KERN Pictograms

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.

Protection against dust and water splashes IPx:
- The type of protection is shown in the pictogram. For details see page 62

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

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

WLAN 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

Wireless data transfer:
- between the weighing unit and the evaluation unit using an integrated radio module

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

Recipe level C:
- 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

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 principle: Single cell technology:
- Advanced version of the force compensation principle with the highest level of precision

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: Strain gauges:
- GB, USA or AUS version

Weighing principle: Electromagnetic force compensation:
- On request GB, USA or AUS version

Universal mains adapter:
- with universal input and optional input socket adapters for
  A) EU, CH, GB
  B) EU, CH, GB, USA
  C) EU, CH, GB, USA, AUS

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

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

Weighing with tolerance range:
- (Checkweighing) Upper and lower limiting values can be programmed individually, e.g. for sorting and dosing. The process is supported by an audible or visual signal, see the relevant model

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

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

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KERN – measuring technology and testing services from a single source

Balances & Test service catalogue
Provides a complete overview of the KERN line of balances, test weights, and services such as verification, calibration, etc.

Medical scales catalogue
Complete line of medical scales, from infant scales to patient scales, chair scales and adiposity scales, as well as hand grip dynamometers, chemist’s balances and veterinary scales.

Microscopes & refractometers catalogue
Extensive range in the area of optical instruments, such as, for example, biological microscopes, stereo microscopes, metallurgical microscopes, polarisation microscopes as well as analogue and digital refractometers.

SAUTER measuring equipment catalogue
Test instruments for industry and commerce, such as force, coating thickness, material thickness and calibration service.

DAkkS calibration service brochure
Detailed information on topics pertaining to the calibration and verification of balances, test weights, and force measuring devices.

Your advantages

fast
• 24 hours delivery service for products in stock – ordered today, on its way tomorrow
• Sales & service hotline available from 8:00 am to 6:00 pm

reliable
• Up to 3 years warranty
• Precision in weighing technology for more than 175 years

competent
• DAkkS accreditation DIN EN ISO/IEC 17025
• Certified QM system DIN EN ISO 9001
• Authorisation for initial verification by the manufacturer 2014/31/EU
• Medical certifications DIN EN ISO 13485 and 93/42/EWG

versatile
• One-stop shopping: from pocket balances through to 15 t crane balance – everything from one supplier
• Find the product you want at lightning speed with the “Balance Quick-Finder” at www.kern-sohn.com

Order hotline +49 7433 9933-0
Service hotline +49 7433 9933-199
Calibration hotline +49 7433 9933-196
Our team of consultants will assist you from Monday to Friday from 8:00 am to 6:00 pm

Online Shop www.kern-sohn.com
E-mail order info@kern-sohn.com
Fax order +49 7433 9933-146

www.kern-sohn.com Information on current product availability, product data sheets, user instructions, useful knowledge, technical glossary, images and much for you to download, practical topic areas, which will guide you to the right product in your industry as well as a clever test weight and balance search engine.
Pallet truck scales

Weighing and transporting – just one operation

Speed up your warehouse and dispatch processes with the KERN pallet truck scales.

Get the exact weight of a load and at the same time, transport it to a specific location, all in one operation. This reduces commissioning times and avoids queues in front of fixed floor scales.

These mobile weighing solutions are space-saving and deliver reliable weighing results. Differences between given and actual weights can be determined quickly e.g. in the goods-in and out department. This uncovers inaccurate quantities, saves time and money and therefore ensures a very short amortisation period of the scales original cost.

KERN offers a carefully coordinated range from the affordable entry level model to the comfort model with removable battery pack.

KERN pallet truck scales are of robust industrial quality, with high-level protection against dust and water splashes, with high-contrast, easy-to-read displays as well as solid wheels and load rollers – all this helps to give you practical support in your work – day after day.

Of course, all KERN pallet truck scales can also be calibrated and delivered with a DAkkS calibration certificate (optional). This ensures the high level of accuracy of your pallet truck scale.

