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Extech MF100

Extech MF100 AC/DC Magnetic Field Meter

USER MANUAL

Introduction

The Extech MF100 is a versatile AC/DC Magnetic Field Meter designed for accurate measurement of magnetic fields. It incorporates a Hall effect sensor with automatic temperature compensation, ensuring reliable readings across various environmental conditions. This device is suitable for a range of applications requiring precise magnetic field analysis.



Figure 1: The Extech MF100 AC/DC Magnetic Field Meter, showing the main unit connected to its uniaxial magnetic probe sensor.

Features

- Utilizes Hall effect sensor with Automatic Temperature Compensation (ATC)
- N pole/S pole indicator for magnetic field direction
- Zero button for accurate DC measurement
- Data Hold function to freeze readings
- Min/Max recording for capturing extreme values
- Auto power off with disable feature to conserve battery life

Package Contents

Upon opening the package, please verify that all items are present and undamaged:

- Extech MF100 AC/DC Magnetic Field Meter
- Uniaxial Magnetic Probe Sensor
- Protective Cover for the probe
- 9V Battery (included)
- Hard Carrying Case

Safety Information

Please read and understand all safety precautions before operating the Extech MF100. Failure to follow these instructions may result in injury or damage to the device.

- Do not attempt to open the meter casing. Servicing should only be performed by qualified personnel.
- Keep the device away from strong electromagnetic fields that are not being measured, as this may affect accuracy.
- Ensure the battery compartment is securely closed before use.
- Dispose of batteries according to local regulations.
- Avoid dropping the meter or subjecting it to severe impact.

Setup

1. **Battery Installation:** Open the battery compartment cover on the back of the meter. Insert the included 9V battery, observing the correct polarity. Close the cover securely.
2. **Probe Connection:** Connect the uniaxial magnetic probe sensor cable to the input jack located at the top of the MF100 meter. Ensure the connection is firm.
3. **Protective Cover:** Place the protective cover over the probe tip when not in use to prevent damage.

Operating Instructions

This section details the basic operation of the Extech MF100.

1. **Power On/Off:** Press the **POWER** button to turn the meter on or off. The display will illuminate.
2. **Selecting AC/DC Mode:** Press the **MODE DC/AC** button to toggle between AC (alternating current) and DC (direct current) magnetic field measurement modes. The selected mode will be indicated on the display.
3. **Zeroing for DC Measurement:** Before taking DC measurements, press the **ZERO** button to calibrate the meter and eliminate any residual magnetic fields. This ensures accurate DC readings.
4. **Taking Measurements:** Position the tip of the uniaxial magnetic probe sensor in the magnetic field you wish to measure. The reading will be displayed on the LCD. The N pole/S pole indicator will show the direction of the magnetic field.
5. **Data Hold:** Press the **HOLD** button to freeze the current reading on the display. Press again to release.
6. **Min/Max Recording:** Press the **REC** button once to enter Min/Max recording mode. The meter will continuously record the minimum and maximum values. Press **REC** again to cycle through Min, Max, and current readings. Press and hold **REC** to exit Min/Max mode.
7. **Auto Power Off:** The meter will automatically power off after a period of inactivity to conserve battery. To disable this feature, refer to the full manual for specific button sequences during power-on.



Figure 2: The Extech MF100 being used by a technician to measure a magnetic field in a laboratory environment.

