

## Festo VUVG-L10-M52-RT-M5-1P3

# FESTO VUVG-L10-M52-RT-M5-1P3 Air Solenoid Valve Instruction Manual

Model: VUVG-L10-M52-RT-M5-1P3

## 1. INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of the FESTO VUVG-L10-M52-RT-M5-1P3 air solenoid valve. Please read this manual thoroughly before using the product and retain it for future reference. This valve is designed for industrial pneumatic applications, specifically as a 5/2 monostable solenoid valve with M5 connections.

## 2. SAFETY INFORMATION

Always observe general safety regulations and accident prevention rules when working with pneumatic systems. Failure to follow these instructions may result in injury or damage to equipment.

- Ensure the system is depressurized and de-energized before installation, maintenance, or repair.
- Only qualified personnel should install, operate, or maintain this device.
- Do not exceed the specified operating pressure or voltage.
- Protect the valve from contamination, moisture, and extreme temperatures.
- Use only clean, dry, and filtered compressed air.

## 3. PRODUCT OVERVIEW

The FESTO VUVG-L10-M52-RT-M5-1P3 is a compact 5/2 monostable air solenoid valve from the VUVG series, designed for controlling pneumatic actuators. It features electrical actuation and M5 pneumatic working ports.

### Key Features:

- **Valve Size:** 10 mm
- **Operating Pressure:** 2.5 - 8 bar
- **Standard Nominal Flow Rate:** 220 L/min
- **Operating Voltage:** 24 VDC
- **Function:** 5/2 Monostable

- **Connections:** 5x M5 ports
- **Actuation:** Electrical



Figure 3.1: Overall view of the FESTO VUVG-L10-M52-RT-M5-1P3 air solenoid valve.

## 4. SETUP AND INSTALLATION

Proper installation is crucial for the reliable operation of the valve.

### 4.1 Mounting

The valve can be mounted in any position. Ensure sufficient space for pneumatic and electrical connections, as well as for maintenance access. Use appropriate fasteners to secure the valve firmly to a stable surface or manifold.

### 4.2 Pneumatic Connections

The valve features M5 threaded ports for pneumatic connections. Refer to the port numbering on the valve body for correct connection:

- **Port 1:** Pressure supply
- **Ports 2 & 4:** Working ports (to actuator)
- **Ports 3 & 5:** Exhaust ports

Use appropriate M5 fittings and ensure all connections are leak-tight. Apply thread sealant if necessary. The operating pressure range is 2.5 to 8 bar.

