





SPECIAL EQUIPMENT: SCALES TO MEET PRE-PACKAGING LEGISLATION

PROFESSIONAL MEASURING



2018

KERN Pictograms

 Internal adjusting: Quick setting up of the balance's accuracy with internal adjusting weight (motordriven)	 GLP/ISO log: The balance displays serial number, user ID, weight, date and time, regardless of a printer connection	 Suspended weighing: Load support with hook on the underside of the balance
 Adjusting program CAL: For quick setting up of the balance's accuracy. External adjusting weight required	 GLP/ISO log: With weight, date and time. Only with KERN printers, see page 154/155	 Battery operation: Ready for battery operation. The battery type is specified for each device
 Memory: Balance memory capacity, e.g. for article data, weighing data, tare weights, PLU etc.	 Piece counting: Reference quantities selectable. Display can be switched from piece to weight	 Rechargeable battery pack: Rechargeable set
 Alibi memory: Secure, electronic archiving of weighing results, complying with the 2014/31/EU standard. For details see page 191	 Recipe level A: The weights of the recipe ingredients can be added together and the total weight of the recipe can be printed out	 Universal mains adapter: with universal input and optional input socket adapters for A) EU, GB B) EU, GB, CH, USA C) EU, GB, CH, USA, AUS
 Data interface RS-232: To connect the balance to a printer, PC or network	 Recipe level B: Internal memory for complete recipes with name and target value of the recipe ingredients. User guidance through display	 Mains adapter: 230V/50Hz in standard version for EU. On request GB, USA or AUS version available
 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	 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	 Power supply: Integrated in balance. 230V/50Hz standard EU. More standards e.g. GB, USA or AUS on request
 USB data interface: To connect the balance to a printer, PC or other peripherals	 Totalising level A: The weights of similar items can be added together and the total can be printed out	 Weighing principle: Strain gauges Electrical resistor on an elastic deforming body
 Bluetooth* data interface: To transfer data from the balance to a printer, PC or other peripherals	 Percentage determination: Determining the deviation in % from the target value (100 %)	 Weighing principle: Tuning fork A resonating body is electromagnetically excited, causing it to oscillate
 WLAN data interface: To transfer data from the balance to a printer, PC or other peripherals	 Weighing units: 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	 Weighing principle: Electromagnetic force compensation Coil inside a permanent magnet. For the most accurate weighings
 Control outputs (optocoupler, digital I/O): To connect relays, signal lamps, valves, etc.	 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	 Weighing principle: Single cell technology Advanced version of the force compensation principle with the highest level of precision
 Interface for second balance: For direct connection of a second balance	 Hold function: (Animal weighing program) When the weighing conditions are unstable, a stable weight is calculated as an average value	 Verification possible: The time required for verification is specified in the pictogram
 Network interface: For connecting the scale to an Ethernet network	 Protection against dust and water splashes IPxx: The type of protection is shown in the pictogram. For details see page 58	 DAkkS calibration possible (DKD): The time required for DAkkS calibration is shown in days in the pictogram
 Wireless data transfer: between the weighing unit and the evaluation unit using an integrated radio module	 Stainless steel: The balance is protected against corrosion	 Package shipment: The time required for internal shipping preparations is shown in days in the pictogram
 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	 Pallet shipment: The time required for internal shipping preparations is shown in days in the pictogram	

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 170 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/EEC

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 [0] 7433 9933-0



Service hotline

+49 [0] 7433 9933-199



Calibration hotline

+49 [0] 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 [0] 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.

Special equipment: Scales to meet Pre-packaging legislation

Pre-packaging legislation (FPVO)

This is anchored in the EC pre-packaging directive 76/211/EEC and serves as consumer protection within the framework of weights and measures laws when selling pre-packaged products commercially. It governs in detail the permitted tolerances (deviations) from the filling quantity stated on the sales label, as well as the quality of the verified balances being used for checking samples.

Pre-packaged products, which are produced and tested in accordance with pre-packaging legislation, carry the E symbol on their label.

Choosing the right verified checkweigher depends, on one hand, on the weighing range required and the largest permitted verification value in relation to the nominal quantity of the pre-packaged goods.

Nominal contents Q_N of the pre-packed goods	largest permitted Verification Value [e]
≤ 10 g (ml)	0,1 g
from 10 g (ml) to ≤ 50 g (ml)	0,2 g
from 50 g (ml) to ≤ 150 g (ml)	0,5 g
from 150 g (ml) to ≤ 500 g (ml)	1,0 g
from 500 g (ml) to $\leq 2,5$ kg (l)	2,0 g
from 2,5 kg (l) and more	5,0 g
from 10 kg (l) to ≤ 15 kg (l)	10 g
from 15 kg (l) to ≤ 25 kg (l)	20 g
from 25 kg (l) to ≤ 100 kg (l)	50 g

Volume values in ml or l are calculated using the weight and density of the liquid.

Order example:

The item to be checked is a pre-packaged product with a filling quantity of 250 g and an average tare value of 100 g. In accordance with the table above, a filling quantity of 250 g requires a checkweigher with a verification value [e] of maximum 1 g.

The right KERN product is either the **KERN FKTF 3K0.5LM** or the **KERN FKTF 6K1LM**

Calibration periods for checkweighers: These are usually 1 year and are therefore shorter than the general re-verification periods in many European countries.



