

# DIGITAL REFRACTOMETERS TYPE: HAND-HELD

Laboratory | Industry | Food Industry



# KERN Pictograms

 <b>360° rotatable microscope head</b>	 <b>Fluorescence illumination for compound microscopes</b> With 100 W mercury lamp and filter	 <b>Integrated scale</b> In the eyepiece	 <b>Battery operation</b> Ready for battery operation. The battery type is specified for each device.
 <b>Monocular Microscope</b> For the inspection with one eye	 <b>Fluorescence illumination for compound microscopes</b> With 3 W LED illumination and filter	 <b>SD card</b> For data storage	 <b>Rechargeable battery pack</b> Rechargeable set
 <b>Binocular Microscope</b> For the inspection with both eyes		 <b>USB 2.0 interface</b> For data transmission	 <b>Plug-in power supply</b> 230V/50Hz in standard version for EU. On request GB, AUS or USA version.
 <b>Trinocular Microscope</b> For the inspection with both eyes and the additional option for the connection of a camera	 <b>Phase contrast unit</b> For a higher contrast	 <b>USB 3.0 interface</b> For data transmission	
 <b>Abbe Condenser</b> With high numerical aperture for the concentration and the focusing of light	 <b>Darkfield condenser/unit</b> For a higher contrast due to indirect illumination	 <b>WIFI data interface:</b> For transmitting of the picture to a mobile display device	 <b>Integrated power supply unit</b> Integrated in microscope. 230V/50Hz standard EU. More standards e.g. GB, AUS or USA on request.
 <b>Halogen illumination</b> For pictures bright and rich in contrast	 <b>Polarising unit</b> To polarise the light	 <b>HDMI digital camera</b> For direct transmitting of the picture to a display device	
 <b>LED illumination</b> Cold, energy-saving and especially long-life illumination	 <b>Infinity system</b> Infinity corrected optical system	 <b>PC software</b> To transfer the measurements from the device to a PC.	 <b>Package shipment</b> The time required to manufacture the product internally is shown in days in the pictogram.
 <b>Incident illumination</b> For non-transparent objects	 <b>Zoom magnification</b> For stereomicroscopes	 <b>Automatic temperature compensation</b> For measurements between 10 °C and 30 °C	
 <b>Transmitting illumination</b> For transparent objects	 <b>Auto-focus</b> For automatic control of the focus level	 <b>Protection against dust and water splashes IPxx:</b> The type of protection is shown in the pictogram cf. DIN EN 60529:2000-09, IEC 60529:1989+A1:1999 +A2:2013	 <b>Pallet shipment</b> The time required to manufacture the product internally is shown in days in the pictogram.
 <b>Fluorescence illumination</b> For stereomicroscopes	 <b>Parallel optical system</b> For stereomicroscopes, enables fatigue-proof working		

# Abbreviations

<b>C-Mount</b>	Adapter for the connection of a camera to a trinocular microscope	<b>SLR camera</b>	Single-Lens Reflex camera
<b>FPS</b>	Frames per second	<b>SWF</b>	Super Wide Field (Field number at least Ø 23 mm for 10× eyepiece)
<b>H(S)WF</b>	High (Super) Wide Field (Eyepiece with high eye point for wearers of glasses)	<b>W.D.</b>	Working Distance
<b>LWD</b>	Long Working Distance	<b>WF</b>	Wide Field (Field number up to Ø 22 mm for 10× eyepiece)
<b>N.A.</b>	Numerical Aperture		

