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› Elitech Digital Manifold Gauge LMG-10Plus User Manual

Elitech US-LMG-10Plus

Elitech Digital Manifold Gauge LMG-10Plus User Manual

Model: US-LMG-10Plus

INTRODUCTION

The Elitech LMG-10Plus Digital Manifold Gauge is a professional tool designed for HVAC/R system maintenance, installation, and troubleshooting. It provides precise measurements for pressure, temperature, and automatically calculates superheating and subcooling. This manual provides detailed instructions for the safe and effective operation of your device.

SAFETY INFORMATION

Always observe the following safety precautions to prevent personal injury and damage to the instrument:

- Read and understand all instructions before using the device.
- Wear appropriate personal protective equipment, including safety glasses and gloves, when working with refrigerants.
- Ensure all connections are secure before applying pressure.
- Do not expose the device to extreme temperatures, moisture, or corrosive environments.
- Only use the device for its intended purpose in HVAC/R systems.
- Keep out of reach of children.

WHAT'S IN THE BOX

Verify that all items listed below are included in your package:

- 1 x Digital Manifold Gauge
- 2 x Temperature Clamps
- 3 x Refrigerant Hoses
- 2 x R410A Adapters (5/16" Female to 1/4" Male)
- 1 x Refrigerant Hose Maintenance Kit
- 1 x Carrying Case

Packing List

- 1 x Digital Manifold
- 2 x Temperature Clamp
- 2 x R410A Adapter (5/16" Female to 1/4" Male)
- 1 x Refrigerant Hose Maintenance Kit
- 3 x Refrigerant Hose
- 1 x Case



Image: Contents of the Elitech LMG-10Plus package, including the digital manifold, temperature clamps, refrigerant hoses, adapters, maintenance kit, and carrying case.

PRODUCT OVERVIEW

Familiarize yourself with the components of the Elitech LMG-10Plus Digital Manifold Gauge:

