

## Hioki CM3286

# Hioki CM3286 Clamp On Power Tester User Manual

Model: CM3286

## 1. INTRODUCTION

The Hioki CM3286 Clamp On Power Tester is a versatile instrument designed for precise measurement of electrical parameters. It is capable of measuring voltage, current, power, power factor, phase angle, reactive power, and frequency. Additionally, it can detect phase sequence on live lines within single-phase or three-phase circuits at any desired point. This manual provides essential information for the safe and effective operation, maintenance, and troubleshooting of your CM3286 device.

## 2. SAFETY INFORMATION

**WARNING: Read all safety warnings and instructions before using this product. Failure to follow the warnings and instructions may result in electric shock, fire, or serious injury.**

- Always observe local and national safety codes.
- Do not use the device if it appears damaged or is operating abnormally.
- Ensure the device is rated for the voltage and current levels you intend to measure.
- Wear appropriate personal protective equipment (PPE), such as insulated gloves and eye protection.
- Avoid touching live conductors with bare hands or non-insulated tools.
- Do not operate the device in wet environments or explosive atmospheres.
- Keep fingers behind the tactile barrier on the instrument during measurements.
- Disconnect the device from the circuit before opening the battery compartment.

## 3. PACKAGE CONTENTS

Verify that all items listed below are present and undamaged upon opening the package:

- Hioki CM3286 Clamp On Power Tester Unit
- Test Leads (Red and Black)
- Carrying Case
- AAA Batteries (x2)

- Instruction Manual (this document)

## 4. PRODUCT FEATURES AND COMPONENTS



Figure 4.1: Hioki CM3286 Clamp On Power Tester (Overall View)

This image displays the complete Hioki CM3286 Clamp On Power Tester, showcasing its ergonomic design, the large clamp jaw for current measurement, and the clear digital display. The function dial and various control buttons are visible on the front panel.



Figure 4.2: Hioki CM3286 Clamp On Power Tester (Front Panel Detail)

This image provides a closer look at the front panel of the Hioki CM3286, highlighting the digital display, the rotary function dial with various measurement settings (e.g., W, Wh, V, A), and the control buttons such as SHIFT, HOLD, MAX/MIN, and RANGE. The input terminals for voltage measurement are also visible at the bottom.

### Key Components:

- **Clamp Jaw:** Used for non-contact AC current measurement.
- **Function Dial:** Selects the desired measurement mode (e.g., Voltage, Current, Power, Frequency).
- **LCD Display:** Shows measurement readings, units, and indicators.
- **Input Terminals:** For connecting test leads for voltage and other measurements.

- **HOLD Button:** Freezes the current display reading.
- **MAX/MIN Button:** Records maximum and minimum readings.
- **RANGE Button:** Manually selects the measurement range.
- **SHIFT Button:** Accesses secondary functions marked in blue on the dial.

## 5. SETUP

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### 5.1. Battery Installation

1. Ensure the device is powered off.
2. Locate the battery compartment cover on the rear of the unit.
3. Use a screwdriver (if necessary) to open the cover.
4. Insert two (2) AAA batteries, observing the correct polarity (+/-) as indicated inside the compartment.
5. Replace the battery compartment cover and secure it.

### 5.2. Initial Power On

After battery installation, turn the function dial from "OFF" to any measurement setting to power on the device. The display should illuminate, indicating readiness for use.

## 6. OPERATING INSTRUCTIONS

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### 6.1. Power On/Off

- To power on, rotate the function dial from the "OFF" position to the desired measurement function.
- To power off, rotate the function dial back to the "OFF" position.

### 6.2. AC Current Measurement (Clamp)

1. Rotate the function dial to the "A" (Current) setting.
2. Open the clamp jaw by pressing the lever.
3. Enclose only one conductor (live or neutral) within the clamp jaw. Ensure the jaw is fully closed.
4. Read the current value on the LCD display.

### 6.3. Voltage Measurement (V)

1. Rotate the function dial to the "V" (Voltage) setting.
2. Connect the red test lead to the "V" input terminal and the black test lead to the "COM" input terminal.
3. Connect the test leads in parallel across the circuit or component to be measured.
4. Read the voltage value on the LCD display.

### 6.4. Power Measurement (W, Wh, var, VA)

The CM3286 can measure various power parameters. Select the appropriate setting on the function dial (W for active power, Wh for energy, var for reactive power, VA for apparent power). Connect test leads for voltage and clamp the jaw around the current conductor as per the specific measurement method outlined in the full manual (not provided here, but implied by the device's capabilities).

## 6.5. Frequency Measurement (Hz)

Select the "Hz" setting on the function dial. Connect test leads across the circuit where frequency is to be measured, similar to voltage measurement.

## 6.6. Phase Sequence Detection

The device features a "Phase Detect" function. Refer to the detailed instructions in the complete manual for proper connection and interpretation of phase sequence on single-phase or three-phase circuits.

## 6.7. Using Buttons (HOLD, MAX/MIN, RANGE, SHIFT)

- **HOLD:** Press to freeze the current reading on the display. Press again to release.
- **MAX/MIN:** Press to enter Max/Min recording mode. The display will show the maximum or minimum value recorded since activation. Press again to cycle through Max, Min, and current readings.
- **RANGE:** Press to switch between auto-ranging and manual ranging. In manual ranging, press repeatedly to cycle through available ranges.
- **SHIFT:** Press to access secondary functions indicated in blue text next to the primary function on the dial.