KERN Models A – Z

OAB-L 108

OBE-12 · OBE-13 12

OBE-S 65

OBL-12 · OBL-13 14

OBL-14 · OBL-15 16

OBL-S · OBN-S 66

OBN-13 · OBN-15 18

OBN-14 NEW 20

OBS-1 8

OBT-1 · OBT-2 NEW 10

OCM-1 22

OCS-9 24

ODC-24 88

ODC-25 NEW 89

ODC-82 · ODC-83 · ODC-84 85

ODC-85 · ODC-86 86

ODC-87 · ODC-88 · ODC-89 87

OIV-2 62

OIV-3 · OIV-9 NEW 60

OIV-6 63

OKM-1 26

OKO-1 28

OLM-1 30

OPO-1 33

ORA 92-98

ORL-B 105

ORM 99-104

OSE-4 · OZL-9 · OZM-9 71

OSE-42 36

OSF-43 38

OXM-9 90

OZB-H 81

OZB-IR 83

OZB-M 74

OZB-UE 80

OZB-UP 79

OZG-4 56

OZL-44 40

OZL-45 46

OZL-45R 48

OZL-46 42

OZL-47 44

OZL-S 67

OZM-5 50

OZM-9 70

OZM-S · OZP-S 68

OZP-5 52

OZS-5 54

NEW New model

KERN Customer Consultants

With questions about our products and services, we will be happy to advise you:

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KERN Hotlines



Technical questions about our products?

You will find assistance here quickly: +49 7433 9933 - ...

Service-Hotline

for general technical questions about your KERN product

→ 199

Optical Devices

for all technical questions concerning our microscopes, microscope cameras, refractometers, etc.

→ 777

Laboratory and Analytical Balances

for all technical questions concerning our high quality precision balances, analytical balances (especially with electromagnetic force-compensated measuring systems, tuning fork and high application density)

→ 444

SAUTER Measuring Instruments

for all technical questions concerning our SAUTER measuring instruments, test benches, force measuring accessories (clamps etc.), SAUTER software

→ 555

System Solutions Industry 4.0

for all technical questions concerning the interlocking of the latest information and communication technology with our scales, load cells and measuring devices as well as questions about KERN software

→ 200

Calibration and Verification Service

for any questions concerning our calibration and verification service

→ 196



Transport and storage case



Rear view, screw-on battery compartment cover

Digital refractive index measurement for laboratories and the industry  
for multi-application ► Laboratory refractometer

Features

- The models in the KERN ORL range are accurate, universal and maintenance-free digital desktop refractometers
- Other key features are the extra-large measuring range and a high degree of accuracy
- With their handy design, they are ideal for convenient and rapid everyday use
- The large, easy-to-read multi-function display with integrated temperature display supports the user to reliably determine the measurement
- The integrated automatic temperature compensation (ATC), avoids the manual conversion of the measurement. This allows a quick and efficient usage of the instrument

- Rapid, user-friendly calibration of the refractometer is possible at any time using standard commercial distilled water
- Mean value measurement (15 measurements)
- The following accessory-parts are included:
  - Pipette
  - Storage box
  - USB cable
  - Power adapter
  - Screwdriver

Technical data

- Measurement temperature: 0 °C – 40 °C
- Overall dimensions W×D×H 180×100×55 mm
- Net weight approx. 365 g (without battery)
- Power supply: USB connection, as an alternative 1 × battery 3.7 V 3000 mA (not included with delivery)
- ATC (Automatic Temperature Compensation)
- Minimum sample volume: 0,3–0,4 ml
- Automatic energy management (AUTO-OFF after 3 Minutes)
- Mean value measurement (15 measurements)

Accessories

- Rechargeable Battery 3,7 V 3000 mA, KERN ORL-A2007, € 65,–
- ORA-A1010 Calibration liquid

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**Note:** Also available with calibration certificate, see page 106

STANDARD

AUTO  
ATC

USB 2.0

1 DAY

OPTION

ACCUR

Model	Scales	Measuring range	Accuracy	Division	Price excl. of VAT ex works €
KERN					
ORL 94BS	Brix Refractive index	0 – 94 % 1,3330 – 1,5290 nD	± 0,1 % ± 0,0002 nD	0,1 % 0,0001 nD	890,–

## The oldest Precision Balance Factory in Germany

### KERN & SOHN GmbH

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Printed in Germany by KERN & SOHN GmbH  
z-co-en-kp-20251

