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Elitech DMG-4B

Elitech Smart Digital Manifold Gauge DMG-4B User Manual

Model: DMG-4B

Brand: Elitech

1. PRODUCT OVERVIEW

The Elitech Smart Digital Manifold Gauge DMG-4B is designed to provide precise measurements for HVAC/R systems. It offers advanced features such as remote firmware upgrades, a comprehensive refrigerant database, and smart app control via Bluetooth. This device aims to simplify complex refrigeration tasks with its digital accuracy and robust design.



Image: Elitech Smart Digital Manifold Gauge DMG-4B, front view.

Key features include:

- Remote firmware upgrade (OTA) for up-to-date functionality.
- Supports over 140 types of refrigerants with instant updates via the Elitech Tools APP.
- Bluetooth connectivity for real-time data monitoring and analysis.
- Digital sensors for enhanced measurement accuracy.
- Compact, portable, and durable design with up to 200 hours of battery life.

2. WHAT'S IN THE BOX

The Elitech Smart Digital Manifold Gauge DMG-4B package includes the following items:

- 1 x Digital Manifold Gauge (DMG-4B)
- 1 x Carrying Bag
- 1 x User Manual
- 1 x Packaging Box



Image: Contents of the Elitech DMG-4B package, including the manifold, bag, and manual.

3. SETUP INSTRUCTIONS

Follow these steps to set up your Elitech Smart Digital Manifold Gauge DMG-4B for initial use.

3.1. Initial Calibration and Refrigerant Selection

Before each measurement, it is crucial to calibrate the pressure sensor and select the correct refrigerant type.

1. Ensure there is no connection between the gauge and any pressure source. The gauge should be at atmospheric pressure.
2. Long press the 'Zero' button to calibrate the pressure sensor. The calibration range is 1-100psi.
3. To switch the refrigerant type, long press 'Zero' and the 'Down Arrow' button together. Then, short press 'Up Arrow' or 'Down Arrow' to cycle through available refrigerant types.

Your browser does not support the video tag.

Video: This video demonstrates how to use the Elitech DMG-4B, including initial setup, calibration, and refrigerant selection.

3.2. App Connection and Firmware Upgrade (OTA)

The Elitech Tools app enhances the functionality of your manifold gauge. It also allows for remote firmware upgrades to keep your device up-to-date.

1. Download and open the 'Elitech Tools' app on your smartphone.
2. Click the menu icon in the upper left corner of the homepage and log in or register an account.
3. On the manifold gauge, click the Bluetooth button. The Bluetooth icon on the display will flash.
4. In the app, click 'Search nearby device' and connect to your DMG-4B.
5. If a newer firmware version is available, the device will prompt you to upgrade. Confirm to start the OTA upgrade process. Alternatively, you can manually initiate a firmware update from the app's settings.

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Video: This video demonstrates connecting the manifold gauge to the Elitech Tools app and performing a firmware upgrade.

4. OPERATING INSTRUCTIONS

The Elitech DMG-4B offers various functions for comprehensive HVAC/R system analysis. Some advanced functions require in-app purchase.

4.1. DIY Refrigerant List

Customize your refrigerant list by selecting from over 140 available types in the app.

1. In the Elitech Tools app, click on the refrigerant icon in the upper right corner of the dashboard.
2. Select the refrigerant types you wish to add or remove from your 'Favorite' list by touching the star icon.
3. Click the update icon in the upper right corner to save your settings and synchronize with the device.

4.2. Pressure Holding Test (Requires In-App Purchase)

This function allows you to test the pressure integrity of your system.

1. Connect the high-pressure refrigerant hose to the testing system and close the high-pressure valve.
2. In the app, navigate to 'Settings' and then 'Hold Pressure Setting'.
3. Set the charging warning value, decay ratio, enable/disable temperature compensation, and set the pressure-holding time.
4. On the device, press and hold the 'MODE' and 'Down Arrow' keys simultaneously to enter the pressure-holding test.
5. Inject gas into the system until the pressure reaches the charging warning value. The device will flash and emit a sound.
6. Click the 'Down Arrow' button on the device to begin the leak test. The timer will start counting down.
7. If the pressure remains within the acceptable leak value (calculated based on decay ratio), the test is successful. Otherwise, it indicates a leak.