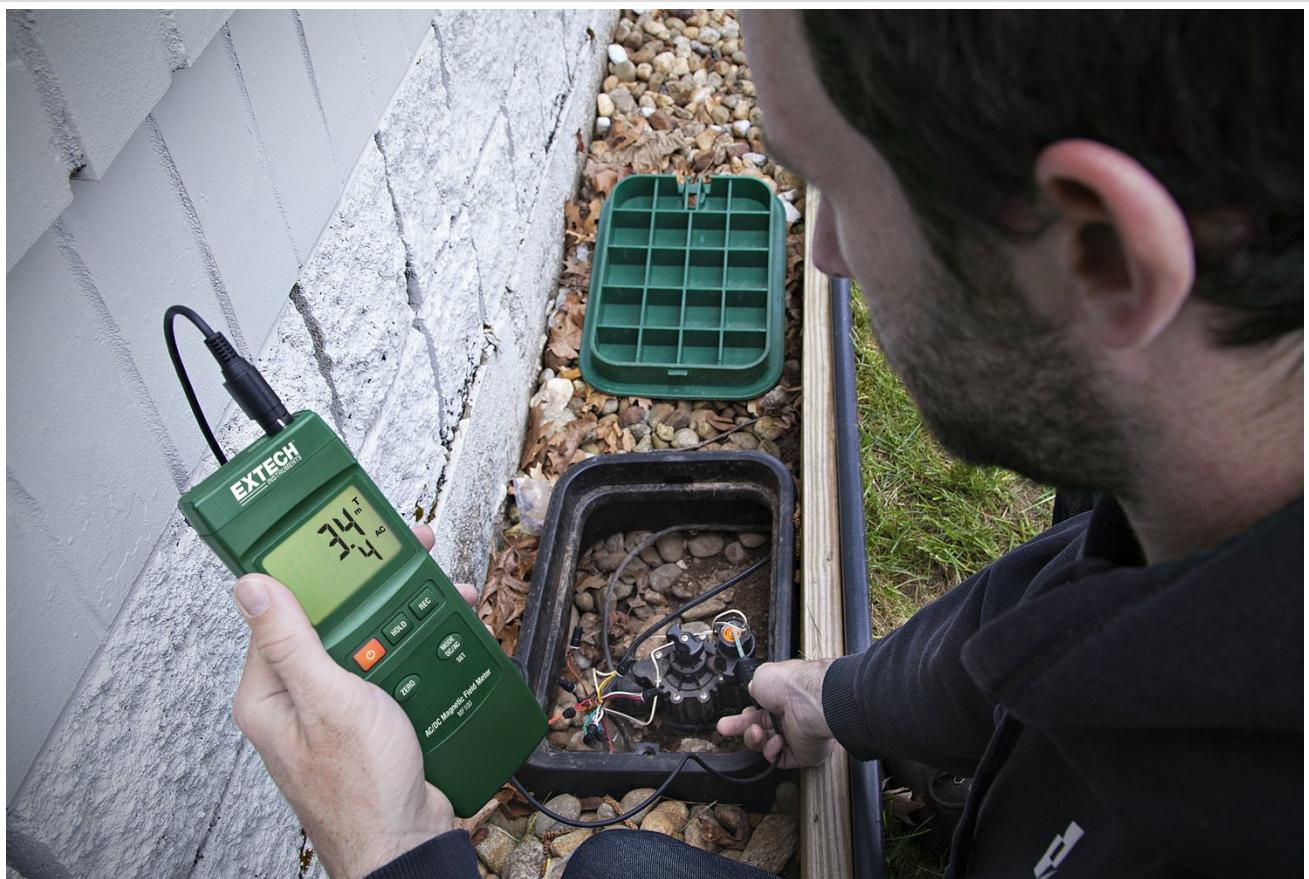


Figure 3: The Extech MF100 in use outdoors, demonstrating its portability and application in various field conditions.

Maintenance

- **Cleaning:** Wipe the meter and probe with a dry, soft cloth. Do not use abrasive cleaners or solvents.
- **Battery Replacement:** When the low battery indicator appears on the display, replace the 9V battery promptly to ensure accurate operation.
- **Storage:** Store the meter in its hard carrying case in a cool, dry place when not in use. Remove the battery if storing for extended periods to prevent leakage.

Troubleshooting

Problem	Possible Cause	Solution
Meter does not power on	Dead or incorrectly installed battery	Replace battery, check polarity
Inaccurate DC readings	Not zeroed before measurement	Press the ZERO button before taking DC measurements
Erratic readings	Interference from other magnetic sources; damaged probe	Move away from other sources; inspect probe for damage

Specifications

Specification	Value
Model Number	MF100
Product Dimensions (L x W x H)	7.8 x 2.7 x 1.2 inches
Item Weight	0.27 Kilograms (9.52 ounces)
Power Source	Battery Powered (2 Lithium Ion batteries required, included)
Sensor Type	Hall Effect with ATC
First Available Date	June 30, 2015

Warranty and Support

Warranty information for the Extech MF100 is typically provided with the product packaging or can be found on the official Extech website. For technical support, service, or to inquire about replacement parts, please visit the [Extech Store on Amazon](#) or the manufacturer's official website.

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Related Documents - MF100

<p>EXTECH User Manual 4-in-1 Humidity, Temperature Airflow and Light Meter Model 45170</p> 	<p>EXTECH 45170 4-in-1 Humidity, Temperature, Airflow, and Light Meter User Manual User manual for the EXTECH 45170, a 4-in-1 meter measuring humidity, temperature, airflow, and light. Includes operation, specifications, and warranty information.</p>
<p>EXTECH User Manual Electromagnetic Field Meter Model 480823</p> 	<p>Extech Electromagnetic Field Meter Model 480823 User Manual User manual for the Extech Electromagnetic Field Meter, Model 480823. This document details the meter's specifications, operation, battery replacement, EMF exposure information, warranty, and calibration services. It measures EMF in Gauss and Tesla units with a frequency bandwidth of 30 to 300Hz.</p>
<p>EXTECH MANUALE UTENTE Misuratore di Livello di Radiazione UV-AB Modello UV505</p> 	<p>Manuale Utente Misuratore di Radiazione UV-AB Extech UV505 Manuale utente completo per il Misuratore di Radiazione UV-AB Extech UV505. Include istruzioni operative, specifiche tecniche, informazioni di sicurezza e manutenzione.</p>
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[Extech EX650 Series User Guide: 600A True RMS Digital Clamp Meters](#)

Comprehensive user guide for the Extech EX650 Series of 600A True RMS digital clamp meters, covering models EX650 and EX655. Learn about operation, features, safety, and specifications for accurate AC/DC voltage, current, resistance, and more measurements.