

FLUKE®

902

HVAC Clamp Meter

Users Manual

PN 2547887

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Introduction

The Fluke 902 is a hand-held battery-operated HVAC Clamp Meter (“the Meter”) that measures:

- AC current
- DC current (up to 200 μ A for flame rod testing)
- AC and DC voltages
- Capacitance
- Resistance
- Continuity
- Temperature in both Celsius ($^{\circ}$ C) and Fahrenheit ($^{\circ}$ F)

The Meter comes with:

- Two AA alkaline batteries (installed)
- Users Manual
- Soft carrying case
- TL75 Test Leads (one pair)
- 80BK Integrated DMM Temperature Probe

Contacting Fluke

To contact Fluke, call one of the following telephone numbers:

USA: 1-888-99-FLUKE (1-888-993-5853)

Canada: 1-800-36-FLUKE (1-800-363-5853)

Europe: +31 402-675-200

Japan: +81-3-3434-0181

Singapore: +65-738-5655

Anywhere in the world: +1-425-446-5500

Or visit Fluke's Web site at: www.fluke.com.

Register the Meter at: <http://register.fluke.com>

Safety Information


A “**⚠️⚠️ Warning**” statement defines hazardous conditions and actions that could cause bodily harm or death.

A “**⚠️ Caution**” statement identifies conditions and actions that could damage the Meter or the equipment under test.

⚠️⚠️ Read First: Safety Information














To ensure safe operation and service of the Meter, follow these instructions:

- **Read the Users Manual before use and follow all safety instructions.**
- **Use the Meter only as specified in the Users Manual; otherwise, the Meter's safety features may be impaired.**
- **Avoid working alone so assistance can be rendered.**
- **Never use the Meter on a circuit with voltages higher than 600 V or a frequency higher than 400 Hz fundamental. The Meter may be damaged.**
- **Never measure ac current while the test leads are inserted into the input jacks.**
- **Do not use the Meter or test leads if they look damaged.**
- **Use extreme caution when working around bare conductors or bus bars. Contact with the conductor could result in electric shock.**

- **Use caution when working with voltages above 60 V dc or 30 V ac rms or 42 V ac peak. Such voltages pose a shock hazard.**
- **Clean the case with a damp cloth and mild detergent only. Do not use abrasives or solvents.**
- **To avoid false readings that can lead to electrical shock and injury, replace the batteries as soon as the low battery indicator () appears. As the Meter gets to the point where the low batteries affect the readings, the Meter locks and no measurements can be made until the batteries are changed.**
- **Do not hold the Meter anywhere beyond the tactile barrier, see Figure 1.**
- **Adhere to local and national safety codes. Individual protective equipment must be used to prevent shock and arc blast injury where hazardous live conductors are exposed.**

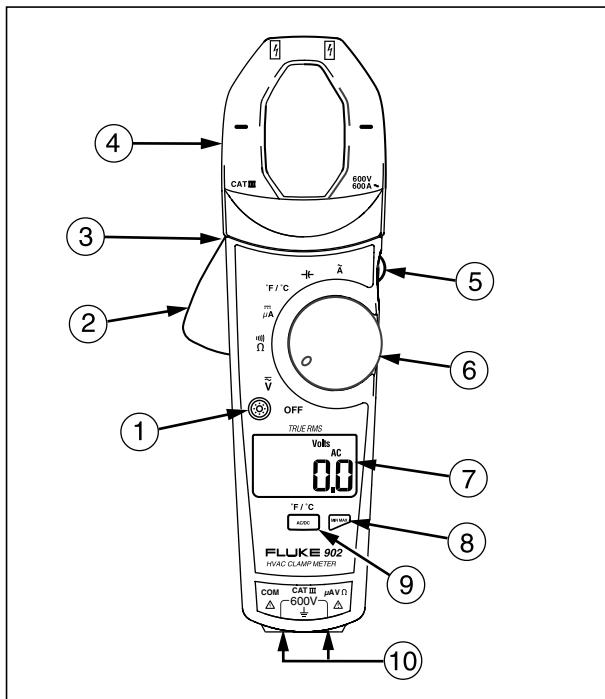
Symbols

The following symbols are found on the Meter or in this manual.

