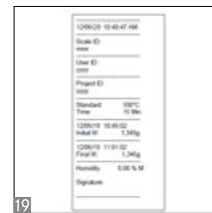
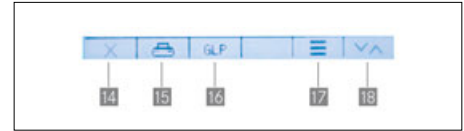
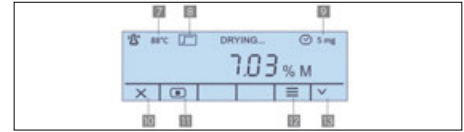


Moisture analyser KERN DLB



Moisture analyser with intuitive graphic display and step-by-step user guidance in 6 languages

**Features**

- Rapid and efficient operation thanks to the graphics display
- Backlit graphics display, digit height 11 mm
- Home screen:
  - 1 Main menu
  - 2 Start drying process
  - 3 Select drying temperature
  - 4 Select shut-off criteria
  - 5 Setting to zero/taring
  - 6 Stand-by

- During measurement:
  - 7 Current temperature
  - 8 Current heating profile
  - 9 Active shut-off criteria
  - 10 Abort drying process
  - 11 Stop drying process
  - 12 Display current drying parameters
  - 13 Toggle the unit for displaying the results
- At the end of the measurement:
  - 14 Exit drying program:
  - 15 Print measurement report
  - 16 (De)activate, edit GLP parameters
  - 17 Display detailed result
  - 18 Toggle the unit for displaying the results

- 400 W halogen-quartz glass heater
- User guidance in 6 languages (DE, EN, FR, IT, ES, PT)
- Automatic taring when starting a measurement by closing the lid
- The last value measured remains on the display until it is replaced by a new measurement
- 19 Internal GLP; printout of balance ID, project ID, user ID, values determined by the drying process etc.
- 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 |         |
|          |        |            |      |       |     |       |        |         |
| CAL EXT  | RS 232 | GLP INTERN | UNIT | 230 V | DMS | 1 DAY | DAkKS  | +3 DAYS |

| Modell KERN  | DLB 160-3A  |
|--|---|
| Readability [d]  | 0,001 g/0,01 %  |
| Weighing capacity [Max]  | 160 g   |
| Reproducibility weight of sample 2 g*                                  | 0,15 %  |
| 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   | <input checked="" type="checkbox"/> Standard drying<br><input type="checkbox"/> Rapid drying, preheating can be switched on   |
| Switch-off criteria  | <ul style="list-style-type: none"> <li>• Automatic unrestricted switch-off (Selectable loss in weight 1 mg/30 s-10 mg/30 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   | • Interval adjustable (5 s - 250 s)   |
| Overall dimensions W×D×H   | 215×345×235 mm  |
| Net weight   | approx. 4,7 kg  |
| Option DAkKS Calibr. Certificate                                       | Mass: KERN 963-127  |
| Option Factory Calibr. Certificate                                     | Temperature: KERN 964-305   |

\* application-dependent

**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 high mechanical stability, with organic binder, box of 100 pieces, KERN RH-A02
- Round fiberglass filter medium mechanical stability, without organic binder, box of 100 pieces, KERN YMF-A01
- Temperature calibration set consists of measuring sensor and display device, KERN DLB-A01N.
- Thermal printer, KERN YKB-01N
- Matrix needle printer, to print the weights on normal paper, ideal for long-term archiving, KERN 911-013

## Pictograms

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

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## 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, EN, FR, IT, ES, NL, PL
- Conformity evaluation and reverification of balances and test weights

## Your KERN specialist dealer:



# WolfLabs

**Pricing on any accessories shown can be found by keying the part number into the search box on our website.**

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct. If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

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Please contact us if this literature doesn't answer all your questions.