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Mastech MS6013

Mastech MS6013 Digital LCR Meter User Manual

Introduction

This manual provides instructions for the safe and effective operation of the Mastech MS6013 Digital LCR Meter. This device is designed for measuring inductance (L), capacitance (C), and resistance (R) in electronic components. Please read this manual thoroughly before use to ensure proper handling and to prevent damage or injury.

Safety Information

Always observe the following safety precautions when using the Mastech MS6013 LCR Meter:

- Ensure the meter is in good working condition before each use.
- Do not attempt to measure live circuits or components with stored charge.
- Replace batteries promptly when the low battery indicator appears to maintain measurement accuracy.
- Do not operate the meter in wet environments or where explosive gases are present.
- Use only the provided test leads or suitable replacements.
- Avoid dropping the meter or subjecting it to strong impacts.

Product Overview

Key Features

- Display: 2000 counts
- Zero Adjustment: Approximately ± 20pF
- Input Jacks for test leads
- High Accuracy in Measuring: 0.1pF resolution
- Low Battery Display indicator



DIGITAL LCR METER

MS6013

SKU NO.: MS6013CBGLO
UPC CODE: 810053674222
EAN CODE: 8435394779294

FEATURE

- Zero Adjustment approx. ± 20pF.
- Input Jacks.
- High Accuracy in Measuring.
- Low Battery Display.

SPECIFICATIONS

Capacitance	Display Counts
200pF~20mF	2000

MAIN APPLICATIONS

ELECTRONICS

CONTENTS

- 189×91×31.5mm 7.4"×3.6"×1.2" 240g/0.52lb
- 1×9V 6F22 Battery
- Test Leads, Carry bag, Battery
- Calibration Certificate
- Quick Start Guide

PACKAGING INFORMATION

Color Box
L165×W70×H225mm

Carton Box
47×37.5×35.5cm

X 20PCS

The image displays the front panel of the Mastech MS6013 LCR Meter, highlighting its 2000-count digital display, rotary function switch for selecting measurement ranges (Capacitance, Inductance), and input terminals. The device also features a zero adjustment knob.

Package Contents

Verify that all items are present in the package:

- Mastech MS6013 LCR Meter (Dimensions: 189mm x 91mm x 31.5mm; Weight: 240g/0.52lb)
- One 9V 6F22 Battery
- Set of Test Leads
- Carry Bag

- Calibration Certificate
- Quick Start Guide

Setup

Battery Installation

The Mastech MS6013 LCR Meter requires one 9V 6F22 battery. To install or replace the battery:

1. Locate the battery compartment cover on the back of the meter.
2. Use a screwdriver to open the cover.
3. Insert the 9V battery, observing correct polarity.
4. Replace the cover and secure it.

Connecting Test Leads

Connect the red test lead to the '+' (positive) input jack and the black test lead to the '-' (negative) input jack on the meter.

Operating Instructions

Power On/Off

Turn the rotary switch to any desired measurement function to power on the meter. Turn it to the 'OFF' position to power off the device.

Zero Adjustment (Capacitance)

Before measuring small capacitance values, it is recommended to perform a zero adjustment. With the test leads open (not connected to any component), turn the 'ZERO ADJ' knob until the display reads zero or as close to zero as possible (within ±20pF).

