

Infrared moisture analyzer with graphics display and a vast database

STANDARD





















| Model KERN | MLS 50-3D |
|---|--|
| Readout [d] | 0,001 g / 0,01 % |
| Weighing range [Max] | 50 g |
| Reproducibility, | 0,1 % |
| weight of sample 2 g | |
| Reproducibility, | 0,02 % |
| weight of sample 10 g | 0,02 /0 |
| Display after drying (Display can be switched over at any time) | |
| Moisture [%] = Moisture | 0 - 100 % |
| content (M) from wet weight (W) | 0 - 100 /0 |
| Dry content [%] = | 100 - 0 % |
| Dry weight (D) from (W) | 100 - 0 % |
| ATRO [%] [(W-D):D] · 100% | 0 - 999 % |
| Moisture content (M) | Absolute value in [g] |
| Temperature range | 40 °C - 160 °C in steps up to 1°C |
| Drying modes | → Standard drying |
| | → Drying in levels |
| | ✓ Gentle drying |
| | ┌─ Rapid drying |
| Switch off criteria | Automatic switch off (AUTO 1 – 5) |
| | • Automatic unrestricted switch off (selectable 1–10 mg / 10-120 s |
| | • Time controlled switch off (1 min – 99 h 59 min) |
| | Manual switch off at the press of a button |
| Recall of measurement | Interval can be set from 1 sec - 10 min |
| | (Only when used with printer KERN YKB-01N or PC) |
| Overall dimensions WxDxH | 206x333x192 mm |
| Net weight | approx. 4,9 kg |
| 0 11 0 111 0 111 0 115 1 | 0/0.407 |
| Option DAkkS Calibr. Certificate | 963-127 |





Features

- Backlit graphic display, digit height 14mm
- Display during the drying process:
- Moisture display in %
- 2 Interim result in moisture-%
- Drying process active
- 4 Active result display
- 5 Active heating profile
- 6 Active switch-off criteria
- Stability display
- Previous drying time
- Current temperature
- 10 Drying process active
- **B** Display after the drying process:
- III End result in moisture-%
- 13 Active result display
- 14 Drying process has finished
- Infrared heater 400 W
- Observation window above the sample, useful during initial setting
- Balance contains memory for automatic sequence of 100 complete drying programs (92 drying programs with optimised drying characteristics for rapid sample warming and therefore shorter drying times, pre-installed at the factory), 100 users with related authorisations, 1000 drying processes performed and 1000 weighing results (alibi memory)
- The last value measured remains on the display until it is replaced by a new measurement
- The large ventilation slots in the heating cover combined with the sample viewing window in the form of a a metal grid, ensure that moisture exhausts quickly which leads to shorter drying times
- 10 sample plates included
- Application handbook: There are many practical examples in the user manual

Accessories

- 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. Box with 100 pieces, KERN RH-A02
- Temperature calibration set consists of measuring sensor and display device, KERN MLB-A12
- Protective working cover standard. Can be re-ordered, scope of delivery: 5 items, KERN ALS-A02S05
- Thermal printer, KERN YKB-01N

KERN Pictograms:



Internal adjusting: Quick setting up of the balance's accuracy with internal adjusting weight (motordriven).



Piece counting: Reference quantities selectable. Display can be switched from piece to weight.



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.



Recipe level A: Separate memory for the weight of the tare container and the recipe ingredients (net total).



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.



Recipe level B: Internal memory for complete recipes with name and target value of the recipe ingredients. User guidance through display.



Rechargeable battery pack: Rechargeable set.



Alibi memory: Electronic archiving of weighing results, complying with the 2009/23/EC standard.

Data interface RS-232: To connect the

balance to a printer, PC or network.



Recipe level C: Internal memory for complete recipes with name and target value of the recipe ingredients. User guidance through display, adjustment of recipe when dosages are exceeded, multiplier function, barcode.



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



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



• AHA •

RS 232

RS-485 data interface: To connect the balance to a printer, PC or other peripherals. High tolerance against electromagnetic disturbance.



Totalising level A: The weights of similar items can be added together and the total can be printed out.



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 C: Internal memory for complete recipes with name and target value of the recipe ingredients. User guidance through display, adjustment of recipe when dosages are exceeded, multiplier function, barcode



Weighing principle: Strain gauge Electrical resistor on an elastic



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



recognition.



deforming body. Weighing principle: Tuning fork

excited, causing it to oscillate.

For the most accurate weighings.

A resonating body is electromagnetically



Percentage determination: Determining the deviation in % from the target value (100 %).



Weighing principle: Electromagnetic force compensation Coil inside a permanent magnet.



WLAN

peripherals.

Control outputs (optocoupler, digital I/O): To connect relays, signal lamps, valves, etc.



Weighing units: Can be switched to e.g. nonmetric units at the touch of a key. See balance model. Please refer to KFRN's website for more details.



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.



Weighing with tolerance range: Upper and lower limiting values can be programmed individually for e.g. dosing, sorting and portioning.



Verification possible:

The time required for verification is specified in the pictogram.



Network interface: For connecting the scale to an Ethernet network. With KERN products you can use a universal RS-232/LAN converter.



Hold function: (Animal weighing program) When the weighing conditions are unstable, a stable weight is calculated as an average



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.



Protection against dust and water splashes IPxx: The type of protection is shown in the pictogram.



Package shipment: The time required for internal shipping preparations is shown in days in the pictogram.



GLP/ISO log: The balance displays the weight, date and time, regardless of a printer



ATEX explosion protection: Suitable for use in hazardous industrial environments, in which there is explosion danger. The ATEX marking is specified for each device.



Pallet shipment: The time required for internal shipping preparations is shown in days in the pictogram.



GLP/ISO log: With weight, date and time. Only with KERN printers.



Stainless steel: The balance is protected against corrosion.



Warranty: The warranty period is shown in the pictogram.

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 - 2000 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 forcemeasurement 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
- Database supported management of checking equipment and reminder service
- Calibration of force-measuring devices • DAkkS calibration certificates in the following languages D, GB, F, I, E, NL, PL

Your KERN specialist dealer: