User Manual

MagEye

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IMPORTANT!

- Please read the user manual carefully before usage.
- Please pay attention to the safety instructions.

THE DELIVERY CONTAINS

- MagEye with transport box
- User manual

IMPORTANT NOTES FOR THE USAGE

- The MagEye contains fragile optical elements and needs to be treated most carefully. The visualization device must be protected from impact and vibration.
- Mechanical influence can cause damage of the sensor element.
- The magneto-optical sensor must not be touched by sharp objects (e.g. screw driver).
- For safe transportation we suggest to always use the accompanying box.
- Store and use the MagEye upon normal conditions with low humidity and a temperature beween +10°C bis +45°C at all times.
- The cleaning of the magneto-optical sensor needs to be performed extremely carefully and solely if necessary with appropriate dry wipes (e.g. opto-wipes - precision lens cleaning wipes). At any time the sensor must not be touched by extremities. The use of solvents is prohibited.

FUNCTIONALITY OF THE MagEye

Magneto-optical visualization

The magnet field visualization is based on magneto-optical sensor technologies using the Faraday-Effect. The magnetic examination object has direct contact to the magneto-optical sensor. This allows the immediate near-surface stray field detection. The optical contrast building depends directly on the local magnetic field of the examination object. Solely normal components of the magnetic field of the examination object relative to the magneto-optical sensor surface will be detected.

The magneto-optical Faraday-Effect and its influence on the linear polarized light on its transit through the magneto-optical sensor are illustrated below:

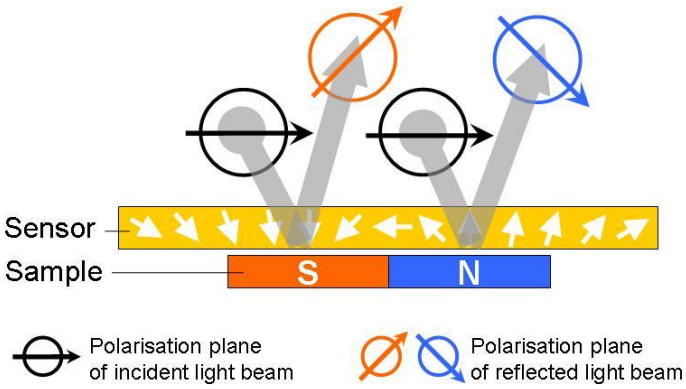
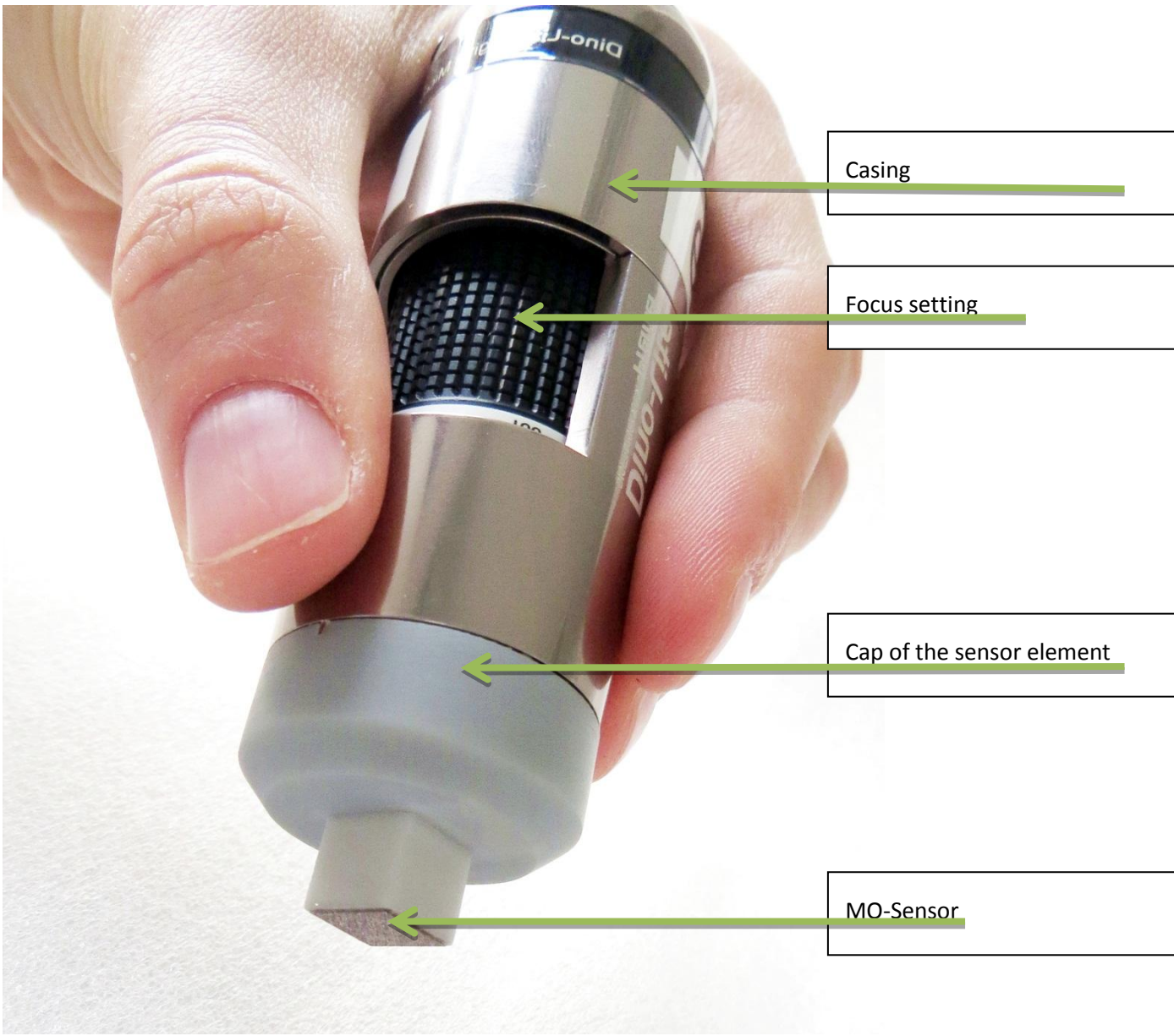