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Quick-Finder Pallet truck scales

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For an explanation on the pictos, see front flap

- = standard  ● = option

Florian Bächle
Product specialist Pallet truck scales

Tel.  +49 7433 9933 - 118
Fax  +49 7433 9933 - 29118
florian.baechle@kern-sohn.com

only € 1320,-

- The power pack in the dispatch department and the warehouse
- The display device is well-protected by a metal frame
- Optimised load rollers so that you can get over rough ground more easily and greater manoeuvrability

KERN VHB  Page 153
Pallet truck scale KERN VHB

Features
- **PRE-TARE function** for manual subtraction of a known container weight, useful for checking fill-levels
- **Display device**: plastic, protection against dust and water splashes IP65
- **Load fork**: Protection against dust and water splashes IP67, temporary use in wet areas possible
- **Pivot range 206°**
- **Castors**: Solid rubber on aluminium rims
- **Load rollers**: Tandem tyres to overcome thresholds and obstacles more easily
- **Totalising of weights**
- **Ready for use**: Batteries included, 4×1.5 V AA, operating time up to 80 h

Technical data
- **Large LCD display**, digit height 28 mm
- **Permissible ambient temperature** -10 °C/40 °C

Accessories
- Castors made of red polyurethane on aluminium rims. Ideal for light-coloured flooring as they leave less visible abrasive marks. Suitable for the current models of the pallet truck scale range KERN VHB (when retrofitting, please give the serial number of the pallet truck scale available when ordering), scope of delivery: 1 item, KERN VHB-A02, € 160,-

### Technical data

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<th>Model</th>
<th>Weighing capacity [Max] [kg]</th>
<th>Readability [d] [kg]</th>
<th>Net weight approx. [kg]</th>
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<th>Option DAkkS Calibr. Certificate</th>
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Pallet truck scale with complete protection against dust and water splashes IP65/67 and a memory for a container weight.

Shipment via freight forwarder. Please ask for dimensions, gross weight, shipping.

www.kern-sohn.com · Order hotline +49 7433 9933-0
KERN & SOHN GmbH
Balances, Test weights, Microscopes,
DAkkS calibration laboratory
Ziegelei 1
72336 Balingen
Germany

Tel.  +49 7433 9933-0
Fax  +49 7433 9933-149

info@kern-sohn.com
www.kern-sohn.com

1769
Ancestor Johann Jakob Sauter built the Hahn inclination scale out of iron, a foundation stone for weighing for the balance industry in Southern Germany

1844
KERN is founded – precision balances are produced

1863
A proud Gottlieb Kern with his staff

1880
Pharmaceutical balance with Aesculap

1923
Inflation – KERN wages are paid with self printed currency

1980
The electronic balance ousts mechanical devices

1994
Accredited DKD laboratory (ISO 17025)

2000
New premises in Balingen

2002
Existing QM system certification in accordance with DIN EN ISO 9001:2000 standards

2007
Approval for the manufacture of medical products (DIN EN 13485 and 93/42/EEC)

2008
Authorisation for initial verification by the manufacturer (2009/23/EC)

2009
Approval for the manufacture and sale of height rods (DIN EN 13485 and 93/42/EEC)

2012
Verification point for non-automatic balances and test weights.

New customer portal www.kern-sohn.com goes live

2014
Expansion of the product range to include optical instruments (microscopes and refractometers)

2015
Inauguration of Ziegelei 2.0 with computer-controlled high-bay warehouse

2017
Come with KERN into the digital future: Expansion of the model ranges compatible with Industry 4.0, as well as the related services

2019
Significant anniversary year! 25 years of accredited DKD laboratory 175 years of KERN & SOHN 250 years of balance manufacture in the Sauter family-owned company

2020
Construction of Ziegelei 3.0, extension of administration building

2023
Significant anniversary year! 25 years of accredited DKD laboratory 175 years of KERN & SOHN 250 years of balance manufacture in the Sauter family-owned company

Ancestral line: Johann Jakob Sauter built the Hahn inclination scale out of iron, a foundation stone for the balance industry in Southern Germany. KERN is founded with the production of precision balances. Gottlieb Kern proudly posed with his staff. Pharmaceutical balances were introduced. Inflation affected KERN wages, which were paid in self-printed currency. The electronic balance replaced mechanical devices. An accredited DKD laboratory was established. New premises were built in Balingen. A quality management system was certified in accordance with DIN EN ISO 9001:2000 standards. Approval was given for the manufacture of medical products. Initial verification was authorized by the manufacturer. Approval was obtained for the manufacture and sale of height rods. A verification point was established for non-automatic balances and test weights. A customer portal was launched. The product range expanded to include optical instruments. Ziegelei 2.0 was inaugurated with a computer-controlled high-bay warehouse. KERN embraced the digital future with expanded model ranges compatible with Industry 4.0. Major milestones included 25 years of accredited DKD laboratory, 175 years of KERN & SOHN, and 250 years of balance manufacture in the Sauter family-owned company. Construction of Ziegelei 3.0 extended the administration building.