more details see internet, scope of supplies: 1 CD, 1 license, KERN SCD-4.0, € 210,-

STANDARD

FACTORY

FA

Model Standard interfaces

KERN

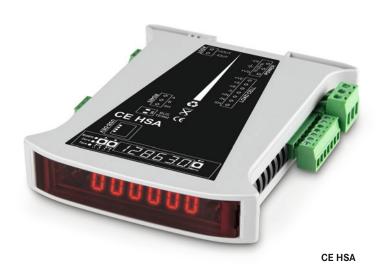
YKV-01 RS-232, USB

 YKV-01
 RS-232, USB
 265,

 YKV-02
 RS-232, USB, Ethernet
 320,

Price excl. of VAT ex works

€











Your contact for technical questions



Stefan Herrmann Tel. +49 7433 9933-214 stefan.herrmann@kern-sohn.com

Compact display device (rail-mounted module) for installation in switch cabinets

Features

- · Compact display unit for recording weighing data using strain gauge load cells, e.g. in industrial applications
- · Due to its small size, it is particularly space-saving to install in switch cabinets
- · Thanks to the many interface variants, the modules can be ideally integrated into existing infrastructures and systems
- · The modules can be used either individually or as a Buslink system with a total of up to 332 DIN rail modules
- The configuration of the module can be carried out conveniently via a connected PC with the suitable software (Download see Internet)
- · Bright LED display for optical control and settings
- Time-saving G-Cal™ (Geographic Calibration) technology for fast and accurate calibration without weights conveniently over a network or the Internet worldwide
- · Convenient communication via remote devices

- · Backup and restore function via USB port
- · Can handle various industrial protocols such as Ethernet IP, Modbus TCP, Modbus RTU, FINS, PROFIBUS DP and PROFINET (according to model)
- · Extremely high measurement frequency possible, up to 1600 data records/second
- · Internal resolution 24 Bit

Technical data

- 7 segment LED display, digit height 7,62 mm
- Dimensions W×D×H 120×101×23 mm
- Power supply 18-32 Vdc; 4 W max.
- · Power supply load cell 5 Vdc
- Sensitivity 0,1 μV/d
- · Adjustable nominal sensitivity 1; 1.5; 2; 2.5; 3 mV/V
- Input voltage unipolar @3mV/V: -1 mV to + 16 mV
- Input voltage bipolar @3mV/V: -16 mV to +16 mV
- Max. load cell impedance 1200 $\boldsymbol{\Omega}$
- Min. load cell impedance 43,75 Ω
- Max. no. of load cells 350 Ω : 8

- Max. no. of load cells 1000 Ω: 22
- Max. resolution d 10.000
- Display steps 1, 2, 5, 10, 20, 50, 100, 200
- Permissible ambient temperature -10 °C/40 °C

Accessories

- Mains adapter for voltage supply to the KERN CE, can be fitted on the DIN rail, KERN CE HSS, € 90,-
- · Large display with superior display size, KERN YKD-A02, € 310,-
- · For further accessories, such as load and load cells, torque sensors and weighing platforms (strain gauge based only) from the SAUTER and KERN range, see internet
- · Further accessories such as DIN rail, housing as well as individual assembly, configuration, adjustment, etc. on request

Note: Models optionally also available verified, please enquire

STANDARD























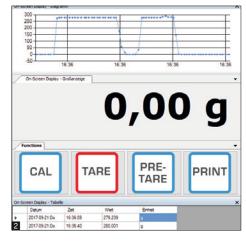
Model KERN	Communication Interfaces	Digital I/O	Analog output	Price excl. of VAT ex works €
CE HSA*	USB	-	0/4-20/24 mA	495,-
CE HSAIO*	USB	3 input / 4 output	0/4-20/24 mA	640,-
CE HSE*	USB, Ethernet	3 input / 4 output	-	560,-
CE HSP*	USB, PROFIBUS	3 input / 4 output	-	560,-
CE HSR*	USB, RS-232, RS-422	3 input / 4 output	-	530,-
CE HSN	USB. PROFINET	3 input / 4 output	-	790













Universal weighing platforms for flexible connection in process chains

Features

- Industry 4.0 process chains: these weighing platforms can be easily integrated into your process chain. All recorded values can be easily transferred and processed further in your system as digital data and data that has already been compared using the many interfaces available. This saves cost, time and resources and ensures even more effective working
- Connecting the platform with a tablet or PC offers the advantage of being able to use the apps and programs which are on that device. These apps and programs are usually already tailored to your needs, are easy and convenient to use and can often be expanded as needed. This offers you the maximum level of flexibility when displaying, processing and saving the recorded weighing data
- · Searching and remote control of the balance using external control devices or computers with the KERN Communication Protocol (KCP).