Figure: Schematic illustration of the magneto-optical Faraday-Effect

- The MagEye is a magneto-optical reading device. It allows immediate optical visualization of magnetic stray fields.
- It is possible to visualize magnetic information of plane magnetic mediums fast and accurately.
- The MagEye is a compact mobile device which can be used with all regular computers.
- Core component of the device is a highly sensitive magneto-optical garnet crystal.
- Areal homogenous illumination of the examination object (e.g. with high performance LED technology).
- Depending on the local magnetic field the Faraday-Effect provides differences in intensity.

  → Direct optical image of the stray field allocation
- Quality and quantity statements about the existence of errors in magnetization.
- Geometric measurement options and documentation .

SETUP



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INSTALLATION AND STARTUP

- Please download the user software from http://www.dino-lite.com/support.php.
- Connect the MagEye with a USB-port (USB 2.0) on your computer after finishing the installation procedure. Drivers will be installed automatically.
- The MagEye is ready for usage immediately.
- Start the installed program to use the MagEye.
- Set up the software options according to your needs.
- Move the sensor head carefully toward the examination object. Focusing is performed by turning the zooming device.
- It is important to carefully move the MagEye across the examination object to prevent sensor damages.
- Make and save images by pressing the little button on top of the MagEye.

SAFETY INSTRUCTIONS

Carefully read the user manual before using the MagEye.

Keep the user manual for later usage.

MO Sensor: Avoid pressure on the magneto-optical sensor. Sensor must not get in touch with sharp objects.

Moisture: Device must not get in touch with liquids to prevent the risk of fire or electric shock.

Heat: Device must be kept away from temperatures above +45°C.

Electricity supply: Device uses a USB-port for electricity supply.

When not in use: Please unplug the USB-connection and store the MagEye in the delivered box to prevent damages.

Damages and Repair: Solely authorized Matesy-employees may perform repairs on the device, if:

- the main plug or cable is damaged,
- damages are caused by liquids or other objects, and
- the device does not perform the designated functionalities in an appropriate way.

WARRANTY STATEMENT

Based on legal regulations of the Federal Republic of Germany the Matesy GmbH assures a limited warranty of 24 months for the shipped goods and instruments.

Excluded from warranty is signs of wear at the magneto-optical sensor.

The Matesy GmbH is not liable for damages due to incorrect transportation, misusage, wrong storage or external forceful impact.