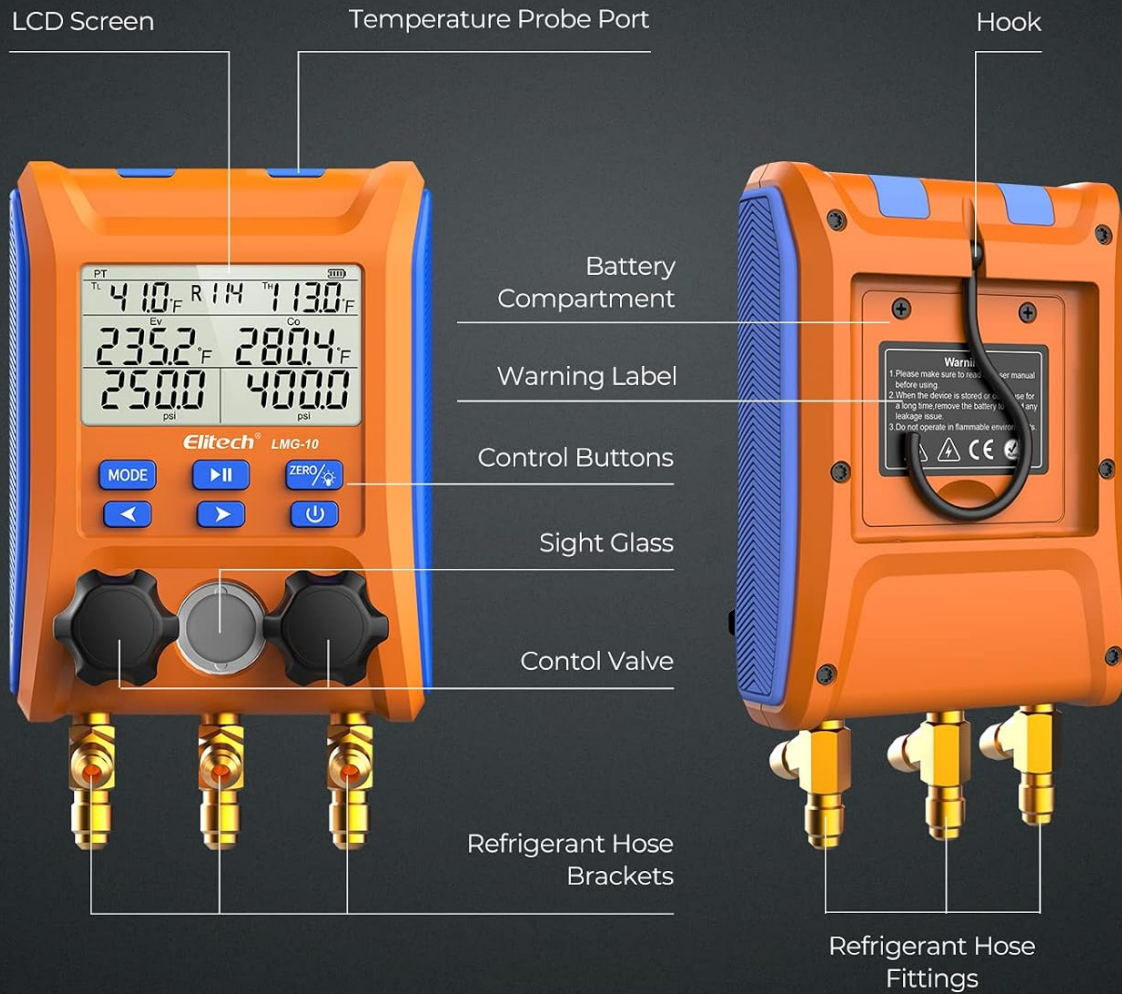


Image: Detailed diagram showing the front and back of the Elitech LMG-10Plus, highlighting key components such as the LCD screen, control buttons, valve knobs, hose connections, temperature probe ports, and the hanging hook.

- **LCD Screen:** Displays pressure, temperature, refrigerant type, superheat/subcooling, and battery status.
- **Control Buttons:** Used for mode selection, unit switching, zeroing, and power control.
- **Control Valves:** Manually open and close refrigerant flow.
- **Refrigerant Hose Fittings:** Connection points for refrigerant hoses.
- **Temperature Probe Ports:** Connect temperature clamps for accurate readings.
- **Hook:** For convenient hanging during operation.

SETUP

1. **Battery Installation:** Open the battery compartment on the back of the unit and insert the required batteries (refer to specifications for battery type). Ensure correct polarity.
2. **Power On:** Press and hold the power button () to turn on the device.
3. **Unit Selection:** Use the 'MODE' button to cycle through pressure units (psi, kg/cm², kPa, MPa, bar) and temperature units

(°F/°C). Select your preferred units.

4. **Connect Hoses:** Attach the refrigerant hoses to the appropriate fittings on the manifold and to the HVAC/R system. Ensure all connections are tight to prevent leaks.
5. **Attach Temperature Clamps:** Connect the temperature clamps to the temperature probe ports and attach them securely to the refrigerant lines for accurate temperature measurements.

OPERATING INSTRUCTIONS

Refrigerant Selection

The LMG-10Plus supports 88 types of refrigerants. To select the desired refrigerant, press the 'MODE' button repeatedly until the refrigerant type display flashes, then use the arrow buttons to scroll through the available refrigerants. Press 'MODE' again to confirm your selection.



Support 88 Types of Refrigerants

R113 R114 R115 R116 R12 R123 R1233ZD R1234ZE
R1234YF R124 R125 R13 R134a R14 R141B R142B
R143A R152A R170 R22 R23 R236FA R245FA R290
R32 R401A R401B R401C R402A R402B R403B
R404A R406A R407A R407B R407C R407D
R407F R408A R409A R410A R410B R412A R413A
R414A R414B R416A R417A R417C R420A R421A
R421B R422A R422B R422C R422D R424A R426A
R427A R428A R429A R434A R437A R438A R441A
R443A R448A R449A R450A R452A R452B
R453A R454A R454B R455A R458A R500 R502
R503 R507A R508A R508B R514A R600 R600a
R601a R718 R744

Image: The digital manifold gauge screen showing a comprehensive list of 88 different refrigerants that the device can measure and calculate for.