KCP is a standardised interface command structure for KERN balances and other instruments which allows you to recall and manage all relevant parameters and device functions. You can therefore simply connect KERN devices with KCP to computers, industrial control systems and other digital systems. In a large number of cases the KCP is compatible with the MT-SICS protocol

- · PRE-TARE function for manual subtraction of a known container weight, useful for checking fill-levels
- 1 A practical status LED informs about the active power supply
- · Draught shield standard for models with weighing plate size Ø 105 mm, weighing space W×D×H 146×146×80 mm
- · included with the delivery:
 - 2 Software BalanceConnection for adjusting and managing the KERN KDP, for large-format display of the values collected on the PC as well as transfer of this data to other Apps and programs

Technical data

- · Dimensions weighing surface
- A Ø 105 mm, plastic, with conductive lacquer
- B W×D 160×160 mm, stainless steel
- · Overall dimensions W×D×H 165×166×75 mm (without draught shield)
- · Cable length approx. 1,2 m
- · Net weight approx. 1,2 kg
- Permissible ambient temperature 5 °C/35 °C

Accessories

- · Bluetooth data interface for wireless data transfer to PC or tablets, must be ordered at purchase, KERN KDP-A03, € 54,-
- · WiFi data interface to transfer data from balances to PC or tablet, must be ordered at purchase, KERN YMI-A01, € 95,-
- · Ethernet data interface, to connect an IP-based Ethernet network, continuous data transfer, must be ordered at purchase, KERN KDP-A02, € 110,-

*WiFi and Ethernet data interface cannot be combined























Model	Weighing capacity	Readability	Reproducibility	Linearity	Weighing plate	Price excl. of VAT	Opti DAkkS Calib	
KERN	[Max] g	[d] g	g	g		ex works €	DAkkS KERN	€
KDP 300-3	350	0,001	0,002	± 0,005	Α	525,-	963-127	98,-
KDP 3000-2	3500	0,01	0,02	± 0,05	В	525,-	963-127	98,-
KDP 10K-4	10000	0,1	0,1	± 0,3	В	490,-	963-128	118,-
KDP 10K-3	10000	1	1	± 3	В	470	963-128	118

WE CAN MAKE YOUR WEIGHING DATA DIGITAL – KERN EASYTOUCH

The KERN EasyTouch software combines the performance of KERN scales with the flexibility of a Windows or Android environment.

The modular system solution for efficient weighing – perfect for your individual requirements







See for yourself how convenient and easy it is to use KERN EasyTouch





See for yourself the many benefits of the new KERN EasyTouch App:

- → Greater efficiency through short workflows for the user
- → Greater security of the measuring results
- → Avoiding measuring and process errors
- → Unlimited master data memory
- → Central data storage and data security (tamper-proof)
- → Interfaces to ERP, PPS, etc. systems

All details about the new KERN EasyTouch App can be found at https://lp.kern-sohn.com/en/easytouch

Working with the KERN EasyTouch is so easy

Collect the weight and measurement data with the appropriate device

Transfer, process and agument the weight or measurement data through KERN EasyTouch

Output or store the weight or measurement data to connected systems or peripheral devices



- → A standard balance is connected to an external laptop/tablet
- → The performance of the balance is transferred to the terminal device 1:1
- → Even simpler control and use of data by expanding the user interface
- → The data is integrated directly in the process and this means it can continue to be used and stored
- → Errors in the process or application are avoided
- → In this way a simple balance becomes a highly-complex measuring device
- → The recorded data can be processed further in a flexible way

The EasyTouch App – these functions are included:

- · Operating system with Basic Weighing and Laboratory Package
- At present 20 optional add-on functions
- Data storage functions
- On request we can also offer tailor-made solutions get in touch with us



Test it without any risk and free of charge – it's that easy!



Load the basic App from the Appstore

The KERN EasyTouch App already contains many helpful functions.



Connect the devices you need

Connect to devices using the four interfaces provided (Bluetooth, wired or USB adapter or WiFi).



Test the basic package for 6 weeks, without obligation and free of charge

After 6 weeks you can decide whether to continue using the Apps. With absolutely no loss of data.

