KERN BALANCES & TEST SERVICES CATALOGUE 2021

<u>KERN</u>[°]

Moisture analyser KERN DLB



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

Features

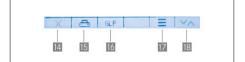
- Rapid and efficient operation thanks to the graphics display
- Backlit graphics display, digit height 11 mm
 Start screen:
- Main menu
- 2 Start drying process
- Select drying temperature
- Select drying temperature
 Select shut-off criteria
- **5** Setting to zero/taring
- Stand-by
- During maga
- During measurement: Current temperature

STANDARD	OPTION						
		GLP	2				DAkkS
CAL EXT	RS 232	INTERN	UNIT	230 V	DMS	1 DAY	+3 DAYS

- B Current heating profile
- Active shut-off criteria
- Abort drying process
- 11 Stop drying process
- Display current drying parameters
- **I** Toggle the unit for displaying the results
- At the end of the measurement:
- Exit drying program:
- Print measurement report
- 16 (De)activate, edit GLP parameters
- 🕼 Display detailed result
- 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
- 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

Modell KERN	DLB 160-3A					
Readability [d]	0,001 g/0,01 %					
Weighing capacity [Max]	160 g					
Reproducibility	0,15 %					
weight of sample 2 g*						
Reproducibility,	0,05 %					
weight of sample 10 g*						
Display after drying (Display can be switched over at any time)						
Moisture [%] = Moisture	0-100 %					
content (M) from wet weight (W)						
Dry content [%] =	100-0 %					
Dry weight (D) from W						
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	J ■ Standard drying					
Drying modes	Rapid drying, preheating can be switched on					
	Automatic unrestricted switch-off (Selectable loss in weight 1 mg/30 s-10 mg/30 s)					
Switch-off criteria	Time controlled switch-off (1 min – 99 min)					
	 Manual switch-off at the press of a button 					
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					

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

* application-dependent

18 Toggle th • 400 W hald

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Pictograms



Internal adjusting: Quick setting up of the balance's accuracy with



CAL EXT

Adjusting program CAL: For quick setting up of the balance's accuracy. External adjusting weight required

internal adjusting weight (motordriven)



Easy Touch: Suitable for the connection, data transmission and control through PC, tablet or smartphone.



Memory:

Balance memory capacity, e.g. for article data, weighing data, tare weights, PLU etc.



Alibi memory:

Secure, electronic archiving of weighing results, complying with the 2014/31/EU standard

Data interface RS-232: • 6550.•

To connect the balance to a printer, PC or RS 232 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



WiFi data interface:

To transfer data from the balance to a printer, PC or other peripherals



WIFI

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



balance calibration.

Range of services:

characteristics) for test weights

· Calibration of force-measuring devices

ment in Europe

Network interface:

For connecting the scale to an Ethernet network

KERN – Precision is our business



KCP

PROTOCOL

GLP/ISO log:

digital systems

The balance displays serial number, user ID, weight, date and time, regardless of a printer connection

KERN Communication Protocol (KCP):

It is a standardized interface command set for

KERN balances and other instruments, which

devices featuring KCP are thus easily integrated

with computers, industrial controllers and other

allows retrieving and controlling all relevant parameters and functions of the device. KERN

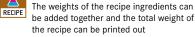


With weight, date and time. Only with KERN PRINTER printers

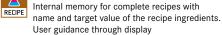
Piece counting:

Reference quantities selectable. Display can PCS be switched from piece to weight

Recipe level A:



Recipe level B:



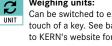
Totalising level A:

- 88' The weights of similar items can be added SUM together and the total can be printed out

Percentage determination:

Determining the deviation in % from the target PERCENT value (100 %)

Weighing units:



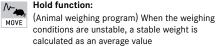
Can be switched to e.g. nonmetric units at the touch of a key. See balance model. Please refer to KERN's website for more details



Weighing 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

Hold function:





Protection against dust and water splashes IPxx:

The type of protection is shown in the pictogram

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To ensure the high precision of your balance KERN offers you the the appropriate test

In combination with a DAkkS calibration certificate the best pre-requisite for proper

The KERN DAkkS calibration laboratory today is one of the most modern and bestequipped DAkkS calibration laboratories for balances, test weights and force-measure-

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.

· Volume determination and measuring of magnetic susceptibility (magnetic

· Conformity evaluation and reverification of balances and test weights

· Database supported management of checking equipment and reminder service

· DAkkS calibration certificates in the following languages DE, EN, FR, IT, ES, NL, PL

· 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

weight in the international OIML error limit classes E1-M3 from 1 mg - 2500 kg.

Your KERN specialist dealer:

Impex Produkter AS Gamle Drammensvei 107 1363 Høvik www.impex.no info@impex.no Tel.: 22 32 77 20



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UNDER

BATT

Universal mains adapter:

Suspended weighing:

Battery operation:

is specified for each device

the balance

with universal input and optional input socket MULTI 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

Load support with hook on the underside of

Ready for battery operation. The battery type





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



Weighing principle: Strain gauges:

Electrical resistor on an elastic deforming body



Weighing principle: Tuning fork:

A resonating body is electromagnetically excited, causing it to oscillate

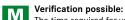


Weighing principle: Electromagnetic force compensation:

Coil inside a permanent magnet. For the most accurate weighings



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



The time required for verification is specified +3 DAYS in the pictogram

DAkkS calibration possible (DKD): DAkkS The time required for DAkkS calibration is

+3 DAYS shown in days in the pictogram

Factory calibration (ISO):



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2 DAYS

The time required for Factory calibration is shown in days in the pictogram



Pallet shipment:

The time required for internal shipping 1 DAY

preparations is shown in days in the pictogram

The time required for internal shipping

preparations is shown in days in the pictogram