# 7. MAINTENANCE

## 7.1. Cleaning

Wipe the device with a soft, damp cloth. Do not use abrasive cleaners or solvents. Ensure the device is completely dry before storage or next use.

## 7.2. Battery Replacement

When the low battery indicator appears on the display, replace the batteries promptly to ensure accurate measurements. Follow the battery installation steps outlined in Section 5.1.

## 7.3. Storage

Store the device in its carrying case in a cool, dry place, away from direct sunlight and extreme temperatures. If storing for extended periods, remove the batteries to prevent leakage.

# 8. TROUBLESHOOTING

Problem	Possible Cause	Solution
Device does not power on.	Dead or incorrectly installed batteries.	Check battery polarity; replace batteries.
No reading on display.	Incorrect function selected; open circuit; test leads not connected properly.	Select correct function; ensure circuit is complete; check test lead connections.
"OL" or "OVER" displayed.	Measurement exceeds selected range or device maximum.	Select a higher range (if manual ranging) or ensure measurement is within device limits.

Problem	Possible Cause	Solution
Inaccurate readings.	Low battery; environmental interference; damaged test leads.	Replace batteries; move away from strong electromagnetic fields; inspect and replace test leads if damaged.

## 9. SPECIFICATIONS

Parameter	Value
Model Number	CM3286
Brand	Hioki
Package Dimensions	9.92 x 2.76 x 2.05 inches
Item Weight	0.45 Kilograms (15.87 ounces)
Batteries	2 AAA batteries (included)
Power Source	Corded Electric ( <i>Note: This refers to the type of power it measures, not its own power source. The device is battery-powered.</i> )
Manufacturer	Hioki
Date First Available	August 20, 2020

## 10. WARRANTY AND SUPPORT





For detailed warranty information, please refer to the warranty card included with your product or visit the official Hioki website. Hioki provides comprehensive customer support for its products.

If you encounter any issues not covered in this manual or require technical assistance, please contact Hioki customer support through their official channels. Ensure you have your product model number (CM3286) and purchase details ready when contacting support.

*Note: Warranty terms and conditions may vary by region.*

### Related Documents - CM3286

	<a href="#">HIOKI CM3286-50 AC</a> HIOKI CM3286-50 AC	Z3210	GENNECT Cross
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<div><div>BT3554-50 BT3554-51 BT3554-52</div><div>Manual de instruções</div><div>TESTADOR DE BATERIA BATTERY TESTER</div><div></div><div><div>Leia atentamente antes de usar. Guarde para referência futura.</div><div>PT</div></div><div><div>Nov 2021 Revised edition 1</div><div>912504990-21 (P&amp;T) 2021-21-194</div><div>HIOKI 912554-990-21</div></div></div>	<p><a href="#">Manual de Instruções HIOKI BT3554-50/51/52 Testador de Bateria</a></p> <p>Guia completo para o Testador de Bateria HIOKI BT3554-50, BT3554-51, BT3554-52. Aprenda sobre medição de resistência, tensão, temperatura, gerenciamento de dados e recursos avançados para avaliação de baterias.</p>
<div><div>HIOKI</div><div>QUICK START MANUAL</div><div>3169-20/21</div><div>CLAMP ON POWER HITESTER</div><div>HIOKI E.E. CORPORATION</div></div>	<p><a href="#">HIOKI 3169-20/21 Clamp On Power HiTester Quick Start Manual</a></p> <p>Quick start guide for the HIOKI 3169-20/21 Clamp On Power HiTester, covering setup, parts identification, measurement procedures, and safety notes. Provides detailed instructions for connecting, configuring, and performing power measurements.</p>
<div><div>ST5540 ST5541</div><div>Instruction Manual</div><div>LEAK CURRENT HITESTER</div><div></div><div><div>EN</div></div><div><div>Jan 2021 Revised edition 1</div><div>915540990-21 (P&amp;T) 21-194</div><div>HIOKI 915541-990-21</div></div></div>	<p><a href="#">HIOKI ST5540/ST5541 Leak Current HiTester Instruction Manual</a></p> <p>This instruction manual details the operation, setup, measurement procedures, and safety guidelines for the HIOKI ST5540 and ST5541 Leak Current HiTester, essential tools for electrical safety testing.</p>
<div><div>CM4141-50</div><div>Manuale di istruzioni</div><div>MULTIMETRO A PINZA CA AC CLAMP METER</div><div></div><div><div>PT</div></div><div><div>Nov 2021 Edition 1</div><div>CM4141CM4150 (P&amp;T) 2021-21-194</div><div>HIOKI CM4141-50</div></div></div>	<p><a href="#">Manuale di Istruzioni Hioki CM4141-50: Multimetro a Pinza CA</a></p> <p>Guida completa al multimetro a pinza CA Hioki CM4141-50. Include istruzioni dettagliate per misurazioni di corrente, tensione, specifiche tecniche, precauzioni di sicurezza e manutenzione.</p>
<div><div>CM4141-50</div><div>Instruction Manual</div><div>AC CLAMP METER</div><div></div><div><div>EN</div></div><div><div>Nov 2021 Edition 1</div><div>CM4141CM4150 (P&amp;T) 21-194</div><div>HIOKI CM4141-50</div></div></div>	<p><a href="#">HIOKI CM4141-50 AC Clamp Meter Instruction Manual</a></p> <p>Instruction manual for the HIOKI CM4141-50 AC Clamp Meter, detailing its features, operation, specifications, and maintenance for accurate electrical measurements.</p>