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SIEMENS 599-01123

Siemens 599-01123 HVAC Control Valve Instruction Manual

Model: 599-01123 | Brand: SIEMENS

INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of the Siemens 599-01123 1/2 inch 2-way valve. This valve features a 2.5 CV, is normally open, has a modified equal percent flow characteristic, brass trim, and F x F connections, designed for ANSI 250 systems. It is manufactured in the United States.



Figure 1: Siemens 599-01123 valve as received in its product packaging.

SETUP AND INSTALLATION

Proper installation is crucial for the optimal performance and longevity of the valve. Ensure all local codes and regulations are followed during installation.

Safety Precautions

- Always depressurize and drain the system before beginning any installation or maintenance.
- Wear appropriate personal protective equipment (PPE), including safety glasses and gloves.

- Ensure the valve is handled carefully to prevent damage to the brass body or internal components.

Tools Required

- Pipe wrenches or adjustable wrenches
- Thread sealant (e.g., PTFE tape or pipe dope suitable for brass and system fluid)
- Measuring tape

Installation Steps

1. **Inspect the Valve:** Before installation, visually inspect the valve for any signs of damage incurred during shipping. Verify the model number (599-01123) matches your requirements.



Figure 2: Close-up view of the product label on the Siemens 599-01123 valve, showing model and specifications.

2. **Prepare Pipe Ends:** Ensure pipe ends are clean, free of burrs, and properly aligned.
3. **Apply Thread Sealant:** Apply an appropriate thread sealant to the male pipe threads. Do not apply sealant to the first thread to prevent contamination of the valve's internal components.
4. **Thread Valve into Piping:** Carefully thread the valve onto the pipe. Use wrenches to tighten the connections, ensuring not to overtighten, which can damage the valve body or threads. Support the valve body with one wrench while tightening with another to prevent twisting the valve.



Figure 3: Side view of the Siemens 599-01123 valve, illustrating the brass body and threaded connections.

5. **System Integration:** Connect the valve to the HVAC control system as per the overall system design. This valve is designed for integration into systems requiring a 1/2 inch, normally open, 2-way flow control.
6. **Leak Check:** After installation, slowly pressurize the system and check all connections for leaks. Rectify any leaks immediately.

OPERATING INSTRUCTIONS

The Siemens 599-01123 is a 2-way, normally open (NO) valve. This means that in its de-energized state, the valve allows flow. When an actuator (not included with this valve, but typically paired with it) is energized, it will close the valve, restricting or stopping flow.

- **Flow Direction:** Ensure the valve is installed with the correct flow direction, typically indicated by an arrow on the valve body.
- **Actuator Pairing:** This valve is designed to be paired with a compatible Siemens actuator. Refer to the actuator's manual for specific wiring and control instructions.
- **Flow Control:** The valve provides a modified equal percentage flow characteristic, meaning the flow rate changes proportionally to the valve stem position, offering precise control over a wide range.

MAINTENANCE

Regular maintenance ensures the long-term reliability and performance of the valve.

Routine Inspection

- **Visual Check:** Periodically inspect the valve body and connections for any signs of corrosion, leaks, or physical

damage.

- **Actuator Check:** If an actuator is installed, verify its proper operation and secure mounting.
- **System Fluid Quality:** Ensure the system fluid is clean and free of debris that could foul the valve's internal components.

Cleaning

The brass body of the valve can be cleaned externally with a damp cloth. Do not use harsh chemicals that could damage the brass or seals.

Component Replacement

This valve is generally considered a sealed unit. In case of internal failure or significant wear, the entire valve assembly is typically replaced rather than individual internal components.

TROUBLESHOOTING

This section addresses common issues that may arise with the valve. Always ensure system safety precautions are followed before attempting any troubleshooting.

| Problem | Possible Cause | Solution |
|-----------------------------------|--|--|
| Valve Leaks at Connections | Improperly tightened connections, insufficient thread sealant, damaged threads. | Depressurize system, re-tighten connections, reapply thread sealant, or replace valve if threads are damaged. |
| No Flow or Restricted Flow | Valve is closed (if normally open), debris in valve, actuator malfunction, incorrect installation (e.g., backward flow). | Check actuator operation and control signal. Depressurize and inspect valve for debris. Verify correct flow direction. |
| Valve Does Not Close Fully | Debris lodged in valve seat, actuator not providing full stroke, worn internal components. | Depressurize and inspect valve for debris. Check actuator calibration and stroke. If internal components are worn, valve replacement may be necessary. |

SPECIFICATIONS

Key technical specifications for the Siemens 599-01123 valve:

Manufacturer: Siemens

Part Number: 599-01123

Item Model Number: 599-01123

Valve Pattern: 2-way

Valve CV/GPM: 2.5

Body Rating: ANSI 250

Maximum Temperature: 250°F

Valve Size: 0.5 inch (1/2")

Material: Brass

Product Dimensions: 2.75 x 1.25 x 3.75 inches

Item Weight: 1.8 pounds

Included Components: Control Valve (Note: Actuator sold separately)

Batteries Required?: No

Date First Available: December 11, 2014

WARRANTY INFORMATION

For detailed warranty terms and conditions, please refer to the official Siemens product warranty documentation or contact Siemens customer support directly. Warranty coverage typically applies to defects in materials and workmanship under normal use and service.

CUSTOMER SUPPORT

If you require further assistance, technical support, or have questions regarding the Siemens 599-01123 valve, please contact Siemens customer service or visit their official website.

Siemens Official Website: www.siemens.com

For product-specific inquiries, it is recommended to have the model number (599-01123) and any relevant system details ready when contacting support.