



## The moisture analyser for heavy, high-volume samples

### Features

- Backlit LCD display, digit height 17 mm
  - 1 Current moisture content in %
  - 2 Unit for displaying the results
  - 3 Drying process active
- **Halogen quartz glass heater** 400 W
- **Internal memory** for automatic sequence of 5 complete drying processes

- The last value measured remains on the display until it is replaced by a new measurement
- **10 sample plates included**
- **Protective working cover** included with delivery
- **Application handbook:** On the internet, you will find a practical application handbook containing many examples, field reports, settings and tips for each KERN moisture analyser

### STANDARD



### OPTION



Model KERN	DLB 160-3A
Readout [d]	0,001 g/0,01 %
Weighing range [Max]	160 g
Reproducibility, weight of sample 10 g	0,05 %
<b>Display after drying (Display can be switched over at any time)</b>	
Moisture [%] = Moisture content (M) from wet weight (W)	0-100 %
Dry content [%] = Dry weight (D) from W	100-0 %
ATRO [%] [(W-D) : D] · 100%	0-999 %
Moisture content (M)	Absolute value in [g]
Temperature range	35 °C-160 °C in steps up to 1 °C
Drying modes	<ul style="list-style-type: none"> <li>Standard drying</li> <li>Rapid drying, Pre-heat level, can be switched on</li> </ul>
Switch off criteria	<ul style="list-style-type: none"> <li>• Automatic unrestricted switch off (Selectable loss in weight 0,1%-9,9% in 60 s)</li> <li>• Time controlled switch off (1 min - 99 min)</li> <li>• Manual switch off at the press of a button</li> </ul>
Log output	<ul style="list-style-type: none"> <li>• Continuous output (residual weight)</li> <li>• At the end of the drying process, manual or automatic (Only in connection with KERN YKB-01N printer or PC)</li> </ul>
Overall dimensions W×D×H	210×340×225 mm
Net weight	approx. 4,2 kg
Option DAKKS Calibr. Certificate	Mass: 963-127
Option Factory Calibr. Certificate	Temperature: KERN 964-305

### Accessories

- **Protective working cover**, scope of delivery: 5 items, KERN ALJ-A01S05
- **Sample plates aluminium**, Ø 90 mm, unit of 80 pieces, KERN MLB-A01A
- **Round fiberglass filter** e.g. for samples that splash or become encrusted or for determining dry mass in liquids, high mechanical stability, with organic binder, box of 100 pieces, KERN RH-A02
- **Round fiberglass filter** e.g. for samples that splash or become encrusted or for determining dry mass in liquids, medium mechanical stability, without organic binder, box of 100 pieces, KERN YMF-A01
- **4 Temperature calibration set** consists of measuring sensor and display device, KERN DLB-A01
- **Thermal printer**, KERN YKB-01N
- **Matrix needle printer**, to print the weights on normal paper, ideal for long-term archiving, KERN 911-013