Sample testing of a pre-packaged item with an average tare value, i.e. the relative constant packaging weight is entered as a fixed value



Sample testing of a pre-packaged item with fluctuating packaging weight, such as glass containers, i.e. the tare weight is entered individually for each sample.



Sample testing of a pre-packaged item which is empty (destructive analysis)

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Pre-packaging legislation

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Quick-Finder Scales to meet Pre-packaging legislation

Read-out [d] g	Weighing range [Max] kg	Model KERN	Price excl. of VAT ex works €	Page	DAYS M CAL EXT MEMORY RS 232 BATT	For an explanation on the pictos, see the front flap					
						1	○	●	●	●	●
0,5	3	FKTF 3K0.5LM	1050,-	152	1	○	●	●	●	●	●
1	6	FKTF 6K1LM	1050,-	152	1	○	●	●	●	●	●
2	12	FKTF 12K2LM	1050,-	152	1	○	●	●	●	●	●
5	30	FKTF 30K5LM	1050,-	152	1	○	●	●	●	●	●
10	60	FKTF 60K10LM	1050,-	152	1	○	●	●	●	●	●

● = Standard ○ = Option



Checkweigher with touch screen operation for sampling tests in accordance with certified pre-packaging legislation and controlling fill quantities in the production process

Features

- **Touchscreen bench scale** with special software for testing, in accordance with weights and measures regulations, that the permitted error limits (minus deviations) have been observed, in accordance with pre-packaging legislation, and for production control and monitoring when filling pre-packaged items to a target weight
- **The verifiable KERN FKTF** fulfills all the regulations of pre-packaging legislation. It has EC type approval which fulfills verification requirements, and which covers the special software for pre-packing legislation
- **The special software for pre-packaging legislation in the KERN FKTF has two functions:**
 - a) When selling pre-packaged products, filling tolerances are regulated in verification terms, in the interests of consumer protection. Here the software supports

compliance with the verification regulations of the pre-packaging legislation during certified sampling tests using the automatically generated largest permitted negative deviation compared with a given target weight (LL 2)

b) In the area of food stuff production, when setting and adjusting the production facility for filling pre-packaged goods to a target weight, the software will automatically display the lower limit value (LL 1) below which the item is not permitted.

- **Statistical function** in the form of daily or weekly records, also with date/time, machine number and user statement. Graphic display is also possible
- **Password protection** for secure manipulation of data which has been stored and collected
- **Protective working cover** included with delivery

Modes

- ① Weighing
- ② Checkweighing function in accordance with pre-packaging legislation
- ③ Controlling fill quantities

Functions

- Capacity display with ①
- Date/time, with ①, ②, ③
- Tare deduction automatic, with ②
- 400 item memories for master data, such as limit values, tare weights, items, machine, user as well as upper limit (UL), lower limit (LL), lower limit 1 (LL 1) and lower limit 2 (LL 2) ②, ③
- Sample testing in accordance with pre-packaging legislation with average tare value ③
- Sample testing in accordance with pre-packaging legislation with fluctuating tare ③
- Sample testing in accordance with pre-packaging legislation with fluctuating tare ②, ③
- Testing in accordance with pre-packaging legislation with an empty item (destructive analysis) ③
- Daily statistics from 10 sets of measurements ③
- Weekly statistics from 49 sets of measurements ③

Technical data

- Large backlit LCD touch display, digit height 18 mm, screen diagonal 5,8" (127×74 mm)
- Dimensions weighing surface, stainless steel, W×D 340×240 mm
- Dimensions housing W×D×H 350×390×120 mm
- Optional battery operation, 6×1.5 V Size C not included, operating time up to 15 h
- Net weight approx. 7 kg
- Permissible ambient temperature 10 °C/40 °C

Accessories

- **Protective working cover**, scope of delivery: 5 items, KERN FKB-A02S05, € 40,-
- **Matrix needle printer**, to print the weights on normal paper, ideal for long-term archiving, KERN 911-013, € 360,-
- **Suitable printers** see *Accessories*

STANDARD



OPTION



FACTORY



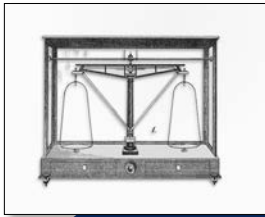
Model	Weighing range [Max] kg	Readout [d] g	Verification value [e] g	Minimum loa [Min] g	Minimum nominal quantity g	Price excl. of VAT ex works €	Options			
							Verification		DAkkS Calibr. Certificate	
KERN							M00 KERN	€	DKD KERN	€
FKTF 3K0.5LM	3	0,5	0,5	10	50	1050,-	965-227	55,-	963-127	72,-
FKTF 6K1LM	6	1	1	20	150	1050,-	965-228	70,-	963-128	88,-
FKTF 12K2LM	12	2	2	40	500	1050,-	965-228	70,-	963-128	88,-
FKTF 30K5LM	30	5	5	100	2500	1050,-	965-228	70,-	963-128	88,-
FKTF 60K10LM	60	10	10	200	10000	1050,-	965-229	93,-	963-129	105,-

Note: For applications that require verification, please order verification at the same time, initial verification at a later date is not possible. Verification at the factory, we need to know the full address of the location of use.

ONLY WHILE STOCKS LAST !

Tradition and innovation for more than 170 years

An independent family business, KERN since already 7 generations is synonymous with quality and reliability in customer service.



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/EU)



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

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