



KERN 24 Analogue Polarimeter Instruction Manual

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KERN®

KERN 24 Analogue Polarimeter



Product Information

Specifications:

- **Product Type:** Manual Polarimeters
- **Usage:** Professional Measuring
- **Power Supply:** Battery operation, Plug-in power supply, Integrated power supply unit
- **Data Interfaces:** SD card, USB 2.0, USB 3.0, WIFI, HDMI
- **Additional Features:** Various illumination types, Magnification options, Auto-focus, Infinity system, Phase contrast unit, Darkfield condenser, Polarising unit
- **Protection:** Protection against dust and water splashes
- **Accessories:** PC software, C-Mount adapter, SLR camera compatibility

Product Usage Instructions

Power Supply:

The product can be powered by batteries, a plug-in power supply (230V/50Hz), or an integrated power supply unit. Ensure you use the specified battery type if operating on batteries.

Data Transmission:

Use the provided interfaces (SD card, USB 2.0, USB 3.0, WIFI, HDMI) for data storage and transmission as needed.

Illumination:

Choose the appropriate illumination type (Halogen, LED, Incident, Transmitting, Fluorescence) based on the nature of the objects being inspected for optimal visibility.

Magnification and Focus:

Utilize the zoom magnification and auto-focus features for precise and detailed observations. The infinity system and phase contrast unit can enhance image quality.

Protection:

Ensure the product is handled carefully to maintain the protection against dust and water splashes as per the

specified IPxx rating.

Frequently Asked Questions (FAQ)

- **How do I know which illumination type to use?**

Select the illumination type based on the transparency of the objects you are inspecting. Use Halogen for bright images, LED for energy-saving long-life illumination, Incident for nontransparent objects, and Transmitting for transparent objects.

- **Can I connect a camera to this product?**

Yes, you can connect a camera using the C-Mount adapter or utilize the HDMI digital camera interface for direct transmitting of images to a display device.

KERN Pictograms

- 360° rotatable microscope head

- **Monocular Microscope**

For the inspection with one eye

- **Binocular Microscope**

For the inspection with both eyes

- **Trinocular Microscope**

For the inspection with both eyes and the additional option for the connection of a camera

- **Abbe Condenser**

With high numerical aperture for the concentration and the focusing of light

- **Halogen illumination**

For pictures bright and rich in contrast

- **LED illumination**

Cold, energy-saving and especially long-life illumination

- **Incident illumination**

For non-transparent objects

- **Transmitting illumination**

For transparent objects

- **Fluorescence illumination**

For stereomicroscopes

- **Fluorescence illumination for compound microscopes**

With 100 W mercury lamp and filter

- **Fluorescence illumination for compound microscopes**

With 3 W LED illumination and filter

- **Phase contrast unit**

For a higher contrast

- **Darkfield condenser/ unit**

For a higher contrast due to indirect illumination

- **Polarising unit**

To polarise the light

- **Infinity system**

Infinity corrected optical system

- **Zoom magnification**

For stereomicroscopes

- **Auto-focus**

For automatic control of the focus level

- **Parallel optical system**

For stereomicroscopes, enables fatigue-proof working

- **Integrated scale**

In the eyepiece

- **SD card**

For data storage

- **USB 2.0 interface**

For data transmission

- **USB 3.0 interface**

For data transmission

- **WIFI data interface:**

For transmitting of the picture to a mobile display device

- **HDMI digital camera**

For direct transmitting of the picture to a display device

- **PC software**

To transfer the measurements from the device to a PC.

- **Automatic temperature compensation**

For measurements between 10 °C and 30 °C

- **Protection against dust and water splashes IPxx:**

The type of protection is shown in the pictogram cf. DIN EN 60529:2000-09, IEC 60529:1989+A1:1999 +A2:2013

- **Battery operation**

Ready for battery operation.

The battery type is specified for each device.

- **Battery operation rechargeable**

Prepared for a rechargeable battery operation

- **Plug-in power supply**

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

- **Integrated power supply unit**

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

- **Package shipment**

The time required to manufacture the product internally is shown in days in the pictogram.

- **Pallet shipment**

The time required to manufacture the product internally is shown in days in the pictogram.