4.3. Vacuum Measurement (Requires In-App Purchase)

Measure the vacuum level of your system.

1. Connect the system to the high-pressure side of the manifold and open the high-pressure valve.
2. Simultaneously press the 'MODE' and 'Down Arrow' buttons twice on the device to enter the vacuum mode.
3. Connect one end of the refrigerant pipe to the vacuum pump.
4. Start the vacuum pump and extract pressure from the system. The device will display the vacuum degree and elapsed time.

4.4. Offline Data Logging (Requires In-App Purchase)

Record measurement data directly on the device for later analysis.

1. In the app, navigate to 'Settings' and then 'Record Function'.
2. Select the desired recording interval (e.g., 1s, 10s, 1min).
3. Click 'Start Offline Recording'. The recording icon on the device will light up and flash.
4. To stop recording, click 'Stop Offline Recording'. The recording icon will turn off.
5. To view or export historical data, click 'Read Device History Data' in the app. Data can be exported in PDF or Excel format.
6. To clear historical data from the device, click 'Clear Historical Data' in the app.

Your browser does not support the video tag.

Video: This video provides an introduction to the Elitech DMG-4B APP's value-added functions, including refrigerant list customization, pressure holding test, vacuum measurement, and offline data logging.

5. MAINTENANCE

Proper maintenance ensures the longevity and accuracy of your Elitech DMG-4B.

- **Cleaning:** Regularly wipe the device with a soft, damp cloth. Avoid using abrasive cleaners or solvents that could damage the casing or screen.
- **Storage:** Store the manifold gauge in its provided carrying bag in a dry, cool place when not in use.
- **Battery Replacement:** The device uses replaceable AAA batteries. Replace them promptly when the low battery indicator appears to ensure continuous operation.
- **Sensor Care:** Ensure the pressure ports are free from debris and moisture. Always cap the ports when not connected to a system.

6. TROUBLESHOOTING

This section addresses common issues you might encounter with your Elitech DMG-4B.

Issue	Possible Cause	Solution
Pressure Holding Test Failure	<ul style="list-style-type: none">• System leakage.• Refrigerant pipe connection not tightened.• Too small leak decay alarm value settings.	<ul style="list-style-type: none">• Check the system for leaks and repair as necessary.• Ensure all connections are securely tightened.• Adjust the leak decay alarm value in the app settings if appropriate for your system.

Issue	Possible Cause	Solution
Screen goes blank or dims immediately	Low battery or display settings.	Replace batteries. Check app settings for display brightness or auto-off timers.
Bluetooth connectivity issues	Out of range, interference, or app/device not paired correctly.	Ensure device and phone are within Bluetooth range. Restart both the device and the app. Re-pair the device through the app.
Inaccurate readings	Sensor not calibrated, dirty ports, or incorrect refrigerant selected.	Perform pressure sensor calibration. Clean pressure ports. Verify the correct refrigerant type is selected in the device and app.

7. SPECIFICATIONS

Detailed technical specifications for the Elitech Smart Digital Manifold Gauge DMG-4B.

Specification	Value
Model	DMG-4B
Item Weight	1.5 pounds (approx. 680g)
Product Dimensions	4.33 x 2.95 x 5.31 inches (approx. 11 x 7.4 x 13.5 cm)
Pressure Range	-14 to 800 psi
Accuracy	±1% FS
Resolution	1 psi
Pressure Units	psi, kg/cm2, kPa, MPa, bar, inHg
Temperature Units	°C / °F
Batteries	2 AAA batteries (included)
Battery Life	Up to 200 hours



Compact & Durable Design

- Pressure Range: -14~800psi
- Accuracy: $\pm 1\%$ FS
- Resolution: 1psi
- Pressure Unit: psi, kg/cm², kPa, MPa, bar, inHg
- Temperature Unit: °C/ °F

The device defaults to 18 types, which can be updated through the APP










Image: Visual representation of Elitech DMG-4B dimensions and key specifications.

