



Quick Start

True RMS Industrial Multimeter

MODEL DM93-2



Quick Start (en)

Note: Please refer to the User Manual for complete safety and operational instructions: <https://support.flir.com>.

Additional language translations are available at the link above.

SAFETY STATEMENTS



WARNING

- Do not operate this device if you do not have the correct knowledge. Incorrect operation can cause damage, shock, injury or death to persons.
- Do not start a measurement before setting the function switch to the correct position. Failure to follow this warning can cause damage to the instrument and injury to persons.
- Do not change to the resistance function when measuring voltage.
- Do not use the device if the test leads or the device show signs of damage.
- Use extreme care when measuring voltages > 25 V AC RMS or 35 V DC.
- Do not perform diode, capacitance, or continuity tests before removing power from the circuit or device under test.
- Allow time for large capacitors to fully discharge before taking capacitance measurements.



This symbol, adjacent to another symbol or terminal, indicates that the user must refer to the manual for further information.



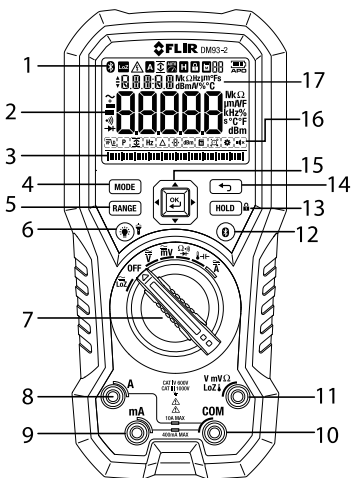
This symbol, adjacent to a terminal, indicates that, under normal use, hazardous voltages may be present.



Double insulation.

- This device complies with part 15 of the FCC Rules. See the User Manual for the full FCC Compliance text. This applies also to Industry Canada Compliance.
- Safety Category Rating: CAT IV 600 V, CAT III 1000 V








PRODUCT DESCRIPTION





1. Mode and function indicators
2. Primary display digits
3. Bar graph display
4. **MODE** button (short press to manually select modes)
5. **RANGE** button (short press to manually select ranges)
6. Backlight (short press) and Worklight (long press) button
7. Function select switch
8. Positive (+) input terminal for high current measurements
9. Positive (+) input terminal for low current measurements
10. **COM** negative (-) input terminal
11. Positive (+) input terminal for Voltage, Diode, Continuity, Resistance, Type-K, and Capacitance tests
12. Bluetooth button (short press to enable/disable communication)
13. **HOLD** (short press) and keypad Lock (long press) button
14. Back (Return) button
15. Arrow key navigation and **OK** (enter) button
16. Extended function icons
17. Secondary display digits





Battery compartment, test lead holders, tilt stand, and worklights are located on back of meter.

FUNCTION SWITCH

LoZ	Low impedance voltage measurements. Short press <i>MODE</i> to manually select AC or DC (or allow Auto-Select to make the selection).
OFF	Meter is powered down.
	Measure Voltage. Short press <i>MODE</i> to manually select AC or DC (or allow Auto-Select to make the selection).
	Measure millivolts. Short press <i>MODE</i> to manually select AC or DC (or allow Auto-Select to make the selection).
Ω	Measure Resistance. Short press <i>MODE</i> to manually select Resistance (or allow Auto-Select to make the selection).
	Test diode. Short press <i>MODE</i> to manually select Diode (or allow Auto-Select to make the selection).
	Test continuity. Short press <i>MODE</i> to manually select Continuity (or allow Auto-Select to make the selection).
	Capacitance measurements. Short press <i>MODE</i> to manually select capacitance (or allow Auto-Select to make the selection).
	Type K Thermocouple temperature measurements. Short press <i>MODE</i> to manually select the mode (or allow Auto-Select to make the selection).
	Measure Current (Amperes). Short press <i>MODE</i> to manually select AC or DC (or allow Auto-Select to make the selection).

FUNCTION BUTTONS

MODE	Auto-Select mode is the default condition. Short press to manually select a mode (to select AC or DC, for example). Long press to return to Auto-Select.
RANGE	Auto-Range is the default mode. Short press to manually select a range. Long press to return to Auto-Range.
HOLD	Short press to freeze/release displayed readings.
	Long press to lock out the keypad.
OK 	Arrows keypad for navigation; OK button to enable an extended function icon.

	Exit an extended icon function.
 	Short press to enable/disable the display backlight. Long press to enable/disable the Worklights.
	Enable/disable Bluetooth communication.

VOLTAGE MEASUREMENTS



WARNING

Use extra care when measuring voltages > 35 V DC and 25 V AC RMS.