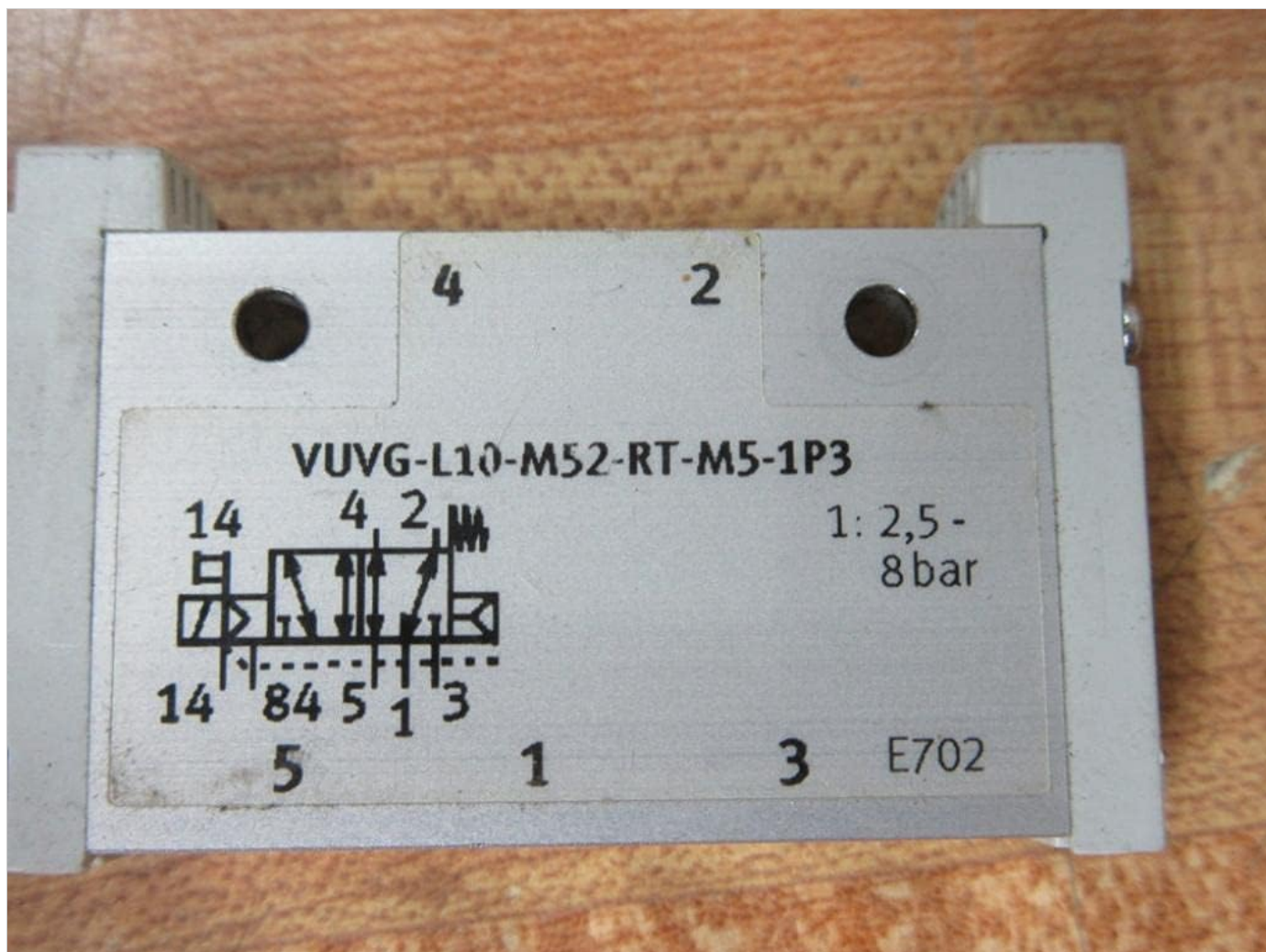


Figure 4.1: Close-up view of the valve label showing model number, pressure range, and port diagram.



Figure 4.2: Bottom view of the valve, illustrating the M5 pneumatic working ports.

### 4.3 Electrical Connections

Connect the valve to a 24 VDC power supply. Ensure correct polarity if specified on the coil. The electrical connection is typically made via a standard connector that plugs into the solenoid coil. Verify that the power supply meets the voltage and current requirements of the valve.

