MS-100 Plus Digital Manifold Gauge User Manual

1.Product Introduction

Thanks for your purchase of the Elitech MS-100Plus series digital manifold gauge. Please read this manual carefully before use to avoid harm to you and your product due to improper operations.

The MS-100Plus series digital dual-manifold valve integrates pressure temperature mode, holding pressure mode, vacuum mode, and data recording mode. Supports connection with Elitech IPT-01 series wireless temperature probes.It is suitable for the daily troubleshooting and maintenance of refrigeration and HVAC systems, helping users provide more accurate and real data, greatly improving the onsite work efficiency of users, and can completely replace the existing mechanical manifold valves. it adopts a dot matrix LCD color screen, enriches the interface effects, and makes data viewing more intuitive. It also supports APP for report viewing and data analysis.The commonly used refrigerants are updated in real time, and the product user experience can be continuously improved through remote firmware upgrades.

2.Safety Instructions

1.This product is not suitable for maintenance of ammonia (ammonia-containing) refrigerant systems.

2.This product contains batteries and should not be placed in high-temperature environments or thrown into fire, as there is a risk of explosion.

3.Do not use this product during thunderstorms to avoid being struck by lightning, endangering life, and damaging the product.

4.Strictly follow the safety precautions of the refrigeration system.

5.When using this product, please wear safety goggles and protective gloves, and read the maintenance manual of the system unit carefully before connecting to the system for maintenance operations.

6.If the product is found to be damaged, please contact us in time. Do not disassemble the product privately, as this may further damage the product and, in severe cases, cause the battery to catch fire or even explode.

3.Environmental Protection

1.Comply with local environmental policies. Refrigerants should not be directly discharged into the atmosphere and must be recovered using professional
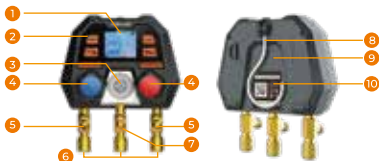
equipment.

2.At the end of the product's life, please recycle it according to local regulations. Do not dispose of it arbitrarily to avoid environmental pollution.

3.Take the scrapped old batteries to the specified waste battery collection point.

4.Overview

1.LCD color screen	6.Refrigerant tube connection port (1/4SAE)
2.Control buttons (see section 5 for button functions)	7.Valve core interface
3.Sight glass	8.Hanging device
4.Valve knob	9.Battery compartment (2 AAA batteries, replaceable)
5.Refrigerant tube bracket	10.Information label

5.Button Functions

	1.Long press: Turn on/off the power. 2.Short press: Turn on/off Bluetooth.
MODE	1.Long press: Enter the settings interface. 2.Short press: ①Mode switch (pressure temperature/hold pressure/vacuum). ②Switch the main option in the settings interface.

	1.Short press: Switch refrigerant type. 2.Long press: ①Data zero calibration (Pressure zero calibration range: -14.7~100psi). ②Zero the timer in the vacuum interface.
	1.Short press: ①Switch refrigerant type. ②Start hold pressure test in the hold pressure interface. ③Start leak test in the vacuum interface. ④Switch sub-option in the settings interface. 2.Long press: ①End hold pressure test in the hold pressure interface. ②Exit the hold pressure data result display interface. ③End leak test in the vacuum interface. ④Exit the vacuum data result display interface.
Pressing and both	Long press for 3 seconds, unlock the selection of refrigerant state. Note: After unlocking, the refrigerant area turns red, indicating that the refrigerant can be switched. The refrigerant will automatically lock after 10 seconds.

6.Technical Parameters

Feature	Specification
Measurement Range	-14.7~800psi

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Accuracy	±0.5%FS
Resolution	0.5psi
Units	Pressure：psi、kPa、MPa、bar、inHg Temperature：℃、℉
Refrigerant Types	18 default types in the device, updatable via APP
Selectable Refrigerants	Default types in the device: R11 R12 R13 R22 R290 R32 R134a R404A R410A R407C R408A R409A R458A R448A R449A R500 R502 R600
Interfaces	1/4 SAE*3 1/4SAE valve core*1
Power Supply	2×1.5V，AAA batteries Battery Life：100H (with dimmed screen display)
Display	LCD color screen
Main Unit	Dimensions：110 x 75 x 135mm Weight：Approx.700g

7.Quick Operation Guide

7.1 Measuring Pressure and Temperature

1.Press the power button ⬚ to turn the device on and enter the main interface for **PT**.