1. Set the function switch to the **V**, **mV**, or **LoZ** position.
2. Insert the black probe into the **COM** terminal and red probe into the **V** terminal.
3. Short press the **MODE** button to manually select AC or DC.
4. Connect the probes in parallel to the part under test.
5. Read the voltage value on the display.

RESISTANCE MEASUREMENTS



WARNING

Do not measure resistance on a powered circuit or component.

1. Set the function switch to the **Ω** position.
2. Insert the black probe into the **COM** terminal and red probe into the **Ω** terminal.
3. Short press **MODE** to manually select resistance **Ω** .
4. Touch the tips of the probes across the circuit under test.
5. Read the measurement on the display.

CONTINUITY TESTS



WARNING

Do not measure continuity on a powered circuit or component.

1. Set the function switch to the Continuity **$\bullet\)))$** position.
2. Insert the black probe into the **COM** terminal and red probe into the **Ω** terminal.

3. Short press **MODE** to select continuity manually.
4. Touch the tips of the probes across the circuit under test.
5. If the resistance is $30 \pm 5 \Omega$, or lower, the meter will beep.

DIODE TESTS



WARNING

Remove power to the device under test before taking diode measurements.

1. Set the function switch to the \rightarrow position.
2. Insert the black probe into the **COM** terminal and red probe into the Ω terminal.
3. Short press **MODE** to manually select diode \rightarrow .
4. Touch the tips of the probes across the diode. There is no need to take two measurements of opposing polarity. The DM93-2 sends a bidirectional signal to the diode for convenience.
5. If the diode is good, a voltage reading will display. If the diode is bad, the display will show **O.L.** or **bAd**.

CAPACITANCE MEASUREMENTS



WARNING

Remove power to the capacitor or circuit under test and fully discharge capacitors before taking measurements.



1. Set function switch to the capacitance position \leftarrow .
2. Short press **MODE** to select capacitance mode manually.
3. Insert the black probe into the **COM** terminal and the red probe into the Ω terminal.
4. Touch the tips of the probes across the part under test.
5. Read the capacitance value on the display.

THERMOCOUPLE TEMPERATURE MEASUREMENTS



WARNING

The supplied Type K thermocouple cannot be used to measure temperature over the entire range of the DM93-2. The range is printed on the label supplied with the thermocouple. If higher temperature range measurements are intended, you must obtain a Type K thermocouple rated for the intended measurement range.

1. With the meter OFF, connect a Type K thermocouple to the meter's input terminals (negative lead to the **COM** terminal and the positive lead to the  terminal).
2. Set the function switch to the position .
3. Short press **MODE** to select the desired temperature units manually.
4. Press the thermocouple tip to the surface under test and read the temperature on the display. Allow time for the measurement to stabilize.
5. To avoid electrical shock, disconnect the thermocouple leads before turning the function switch to another position.


CURRENT MEASUREMENTS



WARNING

Do not measure current on a circuit when voltage is >1000 V.


Do not measure current on a circuit when current is >10 A.

1. Set the function switch to the  position.
2. Insert the black probe into the **COM** terminal and the red probe into the **A** terminal for high current measurement or the **mA** terminal for low current measurements.
3. Short press **MODE** to choose AC, DC, or AC+DC measurements.
4. Touch the test probes in series with the circuit under test.
5. Allow the Auto Range feature to select the optimum scale, or short press the **RANGE** button to manually select the scale.
6. Read the current value on the display.

EXTENDED FUNCTION ICONS

A variety of modes are available that provide extended functionality. Mode icons, related to the selected function, are displayed at the bottom of the LCD.

1. Use the left/right arrows to navigate to an icon. The currently selected icon will flash.
2. Press **OK** to enable the selected (flashing) icon. The icon will appear framed.
3. Use the up/down arrows to step through the additional mode options (if any).

- Press **OK** to disable the selected icon. In some modes, you may need to use the Return button .
- Refer to the User Manual for complete details on the modes detailed below and other functions that are beyond the scope of this Quick Start:



1	VFD (low pass filter)
2	PEAK Hold
3	MIN/MAX/AVG reading memory
4	Frequency (Hz)
5	Relative (Offset)
6	4000 / 40000 display digit selection
7	dBm for AC Voltage measurements
8	99 point manual data recorder
9	10,000 point automatic datalogger
10	Settings
11	Silent mode (beeper)

METERLINK DATA TRANSFER

Stream measurement data from the meter to iOS and Android devices using the METERLINK® mobile app. Download the app from the Apple Store® or Google Play™ and follow the application on-screen prompts. See the User Manual for complete details.

LIMITED LIFETIME WARRANTY

This product is protected by FLIR's Limited Lifetime Warranty. Visit www.flir.com/testwarranty to read the Limited Lifetime Warranty document. Register your product at the website.

CUSTOMER SUPPORT

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