Pressure and Temperature Measurement

Once connected and powered on, the device will display real-time pressure readings from the manifold and temperature readings from the connected clamps. The large LCD display ensures clear visibility of all parameters.



Image: The Elitech LMG-10Plus digital manifold gauge showing its clear LCD display with pressure and temperature readings, emphasizing its key features like temperature compensation and long battery life.

Superheating and Subcooling Calculation

The LMG-10Plus automatically calculates superheating and subcooling values based on the selected refrigerant and measured pressures and temperatures. These values are displayed on the screen, simplifying system analysis.

Superheating / subcooling calculation in real time



Image: A close-up of the Elitech LMG-10Plus display, illustrating how superheating (SH) and subcooling (SC) values are automatically calculated and shown alongside pressure and temperature readings.

Vacuum Leakage Test (VAC Mode)

The device can perform a vacuum leakage test. Enter VAC mode to monitor the vacuum process and identify potential leaks. The display will show the vacuum level and any changes over time, aiding in precise leak detection.

Temperature Compensation

The LMG-10Plus features temperature compensation, which helps to maintain accuracy during pressure holding and vacuum leakage tests by accounting for variations in ambient temperature. This ensures more reliable test results.

Auto-Off Function

To conserve battery life, the device is equipped with an auto-off function. It will automatically power down after a period of inactivity. This feature can typically be configured or disabled in the settings, if available.

MAINTENANCE

- **Cleaning:** Wipe the device with a soft, damp cloth. Do not use abrasive cleaners or solvents.
- **Storage:** Store the manifold gauge in its carrying case in a dry, cool place when not in use.
- **Battery Replacement:** Replace batteries when the low battery indicator appears on the display. Ensure to use the specified battery type.
- **Hose and Fitting Inspection:** Regularly inspect hoses and fittings for wear, cracks, or damage. Replace any damaged components to ensure accurate readings and prevent refrigerant leaks.

TROUBLESHOOTING

Problem	Possible Cause	Solution
Device does not power on.	Low or dead batteries; incorrect battery installation.	Replace batteries; ensure correct polarity.
Inaccurate pressure readings.	Loose hose connections; damaged sensor; incorrect refrigerant selected.	Check and tighten all connections; contact support if sensor is suspected; verify refrigerant selection.
Temperature clamps not reading.	Clamps not properly connected; damaged clamp.	Ensure clamps are fully inserted into ports; check clamp for physical damage.
Display is dim or flickering.	Low battery.	Replace batteries.

SPECIFICATIONS

- **Model:** US-LMG-10Plus
- **Product Dimensions:** 4.4 x 2.5 x 6.3 inches
- **Item Weight:** 4 Pounds
- **Material:** Brass
- **Measuring Range:** -14.5 to 800 psi
- **Accuracy:** +0.5% FS
- **Pressure Units:** psi, kg/cm², kPa, MPa, bar
- **Temperature Units:** °F/°C
- **Battery Life:** Approximately 200 hours
- **Working Temperature Range:** 14~122°F / -10~50°C



- Measuring Range: -14.5~800 psi
- Accuracy: +0.5% FS
- Units: psi, kg/cm³, kPa, MPa, bar
- Battery life: 200H
- Working Temperature Range: 14~122°F/-10~50°C

Image: Visual representation of the Elitech LMG-10Plus dimensions and weight, along with key technical specifications.

WARRANTY AND SUPPORT

Elitech provides customer support for its products. For technical assistance, troubleshooting, or warranty inquiries, please contact Elitech customer service. 24/7 US technician support is available via email and phone.

For the most up-to-date warranty information and contact details, please refer to the official Elitech website or the documentation included with your product.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question

and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

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

Submit question