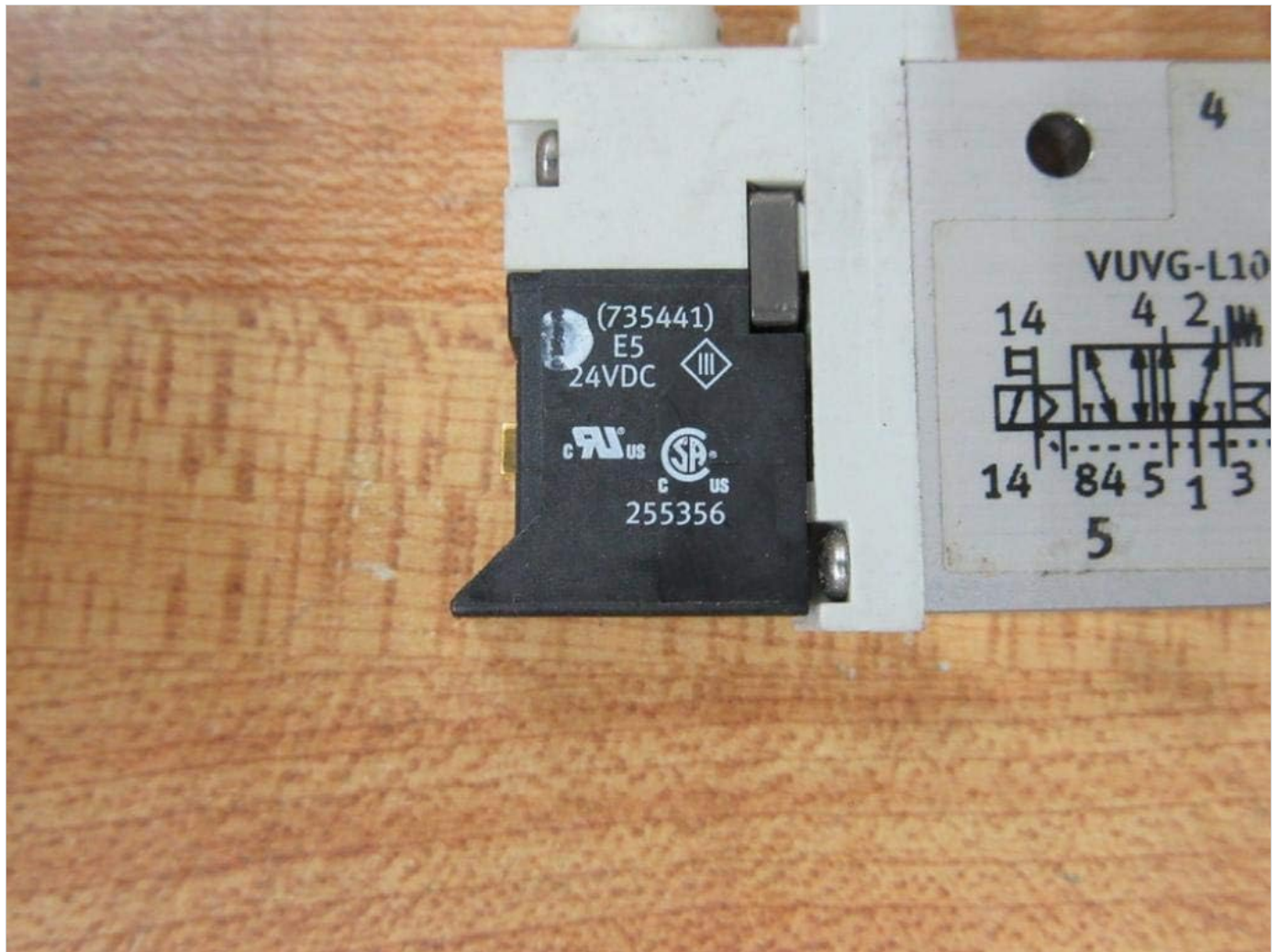


Figure 4.3: Detailed view of the electrical connector area on the valve, showing voltage rating.

## 5. OPERATING INSTRUCTIONS

The VUVG-L10-M52-RT-M5-1P3 is a 5/2 monostable valve. This means it has five ports and two stable positions. Being monostable, it requires continuous electrical power to maintain one of its positions; upon removal of power, it returns to its default position via a spring return mechanism.

- When the solenoid is de-energized, compressed air flows from port 1 to port 2, and port 4 is exhausted through port 5.
- When the solenoid is energized (24 VDC applied), compressed air flows from port 1 to port 4, and port 2 is exhausted through port 3.

Ensure the operating pressure is within the specified range of 2.5 to 8 bar for optimal performance and to prevent damage.

## 6. MAINTENANCE

Regular maintenance ensures the longevity and reliable operation of the valve.

### 6.1 Cleaning

Keep the valve exterior clean. Use a soft, damp cloth. Avoid using harsh chemicals or abrasive materials that could damage the valve body or seals.

### 6.2 Inspection

Periodically inspect the valve for signs of wear, damage, or leakage. Check all pneumatic and electrical connections for tightness and integrity. Ensure the solenoid coil is free from debris and securely attached.

### 6.3 Air Quality

The use of clean, dry, and filtered compressed air is essential. Contaminants in the air supply can lead to premature wear of internal components and valve malfunction. Ensure your air preparation unit (filter, regulator, lubricator if applicable) is functioning correctly.

## 7. TROUBLESHOOTING

This section provides guidance for common issues. For complex problems, contact qualified technical support.

| Problem                      | Possible Cause                                                         | Solution                                                                             |
|------------------------------|------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Valve does not switch        | No electrical power; Incorrect voltage; Damaged coil; Low air pressure | Check power supply (24 VDC); Verify voltage; Replace coil; Check air supply pressure |
| Air leakage                  | Loose fittings; Damaged seals; Contamination                           | Tighten connections; Inspect and replace seals; Clean valve and air supply           |
| Reduced flow rate            | Low air pressure; Clogged exhaust; Contamination                       | Check air supply pressure; Clear exhaust ports; Clean valve and air supply           |
| Valve sticks in one position | Contamination; Mechanical obstruction                                  | Clean valve internals; Inspect for foreign objects                                   |

## 8. SPECIFICATIONS

Technical data for the FESTO VUVG-L10-M52-RT-M5-1P3 air solenoid valve.

| Parameter                      | Value                                |
|--------------------------------|--------------------------------------|
| Model Number                   | VUVG-L10-M52-RT-M5-1P3               |
| Brand                          | Festo                                |
| Valve Function                 | 5/2 Monostable                       |
| Valve Size                     | 10 mm                                |
| Operating Pressure             | 2.5 - 8 bar                          |
| Standard Nominal Flow Rate     | 220 L/min                            |
| Operating Voltage              | 24 VDC                               |
| Pneumatic Connections          | 5x M5 (Inlet, Outlet, Exhaust)       |
| Actuation Type                 | Electrical                           |
| Material                       | Stainless Steel (housing components) |
| Item Weight                    | 3.2 ounces                           |
| Product Dimensions (L x W x H) | 4 x 3 x 4 inches                     |

## 9. WARRANTY AND SUPPORT

For information regarding product warranty or technical support, please refer to the official Festo website or contact your

authorized Festo distributor. Ensure you have the product model number (VUVG-L10-M52-RT-M5-1P3) available when seeking support.

## 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