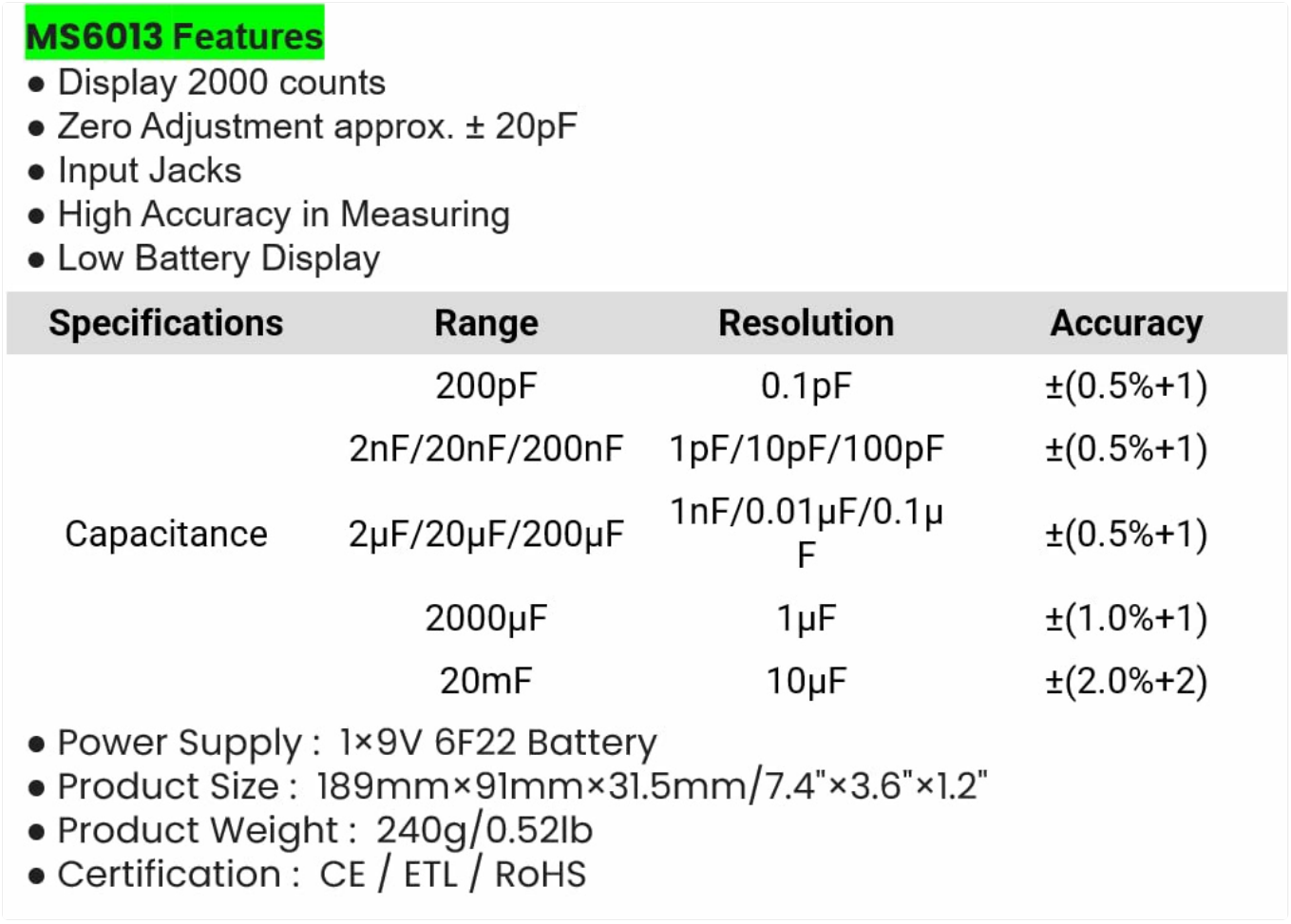
Measuring Capacitance (C)

1. Turn the rotary switch to the desired capacitance range (e.g., 2nF, 20nF, 200nF, 2uF, 20uF, 200uF, 2000uF, 20mF).
2. Perform zero adjustment if measuring small values.
3. Connect the capacitor to the test leads.
4. Read the capacitance value from the display.

Measuring Inductance (L)

1. Turn the rotary switch to the desired inductance range (e.g., 2mH, 20mH, 200mH, 2H).
2. Connect the inductor to the test leads.
3. Read the inductance value from the display.

Specifications



This image presents a detailed table of specifications for the Mastech MS6013, outlining capacitance measurement ranges from 200pF to 20mF, their corresponding resolutions, and accuracy percentages. It also lists power supply, product dimensions, weight, and certifications.

Feature	Detail
Display	2000 counts
Capacitance Ranges	200pF, 2nF, 20nF, 200nF, 2μF, 20μF, 200μF, 2000μF, 20mF
Capacitance Accuracy	±(0.5%+1) for most ranges, ±(1.0%+1) for 2000μF, ±(2.0%+2) for 20mF
Inductance Ranges	2mH, 20mH, 200mH, 2H
Power Supply	1x 9V 6F22 Battery
Product Size	189mm × 91mm × 31.5mm (7.4" × 3.6" × 1.2")
Product Weight	240g / 0.52lb
Certifications	CE, ETL, RoHS
Material	Acrylonitrile Butadiene Styrene
Color	Blue

Maintenance

Cleaning

Wipe the meter with a soft, damp cloth. Do not use abrasive cleaners, solvents, or harsh chemicals, as these may damage the casing or display.

Battery Replacement

Refer to the 'Battery Installation' section for detailed instructions on replacing the 9V battery when the low battery indicator appears on the display. Always use a fresh 9V 6F22 battery.

Storage

When not in use for extended periods, store the meter in a cool, dry place away from direct sunlight, extreme temperatures, and high humidity. Remove the battery if storing for several months to prevent leakage.

Troubleshooting

Meter does not power on

- Check if the battery is correctly installed with the proper polarity.
- Ensure the battery has sufficient charge; replace if necessary.
- Verify the rotary switch is set to an ON position (any measurement function).

Inaccurate readings

- Ensure test leads are properly connected to the meter and the component.
- For capacitance measurements, perform zero adjustment before connecting the component.
- Check if the component itself is faulty or damaged.
- Ensure the correct measurement range is selected for the component being tested.
- Verify the battery has sufficient power; low battery can affect accuracy.

Warranty and Support

For warranty information, technical support, or service inquiries, please refer to the documentation provided with your purchase or contact Mastech customer service through their official channels. Keep your purchase receipt and product serial number for any warranty claims.

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Question

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Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

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