Talk to the professionals

Our KERN EasyTouch specialists will gladly inform and advise you on all questions regarding the new KERN EasyTouch App

Tel. +49 7433 9933-324 ETsales@kern-sohn.com





Daniel Egeler Maximilian Pfister

Wolfgang Schäfer



Your benefits of the KERN EasyToch software

- \rightarrow You only pay for the functions that you use
- → Expansion of the range of services of your balance to meet your individual ideas and preferences
- → Easy control of your balances from wherever you currently are: laboratory, production, office control of a PC, laptop or a tablet
- → Tamper-proof storage of all weighing data on a central server, in an orderly database

- → Wired through RS 232 interface cable + USB adapter AFH 13
- → Bluetooth through KUP-06 or KUM-06
- → Ethernet through KUP-04 or KUM-04
- → WLAN through KUP-05 or KUM-05

KERN EasyTouch - available right now for the following KERN ranges/models

KERN Balances / Weighing platforms					
572	FCB	IOC ⁽¹⁾	KGP	PKS	
CDS	FKB	IXC	PCB	SXC	
CKE	IFB	KDP	PCJ		
DS	IFC	KFC-TM	PKJ		

(1) Verified operation: Weighing data from legally regulated uses can be stored and archived in KERN EasyTouch in conformity with standards, by using models from this product family with valid calibration and measurement value memory. This standard-compliant data storage also applies to SaveServer.

Depending on the model and connection type (USB, Bluetooth, Ethernet, WiFi), please contact KERN specifically, as there may currently still be restrictions on the possible combinations.

Tip: Other KERN ranges can be adapted to be EasyTouch compatible – keep up-to-date with the latest new on https://lp.kern-sohn.com/en/easytouch



Note: All KERN models which are EasyTouch compatible are marked with the relevant symbol in the catalogue!

EasyTouch function at a glance

Basic Package - Operating system

SET-01 EasyTouch Base

Basic Weighing & Laboratory Package

The basic package contains many useful functions such as weighing, totalizing, target dispensing and percentage weighing. As well as the local master data administration and management of the weighing results.

The basic package can be expanded at any time with additional, optional add-on functions.

Optional add-on functions



SET-07 ET Variable

Free variable function

Individually definable units, e.g. cable length g/m, weight per unit area g/m^2 , etc.

SET-08 ET Take-Out

Take-out function

Ideal for portioning by removing from a source container

SET-11 ET Safety

Precision & Safety function

Scale monitoring: the MUST for the pharmaceutical sector

SET-16 ET Batch & Statistics

Batch measuring function with statistical analysis

Perfect function in the context of production control, for calculating averages, etc.

SET-21 ET Formulation

Recipe function

Recipe management, dosing aid, recipe adjustment, multiplier function, etc.

SET-22 ET Difference

Difference function

Monitoring of weight increase (e.g. cell growth) or weight decrease (e.g. drying) and calculation of the weight difference

SET-31 ET Tolerance

Tolerance weighing function

Weighing within defined limits ensures fast sorting, portioning, picking, checking

SET-32 ET Count

Piece-counting function

Fast counting of large quantities, avoids counting errors, saves time and money!

SET-33 ET Target Count

Target-counting function

For lightning-fast picking of small parts, safely supported by optical and acoustic signals

SET-17 ET PrePack

Production control and packaging

Perfect for use in sectors such as the food industry for weighing in accordance with pre-packaging legislation

SET-14 ET Individual Print

User-customised print format function

Individual positioning of print elements, form printing, paper sizes and barcode printing is possible

You can find more functions on our EasyTouch home page:



https://lp.kern-sohn.com/ en/easytouch

Central data memory

SET-10 ET Save-Data Server

Weight storage and Save-Server function

Central storage of weighing and measuring data in a network

SET-28 Customization Service

Service for programming

Setting up and configuring interfaces (e.g. to merchandise management, ERP or PPS) and individual customer requirements

KERN & SOHN GmbH

www.kern-sohn.com

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Discover the multifaceted World of Balances, Microscopes and Measuring Technology from KERN online: www.kern-sohn.com



- → Full KERN & SAUTER Product Range
- → Convenient 24/7 Ordering
- → Selection of more than 5,000 Items across Weighing and Measuring Technology, Optical Instruments as well as Accessories and Services
- → Extensive Information and useful Download Options
- → Technical Product Data Sheets
- → Operating Instructions
- → Descriptive Image and Video Material
- → Useful KERN Services
- → Technical Glossary
- → KERN Dealer Portal
- → Practical Filter and Search Functions