# KERN Pictograms

 <b>Internal adjusting:</b> Quick setting up of the balance's accuracy with internal adjusting weight (motordriven)	 <b>GLP/ISO log:</b> The balance displays serial number, user ID, weight, date and time, regardless of a printer connection	 <b>Suspended weighing:</b> Load support with hook on the underside of the balance
 <b>Adjusting program CAL:</b> For quick setting up of the balance's accuracy. External adjusting weight required	 <b>GLP/ISO log:</b> With weight, date and time. Only with KERN printers	 <b>Battery operation:</b> Ready for battery operation. The battery type is specified for each device
 <b>Memory:</b> Balance memory capacity, e.g. for article data, weighing data, tare weights, PLU etc.	 <b>Piece counting:</b> Reference quantities selectable. Display can be switched from piece to weight	 <b>Rechargeable battery pack:</b> Rechargeable set
 <b>Alibi memory:</b> Secure, electronic archiving of weighing results, complying with the 2014/31/EU standard.	 <b>Recipe level A:</b> The weights of the recipe ingredients can be added together and the total weight of the recipe can be printed out	 <b>Universal mains adapter:</b> with universal input and optional input socket adapters for A) EU, GB B) EU, GB, CH, USA C) EU, GB, CH, USA, AUS
 <b>Data interface RS-232:</b> To connect the balance to a printer, PC or network	 <b>Recipe level B:</b> Internal memory for complete recipes with name and target value of the recipe ingredients. User guidance through display	 <b>Mains adapter:</b> 230V/50Hz in standard version for EU. On request GB, USA or AUS version available
 <b>RS-485 data interface:</b> To connect the balance to a printer, PC or other peripherals. Suitable for data transfer over large distances. Network in bus topology is possible	 <b>Recipe level C:</b> 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	 <b>Power supply:</b> Integrated in balance. 230V/50Hz standard EU. More standards e.g. GB, USA or AUS on request
 <b>USB data interface:</b> To connect the balance to a printer, PC or other peripherals	 <b>Totalising level A:</b> The weights of similar items can be added together and the total can be printed out	 <b>Weighing principle: Strain gauges</b> Electrical resistor on an elastic deforming body
 <b>Bluetooth* data interface:</b> To transfer data from the balance to a printer, PC or other peripherals	 <b>Percentage determination:</b> Determining the deviation in % from the target value (100 %)	 <b>Weighing principle: Tuning fork</b> A resonating body is electromagnetically excited, causing it to oscillate
 <b>WLAN data interface:</b> To transfer data from the balance to a printer, PC or other peripherals	 <b>Weighing units:</b> 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	 <b>Weighing principle: Electromagnetic force compensation</b> Coil inside a permanent magnet. For the most accurate weighings
 <b>Control outputs (optocoupler, digital I/O):</b> To connect relays, signal lamps, valves, etc.	 <b>Weighing with tolerance range:</b> (Check-weighing) 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	 <b>Weighing principle: Single cell technology</b> Advanced version of the force compensation principle with the highest level of precision
 <b>Interface for second balance:</b> For direct connection of a second balance	 <b>Hold function:</b> (Animal weighing program) When the weighing conditions are unstable, a stable weight is calculated as an average value	 <b>Verification possible:</b> The time required for verification is specified in the pictogram +3 DAYS
 <b>Network interface:</b> For connecting the scale to an Ethernet network	 <b>Protection against dust and water splashes IPxx:</b> The type of protection is shown in the pictogram.	 <b>DAkkS calibration possible (DKD):</b> The time required for DAkkS calibration is shown in days in the pictogram +3 DAYS
 <b>Wireless data transfer:</b> between the weighing unit and the evaluation unit using an integrated radio module	 <b>Stainless steel:</b> The balance is protected against corrosion	 <b>Package shipment:</b> The time required for internal shipping preparations is shown in days in the pictogram 1 DAY
 <b>KERN Communication Protocol (KCP):</b> 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		 <b>Pallet shipment:</b> The time required for internal shipping preparations is shown in days in the pictogram 2 DAYS

## KERN – Precision is our business

To ensure the high precision of your balance KERN offers you the the appropriate test weight in the international OIML error limit classes E1-M3 from 1 mg - 2500 kg. In combination with a DAkkS calibration certificate the best pre-requisite for proper balance calibration.

The KERN DAkkS calibration laboratory today is one of the most modern and best-equipped DAkkS calibration laboratories for balances, test weights and force-measurement in Europe.

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

### Range of services:

- DAkkS calibration of balances with a maximum load of up to 50 t
- DAkkS calibration of weights in the range of 1 mg – 2500 kg
- Volume determination and measuring of magnetic susceptibility (magnetic characteristics) for test weights
- Database supported management of checking equipment and reminder service
- Calibration of force-measuring devices
- DAkkS calibration certificates in the following languages DE, GB, FR, IT, ES, NL, PL
- Conformity evaluation and reverification of balances and test weights

## Your KERN specialist dealer: