



Motic®

MORE THAN MICROSCOPY

BA310POL | ADVANCED POLARIZATION MICROSCOPE





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Based on the success of its popular BA Microscope Series for Bio-Medical applications, Motic is pleased to introduce the new **BA310POL**, an extremely powerful yet affordable **Polarization microscope for Transmitted light samples**.

The BA310POL is designed for the examination of birefringent samples from petrography and mineralogy, and can also be used for the synthetic materials industry where repeatable observations can be performed with efficiency and reliability. The BA310POL also works especially well in **Educational applications of material professions**, where affordability and ease-of-use are key requirements.

Objectives

Motic introduces its new **strain-free EC Plan Achromatic objectives**. These objectives are made of high quality glass and follow the successful Motic CCIS® Optical concept. Multi-layer coating ensures improved contrast and image quality. The ball bearing **4-fold nosepiece** shows a **reversed orientation** of the lenses. In reference on a given objective position, all other objectives can be centered individually by counter-sunk screws.

Magnification	N.A.	W.D.(mm)
EC Plan 4X	0.10	15.90
EC Plan 10X	0.25	17.40
EC Plan 20X	0.45	0.90
EC Plan 40X	0.65	0.50
EC Plan 60X	0.80	0.35

Eyepieces

The **standard eyepieces**, **N-WF 10X/20** with high eyepoint for eyeglass wearers, made of high quality optical glass, provide consistent diopter adjustments for both eyes. As required for polarization work, one eyepiece is equipped with a **fixed crosshair reticule**.

Eyepiece Tubes

Incorporating an **interpupillary distance of 55-75mm**, the BA310POL observation tubes guarantee hours of fatigue-free viewing due to an **ergonomic viewing angle of 30°**. A large **Field of View (20mm)** enables fast and comfortable screening.

The **Trinocular tube** allows digital documentation by using a wide variety of digital cameras, with a **standard 20/80 light split** through the photo/video port. As an **option**, a **0/100 light split** tube is available.



Intermediate Tube

As an integral part of the BA310POL setup, the **Intermediate tube** carries an **Analyzer**, **Bertrand lens** and **compensator slot**. The **Analyzer** is **360° rotatable**, with a complete scale of 1° increment. A fixing screw helps to freeze the position of best extinction.

The built-in **Bertrand lens** is **focusable and centerable**, giving access to the back focal plane of the objectives, especially when working in the Conoscopic method. A **DIN compliant compensator slot** (20mm x 6mm) allows the use of all established compensators.

Illumination

The **Transmitted light illumination** is based on a **6V/30W** Halogen light source. With an **adjustable field diaphragm** and **aperture diaphragm**, repeatable even and **homogenous illumination** is guaranteed.



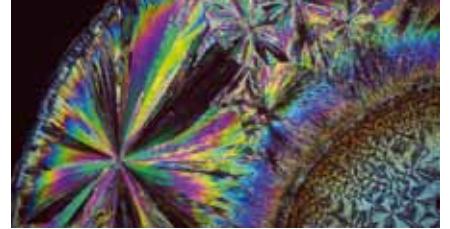
Stage

The BA310POL microscope stand carries a **pre-centered stage** of 160mm diameter. The hard coated and chemical resistant surface is designed to withstand abrasion under rough usage. A high precision ball-bearing mechanism ensures smooth movement and accurate rotation, while a **continuous 360° scale with 1° increments** allows precise positioning of the sample. The standard package comes with sample clamps to fix the slides.

General Specifications

- Binocular/Trinocular head Siedentopf type, 30° inclined, 360° rotating (light split 100:0/20:80 or 100:0/0:100)
 - Interpupillary distance 55-75mm
 - Rotatable analyzer 360°, Bertrand lens 0,5X and slot for compensators
 - Widefield high eyepoint eyepieces, N-WF10X/20mm with diopter adjustment, +/- 5 diopter and cross reticle on one eyepiece
 - Reversed quadruple revolving nosepiece, 3 centerable positions
 - Color Corrected Infinity Optical System [CCIS®]
4X/0.10 (WD 15.9mm), 10X/0.25 (WD 17.4mm),
40X/0.65/S (WD 0.5mm) and 60X/0.8/S (WD 0.35mm)
 - Coaxial coarse and fine focusing system with tension adjustment
 - 360° circular rotating stage, 1° increments, 0,1° vernier scale and lockable
 - Achromat swing-out condenser N.A. 0.90/0.13 (strain-free) with iris diaphragm and rotatable polarizer
 - Koehler illumination Quartz Halogen 6V/30W with intensity control
 - Universal power supply 100-240V
 - Empty insertion plate, blue filter, power cord, dust cover, allen key, and spare fuse
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Today, accurate documentation has been established as an important part in natural sciences and industrial quality control. Like in all Motic's BA series, the new BA310POL offers the choice between several imaging options.

Digital Documentation

The combination of the BA310POL with a member of the Moticam series of digital cameras delivers excellent live images, which can easily be stored for future usage.

All Motic cameras come equipped **with software** to transform the BA310POL into an **analysis and documentation station**.

As **colour fidelity** is a **basic requirement** for polarization work, Motic recommends the use of **CCD sensor technology**, implemented in our Research grade Moticam Pro Line. This technology is superior to the CMOS technique especially when true colours are of special interest.

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