	May be used on hazardous live conductors
	Risk of danger. Important information. See Users Manual.
	Hazardous voltage. Risk of electric shock.
	Double insulation
	Battery
	Complies with Canadian and US Standards
	Conforms to relevant European Union directives
	Earth ground
	DC (Direct Current)
	AC (Alternating Current)
	Do not dispose of this product as unsorted municipal waste. Contact Fluke or a qualified recycler for disposal.
	Conforms to relevant Australian standards
	Inspected and licensed by TÜV Product Services

Getting Acquainted with the Meter

Refer to Figures 1 and 2 and Tables 1 and 2 to become more acquainted with the Meter's features.



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Figure 1. 902 HVAC Clamp Meter Features

HVAC Clamp Meter
Getting Acquainted with the Meter

Table 1. 902 HVAC Clamp Meter Features

Number	Description
①	Backlight Button
②	Jaw Release
③	Tactile Barrier
④	Jaws
⑤	Hold Button
⑥	Rotary Switch: \bar{V} DC and AC voltage Ω Resistance and continuity $\bar{\mu A}$ DC microamps $^{\circ}F/^{\circ}C$ Degrees Fahrenheit / degrees Celsius ⌚ Capacitance \tilde{A} AC current
⑦	LCD
⑧	Min Max Button
⑨	AC/DC, $^{\circ}F/^{\circ}C$ Button
⑩	Input Terminals

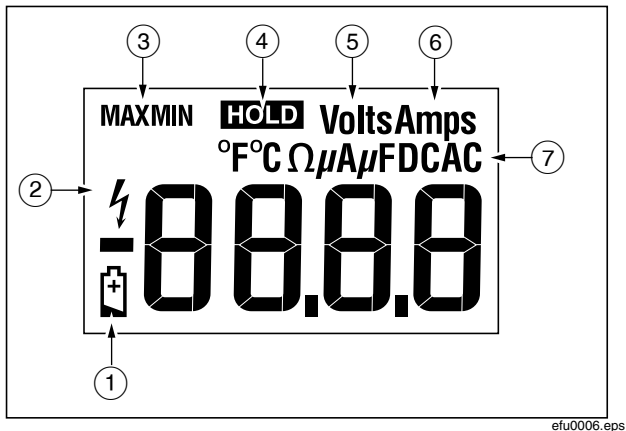


Figure 2. Display Features

Table 2. Display Features

Number	Indication
①	Battery indicator -The batteries are low and need to be changed. ⚠ ⚠ Warning: To avoid false readings, which could lead to possible electric shock or personal injury, replace the batteries as soon as the battery indicator appears.
②	Indicates the presence of high voltage
③	Indicators for minimum and maximum recording mode
④	Display Hold is active
⑤	Volts
⑥	Amps
⑦	°F - Degrees Fahrenheit °C - Degrees Celsius Ω - Ohms μA - Microamps μF - Microfarads DC - Direct Current AC - Alternating Current

Using the Meter

AC and DC Voltage Measurement

To measure AC or DC voltage:

1. Insert the test leads into the Meter.
2. Turn the rotary switch to \tilde{V} .
3. Press to choose AC or DC voltage. The display reflects the chosen voltage mode.
4. Use the test leads to take the measurement. The Meter reading appears on the display.

Note

When a measured voltage is above 30 V, \tilde{V} appears on the display. When the voltage drops below 30 V, \tilde{V} disappears.

Resistance and Continuity

To measure resistance or continuity:

⚠ ⚠ Warning

To avoid false readings that can lead to electrical shock and injury, de-energize the circuit before taking the measurement.

1. Insert the test leads into the Meter.
2. Turn the rotary switch to Ω .
3. Take the measurement. The resistance reading appears on the display.
 - If the resistance is shorted, the Meter beeps and shows a reading $< 30 \Omega$.
 - If the resistance is open or exceeds the Meter's range, the display reads **OL**.

Microamps μA Measurement

The μA dc ($\overline{\mu\text{A}}$) function on the Meter is primarily for HVAC flame rod testing. To test a heating system flame rod (refer to Figure 3):

1. Turn the heating unit off and locate the wire between the gas-burner controller and the flame rod.
2. Break this connection.
3. Turn the rotary switch on the Meter to $\overline{\mu\text{A}}$.
4. Using alligator clips, connect test leads between the flame sensor probe and control-module wire.
5. Turn heating unit on and check the reading on the Meter.
6. Refer to the heating unit documentation for what the desired reading should be.