8. WARRANTY AND SUPPORT

Elitech provides comprehensive support for its products.

- **Warranty:** The Elitech DMG-4B typically comes with a 1-year warranty from the date of purchase. Please refer to the official Elitech website or your purchase documentation for specific warranty terms and conditions.
- **User Manual (PDF):** For a detailed PDF version of the user manual, please refer to the official product page or Elitech's support resources. [Download User Manual \(PDF\)](#)
- **Online Support:** For further assistance, technical support, or inquiries, visit the official Elitech website or contact their customer service.

Related Documents - DMG-4B

<div> MS-100 PLUS Digital Manifold Gauge User Manual</div> <div></div>	<p>Elitech MS-100 PLUS Smart Digital Manifold Gauge User Manual</p> <p>Comprehensive user manual for the Elitech MS-100 PLUS Smart Digital Manifold Gauge, covering product introduction, safety instructions, overview, button functions, technical parameters, and quick operation guides for refrigeration and HVAC systems.</p>
<div> MS-100 Digital Manifold Gauge User Manual</div> <div> English</div>	<p>Elitech MS-100 Digital Manifold Gauge User Manual</p> <p>User manual for the Elitech MS-100 Digital Manifold Gauge, detailing its features, operation, specifications, and maintenance.</p>
<div> MS-800 Series Manifold Instrument User Manual</div> <div></div>	<p>Elitech MS-800 Series Digital Manifold Gauge User Manual & Specifications</p> <p>Comprehensive user manual for the Elitech MS-800 Series digital manifold instrument, covering product introduction, safety guidelines, environmental protection, detailed specifications, and quick operation guides for pressure and temperature measurements, hold pressure tests, and refrigerant charging for HVAC and refrigeration systems.</p>
<div></div>	<p>Elitech MS-100 Digital Manifold Gauge: Features, Operation, and Specifications</p> <p>Comprehensive guide to the Elitech MS-100 Digital Manifold Gauge, covering its features, quick operation, technical specifications, precautions, and product details for HVAC and refrigeration systems.</p>
<div><p>1. Descripción del producto</p><p>1.1 Introducción breve</p><p>Este manual describe el uso y las características de los instrumentos de la serie MS-100 de Elitech. Los instrumentos de la serie MS-100 son dispositivos digitales que permiten medir la presión y la temperatura de los gases refrigerantes en sistemas de refrigeración y climatización. Los instrumentos de la serie MS-100 están diseñados para ser fáciles de usar y para proporcionar mediciones precisas y confiables. Este manual describe el uso y las características de los instrumentos de la serie MS-100 de Elitech. Los instrumentos de la serie MS-100 son dispositivos digitales que permiten medir la presión y la temperatura de los gases refrigerantes en sistemas de refrigeración y climatización. Los instrumentos de la serie MS-100 están diseñados para ser fáciles de usar y para proporcionar mediciones precisas y confiables.</p></div> <div></div>	<p>Elitech MS Series Digital Manifold Gauge User Manual</p> <p>User manual for the Elitech MS Series digital manifold gauge, covering product description, general overview, button functions, specifications, quick start guide, operation steps, intelligent applications, and maintenance.</p>
<div></div>	<p>Elitech MS-100 Digital Manifold: User Manual and Specifications</p> <p>Comprehensive guide to the Elitech MS-100 digital manifold, covering its features, technical specifications, operation, safety instructions, and troubleshooting. Learn how to use the device for pressure and temperature measurements, leak tests, vacuum processes, and data logging with the Elitech Tools app.</p>