AEGTEST AEG-8103

AEGTEST 8103 Gauss Meter User Manual

Model: AEG-8103

Brand: AEGTEST

1. Introduction

The AEGTEST 8103 Gauss Meter is a versatile and portable device designed for precise measurement of DC magnetic field strength and direction. It is equipped with a 5% precision Hall probe, making it suitable for a wide range of applications including general magnetic field detection, equipment repair, and basic magnetic analysis. This manual provides essential information for the safe and effective operation of your device.

What's Included:

- 8103 Gauss Meter
- Hall Probe
- Storage Case
- Type-C Charging Cable
- User Manual

Figure 1: AEGTEST 8103 Gauss Meter with Hall probe, storage case, and charging cable.

2. Safety Information

Please read and understand all safety instructions before operating the device. Failure to follow these instructions may result in injury or damage to the device.

- Do not attempt to disassemble or modify the device.
- Keep the device away from water and other liquids.
- Avoid exposing the device to extreme temperatures or direct sunlight.
- Use only the provided charging cable and accessories.
- Ensure the Hall probe is handled with care to prevent damage.

3. Product Overview

The 8103 Gauss Meter is designed for ease of use and reliable performance. Its key features include:

- **5% Basic Precision Measurement:** Detects magnetic field strength (Gs/mT) and identifies

magnetic pole direction (N/S) for DC magnetic fields. Measurement range up to 0-2500 mT.

- **Audible and Visual Alarms:** Alerts when measurements exceed predefined thresholds.
- **Data Hold and Storage:** Records maximum values for easy tracking and review.
- **Automatic and Manual Zero Calibration:** Ensures measurement accuracy.
- **Dual Industrial Modes:** QC test mode for quality control and counting/speed measurement mode for dynamic applications.
- **User-Friendly Design:** TFT color display, built-in 750mAh rechargeable battery (up to 16 hours continuous use), and integrated stand for hands-free operation.

Figure 2: Device display illustrating various measurement functions.

4. Setup

Follow these steps to prepare your Gauss Meter for use:

1. **Charge the Device:** Connect the provided Type-C charging cable to the meter and a suitable USB power source. The device features a built-in 750mAh rechargeable battery, offering up to 16 hours of continuous use on a full charge.
2. **Connect the Hall Probe:** Securely attach the Hall probe to the designated port on the top of the Gauss Meter. The probe dimensions are 5 x 0.5 x 0.1 cm, with a 54 cm connection cable.
3. **Power On:** Press and hold the power button until the TFT color display illuminates.

Figure 3: Type-C charging port and battery life indication.

5. Operating Instructions

The 8103 Gauss Meter offers various functions for magnetic field measurement.

5.1 Basic Measurement

To take a measurement, hold the Hall probe near the magnetic field source. The device will display the magnetic field strength in Gs (Gauss) or mT (milliTesla) and indicate the magnetic pole direction (N/S). Ensure the probe is positioned correctly for accurate readings.

5.2 Data Hold and Storage

Press the 'Hold' button to freeze the current reading on the display. The device can also automatically record maximum values, allowing for easy review of key measurements. Refer to the on-screen menu for data storage and retrieval options.

5.3 Alarm Function

The meter features audible and visual alarms. These alarms activate when the measured magnetic field strength exceeds user-defined thresholds. The alarm threshold is adjustable through the device settings.

Figure 4: Alarm indicators for easy data monitoring.

5.4 Dual Industrial Modes

- **QC Test Mode:** Quickly verifies if the magnetic field strength meets predefined standards, ideal for quality control and material screening.
- **Counting and Speed Measurement Mode:** Detects changes in magnetic fields for dynamic counting and speed measurement, useful for motor testing and equipment maintenance.

Figure 5: Display showing QC test mode and counting/speed measurement mode interfaces.

5.5 Zero Calibration

The device supports both manual and automatic zero calibration to maintain measurement accuracy. Perform calibration in an environment free from magnetic interference.

6. Maintenance

Proper maintenance ensures the longevity and accuracy of your Gauss Meter.

- **Cleaning:** Use a soft, dry cloth to clean the device and probe. Do not use abrasive cleaners or solvents.
- **Storage:** Store the device in its provided storage case in a cool, dry place when not in use. Avoid

areas with strong magnetic fields.

- **Battery Care:** Recharge the battery regularly, even if the device is not frequently used, to maintain battery health.

7. Troubleshooting

If you encounter issues with your Gauss Meter, try the following:

- **Device not powering on:** Ensure the battery is charged. Connect the device to the Type-C charging cable and allow it to charge for at least 30 minutes before attempting to power on again.
- **Inaccurate readings:** Perform a zero calibration in a magnetically neutral environment. Check if the Hall probe is securely connected and undamaged.
- **No display:** Check battery level. If the screen remains blank after charging, contact customer support.

8. Specifications

Feature	Detail
Model Number	AEG-8103
Measurement Range	0-2500 mT (0-25000 Gs)
Accuracy	±5% (Standard Precision)
Magnetic Field Type	DC Magnetic Field
Hall Probe Dimensions	5 x 0.5 x 0.1 cm
Hall Sensor Connection	54 cm
Battery	Built-in 750mAh rechargeable battery (1 C batteries included)
Operating Time	Up to 16 hours
Display	TFT Color Display
Product Dimensions	6.3 x 2.7 x 14 cm
Item Weight	130 Grams
Power Source	Battery Powered
Compliance	IEC 61010-1, CE, RoHS

9. Warranty and Support

The AEGTEST 8103 Gauss Meter comes with a standard manufacturer's warranty against defects in materials and workmanship. For warranty claims or technical support, please refer to the contact information provided with your product packaging or visit the official AEGTEST website.

The device is factory-calibrated and has passed calibration tests by internationally recognized institutions, complying with industry standards for precision and reliability.