MS-800 Series Manifold Instrument User Manual

1 Product Introduction

Welcome to purchase the Elitech MS-800 series manifold instrument, please read this manual carefully before use, to avoid illegal operation to bring harm to you and your products.

The MS-800 series manifold instrument integrates pressure-temperature mode, pressure-holding mode, vacuum mode, and data logging mode. It is suitable for daily troubleshooting, maintenance and repair of refrigeration and HVAC systems to help users provide more real and accurate data, greatly improve the efficiency of user's work on site, and can completely replace the existing mechanical gauge valves. Adopting dot-matrix LCD screen, rich interface effect, more intuitive data viewing, while supporting APP to view reports and data analysis, instant update of commonly used refrigerants, can be upgraded by remote firmware, and constantly improve the product user experience.
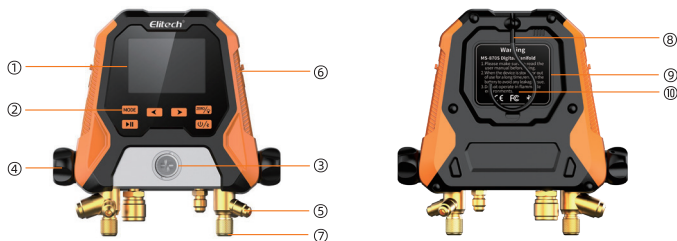
2 Safety Instructions

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 screen	6.Temperature clamp connector
2. Control buttons	7.Refrigerant pipe connection port(1/4SAE)
3. Liquid sight glass	8.Suspension device
4. Valve knob	9.Battery compartment (AA batteries*3)
5. Refrigerant tube holder	10.Information sticker

5 Button Functions

⟨U/*⟩	1. Long press: power on/off 2. Short press: turn on/off Bluetooth
MODE	1. Long press: Enter the setting interface 2. Short press: ①Mode switching (pressure temperature/holding pressure/vacuum) ②Setting interface to switch the main option
ZERO/*	1. Short press:Turn on/off the backlight 2. Long press: ①Data calibration (air pressure calibration range: -14.7-100psi) ②Vacuum interface timer zero

►‖	Short press: ①Pressure-holding interface to open pressure-holding test ②Vacuum interface to open the leakage test 2.Long press: ①Pressure-holding interface ends pressure-holding test ②Exit pressure holding data result display interface ③Vacuum interface ends leakage test ④Exit vacuum data result display interface
◄	Short press: ①Switch refrigerant when unlocking ②Switching sub-options in the setting screen
►	Short press: ①Switch refrigerant when unlocking ②Switching sub-options in the setting screen
Press ◄ and ► at the same time	Press and hold for 3 seconds to unlock selection of refrigerant state

6 Specification

6.1 Host parameter

| Characteristics	Parameters
Measurement range	-14.7~800psi
Accuracy	±0.5%FS
Resolution	0.5psi
Units	psi、kg/cm²、kPa、MPa、bar、inHg
Refrigerant type	Device default 18 types, can be updated through APP
Selectable refrigerants	Equipment default type: R11 R12 R13 R22 R290 R32 R134a R404A R410A R407C R408A R409A R458A R448A R449A R500 R502 R600
Interface	1/4 SAE*3、3/8SAE*1（MS-870）

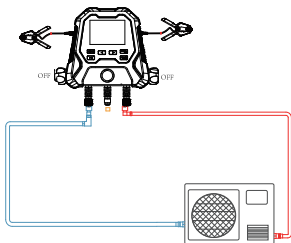| Power	supply 3*1.5V, AA batteries Battery life: not less than 150 hours (Bluetooth and backlight off)
Display	LCD screen
Main unit	Size:187*185*47mm Weight: about 1300g
Main unit	Working temperature: -10~50℃/14~122°F Storage Temperature: -20~60℃/-4~140°F

6.2 Temperature parameter

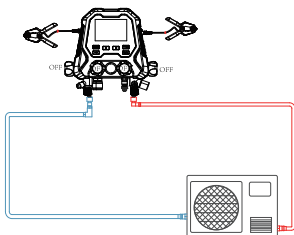| Characteristics	Parameters
Measurement range	-40~150℃
Accuracy	±0.5℃（-40~130℃）、±1℃（130~150℃）
Resolution	0.1℃
Units	℃、℉
Interface	PS/2

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.Refrigerant area blinks, 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.
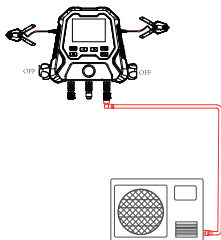
MS-810 series

MS-870 series

7.2 Hold Pressure Measurement

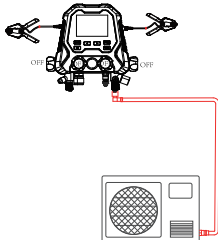1.Turn on the device and press the button MODE to enter the HOLD pressure interface.

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.

MS-810 series
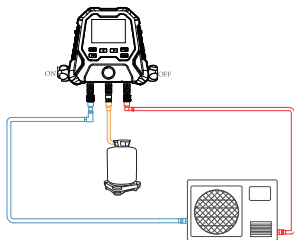

MS-870 series

7.3 Refrigerant Charging

1.Turn on the device and enter the PT interface.
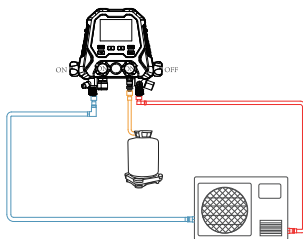2.Connect the refrigerant tank to the middle interface.

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.

MS-810 series   MS-870 series

8 More Details

Scan the QR code for instructions in your language.
Scannen Sie den QR-Code für Anleitungen in Ihrer Sprache.
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Escanea el código QR para obtener instrucciones en tu idioma.
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