Abbreviations

- **C-Mount** Adapter for the connection of a camera to a trinocular microscope
- **FPS** Frames per second

- **H(S)WF** High (Super) Wide Field (Eyepiece with high eye point for wearers of glasses)
- **LWD** Long Working Distance
- **N.A.** Numerical Aperture
- **SLR camera** Single-Lens Reflex camera
- **SWF** Super Wide Field (Field number at least Ø 23 mm for 10× eyepiece)
- **W.D.** Working Distance
- **WF** Wide Field (Field number up to Ø 22 mm for 10× eyepiece)

KERN Models A – Z

- **OAB-L** 110-111
- **OBE-12** · **OBE-13** 16
- **OBE-S** 67
- **OBL-12** · **OBL-13** 16
- **OBL-14** · **OBL-15** 18
- **OBL-S** · **OBN-S** 68
- **OBN-13** · **OBN-15** 20
- **OBN-14** 22
- **OBS-1** 10
- **OBT-1** 12
- **OCM-1** 24
- **ODC-2** 89
- **ODC-82** · **ODC-83** · **ODC-84** 86
- **ODC-85** · **ODC-86** 87
- **ODC-87** · **ODC-88** · **ODC-89** 88
- **OIV-2** 64
- **OIV-3** 63
- **OIV-6** 65
- **OKM-1** 27
- **OKO-1** 29
- **OLM-1** 31
- **OPO-1** 34
- **ORA** 100
- **ORL-B** 107
- **ORM** 106
- **OSE-4** · **OZL-9** · **OZM-9** 73
- **OSE-42** 38
- **OSF-4G** 40
- **OXM-9** 90
- **OZB-H** 82
- **OZB-IR** 84
- **OZB-M** 79
- **OZB-UE**
- **OZB-UP** 80

- **OZG-4**_ 58
- **OZL-44**_ 42
- **OZL-45**_ 48
- **OZL-45R**_ 50
- **OZL-46**_ 44
- **OZL-47**_ 46
- **OZL-S**_ 69
- **OZM-5**_ 52
- **OZM-9**_ 72
- **OZM-S · OZP-S**_ 70
- **OZP-5**_ 54
- **OZS-5**_ 56
- **OXM-9 (Software OXM 901 · OXM 902)** 90

KERN Customer Consultants

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

- **UK, IE, IS, FR, Maghreb, BE, LUX**



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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

Features

- The models of the serie KERN OAB-L are manual polarimeters which are characterised by its ergonomic design and easy handling
- The powerful 589 nm sodium vapour lamp is the optimum light source to produce a linear, polarised beam of light
- The 1° scale division including Nonius (0.05°) enables precise definition of the angle of rotation of the substance to be observed

- To hold liquid samples, two glass cuvettes (100 mm/200 mm) are included with the delivery
- **Included with delivery:**
Sodium vapour lamp, 100 mm glass cuvette, 200 mm glass cuvette, replacement lenses and sealing rings for cuvettes

Technical data

- **Light source:** Sodium vapour lamp (589 nm)
- **Stabilisation time:** 10 mins after switching on
- **Total dimensions W×D×H** 430×140×310 mm
- **Net weight approx.** 3,5 kg

Scope of application: Laboratory/Education



Cuvette in measuring chamber

The reliable polarimeters in the OAB-L range have been designed for simple laboratory applications as well as practical training. You can evaluate liquid, optically-active samples with chiral characteristics with this device. Typical applications are determining kinetics in cane sugar inversion, determining mutarotation of glucose and investigation of starch hydrolysis. The optical rotation is measured in degrees.

The main scope of applications is:

- Pharmacy
- Sugar industry: for example cane sugar
- Beverage industry
- Food industry
- Chemical industry
- Laboratories
- Training

| Model | Scales | Measuring range | Division | Vernier | Wave length | Price excl. of VAT ex works € |
|------------------|------------------|-----------------|-----------|--------------|-------------|--|
| KERN | | | | | | |
| OAB 10LN* | Optical rotation | $\pm 180^\circ$ | 1° | $0,05^\circ$ | 589 nm | 920,- |

! *ONLY WHILE STOCKS LAST

Accessory parts: OAB



Cuvette 10 and 20 cm

| Model | Description | Price excl. of VAT ex works € |
|-------------------|--|--|
| KERN | | |
| OAB-A2501 | Glass cuvette, Length: 100 mm (Spare part) | 110,- |
| OAB-A2502 | Glass cuvette, Length: 200 mm (Spare part) | 110,- |
| OAB-A2581* | Sodium vapour lamp, Wave length: 589 mm (Spare part) | 120,- |

*For model OAB 10LN only

FOR MORE INFO

Discover the multifaceted World of Balances, Microscopes and Measuring Technology from KERN online:

www.kern-sohn.com


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- Technical Product Data Sheets
- Operating Instructions

- Descriptive Image and Video Material
- Useful KERN Services
- Technical Glossary
- KERN Dealer Portal
- Practical Filter and Search Functions

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Documents / Resources

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|  | <p>KERN 24 Analogue Polarimeter [pdf] Instruction Manual 24 Analogue Polarimeter, 24, Analogue Polarimeter, Polarimeter</p> |
|---|--|

References

- 14Polarimeterskern-sohn.com
- [Your Name as Your Email | Hover Realnames](#)
- [User Manual](#)

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