2.Hold the ▣ + ▢ button for 3 seconds to unlock the refrigerant selection.
3.The refrigerant section will turn red. Short press ▣ or ▢ to select the desired refrigerant.
4.Close all valves and connect the high and low-pressure sides of the product to the system being tested.
5.Start the system being tested to real-time monitor the system's pressure and saturation temperature among other parameters.
*Note: Ensure proper connection according to the diagram shown below.*
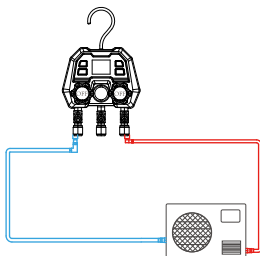
7.2 Hold Pressure Measurement

1.Turn on the device and press the button [MODE] to enter the **HOLD** pressure interface.
2.Charge the system being tested with an appropriate amount of nitrogen. When the pressure reaches the target value, close the high-pressure side valve.
3.Press the button to start the hold pressure test.
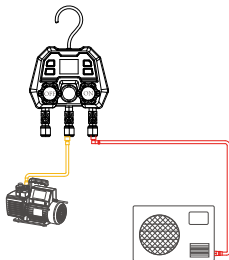*Note: Ensure the connection is made correctly according to the diagram shown below.*
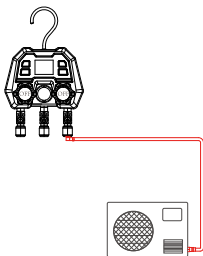
7.3 Vacuum Test

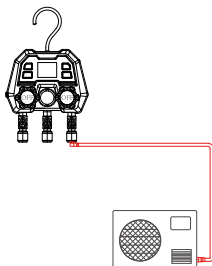1.Turn on the device and press the button [MODE] to enter the **VAC** interface.

2.Start the vacuum pump to begin the vacuum test.

Note: Ensure the connection is correctly made as illustrated in the diagram below.

3.After vacuuming for a period, press the button [   ] to start the leak test.

*Note: Ensure the connection is correctly made as illustrated in the diagram below.*

4.Long press the button 🔘 to exit the leak test.

7.4 Refrigerant Charging

1.Turn on the device and enter the **PT** interface.

2.Connect the refrigerant tank to the middle interface.

3.Close the high-pressure valve and open the low-pressure valve.

4.Open the refrigerant line valve to charge refrigerant.

Note: Ensure the connection is made correctly as shown in the diagram below.
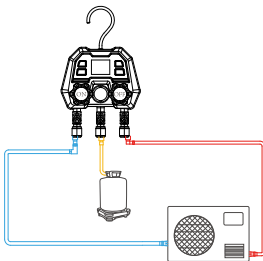
8.Multi-device Interconnection

This series product supports connection with Elitech IPT-01 series wireless temperature probes . If you need to purchase wireless probes that support the connection of this product, please contact our customer service.

9.More Details

Scan the QR code for instructions in your language.
Scannen Sie den QR-Code für Anleitungen in Ihrer Sprache.
Scannez le code QR pour les instructions dans votre langue.
Scansiona il codice QR per le istruzioni nella tua lingua.
Escanea el código QR para obtener instrucciones en tu idioma.
Digitalize o código QR para obter instruções na língua da sua escolha.
Scan de QR-code voor meer gedetailleerde productbeschrijvingen.
Daha ayrıntılı ürün açıklamalarına ulaşmak için lütfen QR kodunu tarayın.
Для получения более подробной информации о продукте, пожалуйста, отсканируйте QR-код, чтобы получить его.
QRコードをスキャンして、お好きな言語の説明書をご覧ください。

10.Family Product