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Strnek SJT-BR#-TOOLPC-210722-B07THT182B

Four-way Reversing Valve User Manual

Brand: Strnek | Model: SJT-BR#-TOOLPC-210722-B07THT182B

Introduction

This manual provides essential information for the proper installation, operation, and maintenance of the Strnek Four-way Reversing Valve. This component is designed for use in air conditioning and refrigeration systems, specifically in heat pump type systems, to manage refrigerant flow for both cooling and heating cycles.

Product Overview and Features

The Strnek Four-way Reversing Valve is a critical component in heat pump systems, enabling the conversion between refrigeration and heating modes by redirecting refrigerant flow. Its design incorporates several features for reliable performance:

- **Reliable Operation:** Designed for consistent performance even under low pressure differences, minimizing pressure drop and internal leakage.
- **Durable Solenoid Coil:** The electromagnetic coil is constructed from thermosetting plastic, offering resistance to water and lightning, along with excellent insulation properties.
- **Energy Efficiency:** Engineered for energy savings, exhibiting low temperature rise, reduced noise, and effective anti-vibration characteristics.
- **Superior Sealing:** Provides excellent sealing performance, contributing to high energy efficiency.
- **Compact and Robust:** Features a lightweight design with good vibration resistance, promoting environmental protection.

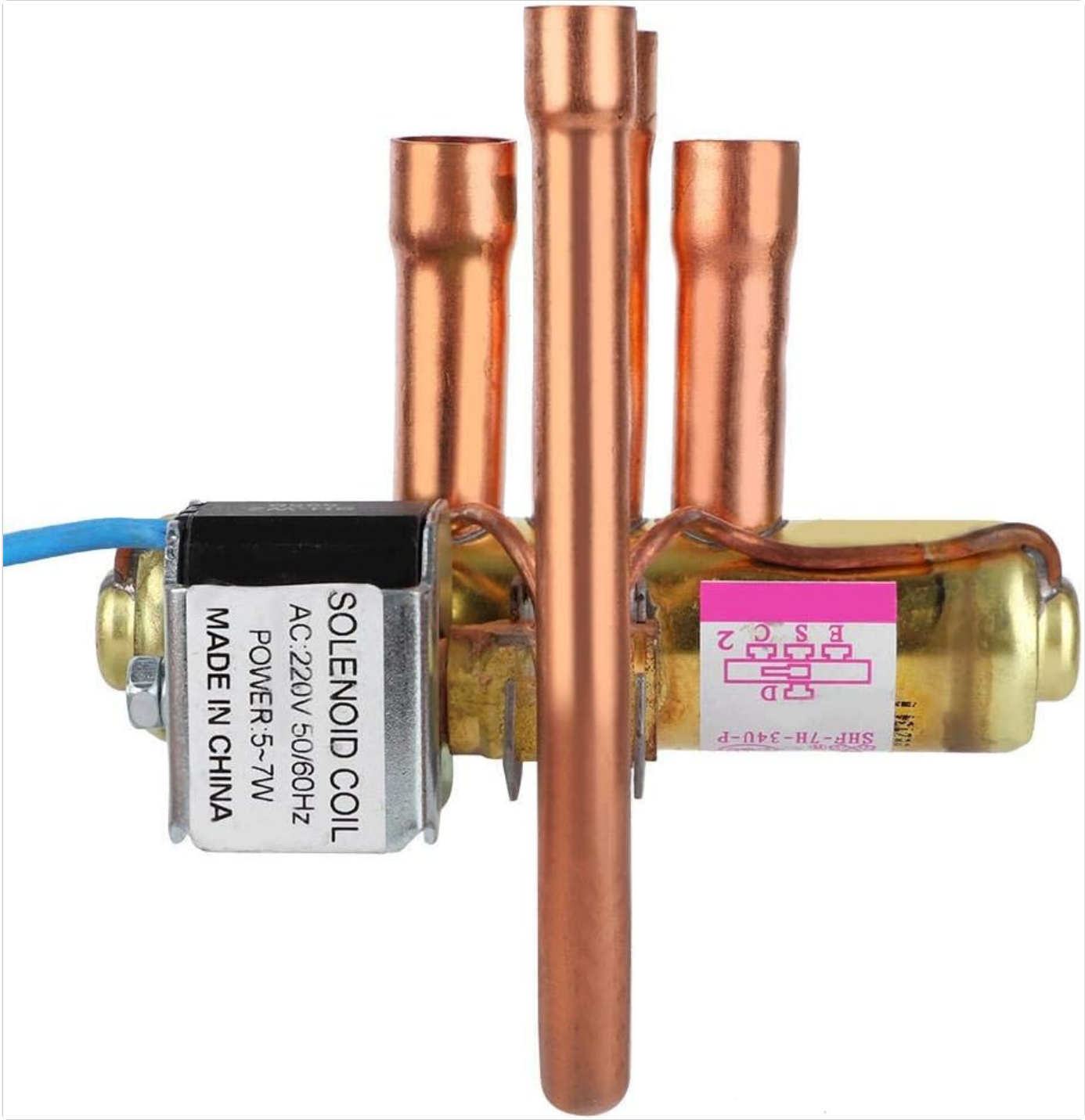


Figure 1: Front view of the Strnek Four-way Reversing Valve, showing the copper tubing and the solenoid coil on the left side.

Specifications

Attribute	Detail
Material	Copper, Plastic
Applicable Refrigerants	R22, R407C, R404A, R410A, etc.
Applicable Medium Temperature	-30°C to +120°C (-22°F to +248°F)
Applicable Ambient Temperature	-25°C to +70°C (-13°F to +158°F)
Relative Humidity	95% RH or less

Certifications	UL, PED
Type (Capacity)	1P, 1.5P-2P (as per model)
Dimensions (L x W x H)	0.39 x 0.39 x 0.39 inches (approximate, component dimensions)
Item Weight	10.6 ounces
UPC	715990682371

Installation and Setup

Proper installation is crucial for the optimal performance and longevity of the four-way reversing valve. This component requires professional installation within a refrigeration or air conditioning system.

Important Installation Notes:

1. **Pre-Welding Check:** Before commencing any welding, it is imperative to verify the position of the four-way valve slider. This slider is located inside the main valve body. In its normal state, the slider should be positioned to the left. If the slider is found in the middle or to the right, gently tap the valve body to encourage the slider to move to the left. This ensures correct initial alignment for proper function.
2. **Solenoid Coil Removal:** Prior to desoldering the four-way valve from the system, the coil of the priority valve must be carefully removed. This step is critical to prevent any potential damage or burning of the coil during the high-temperature desoldering process.

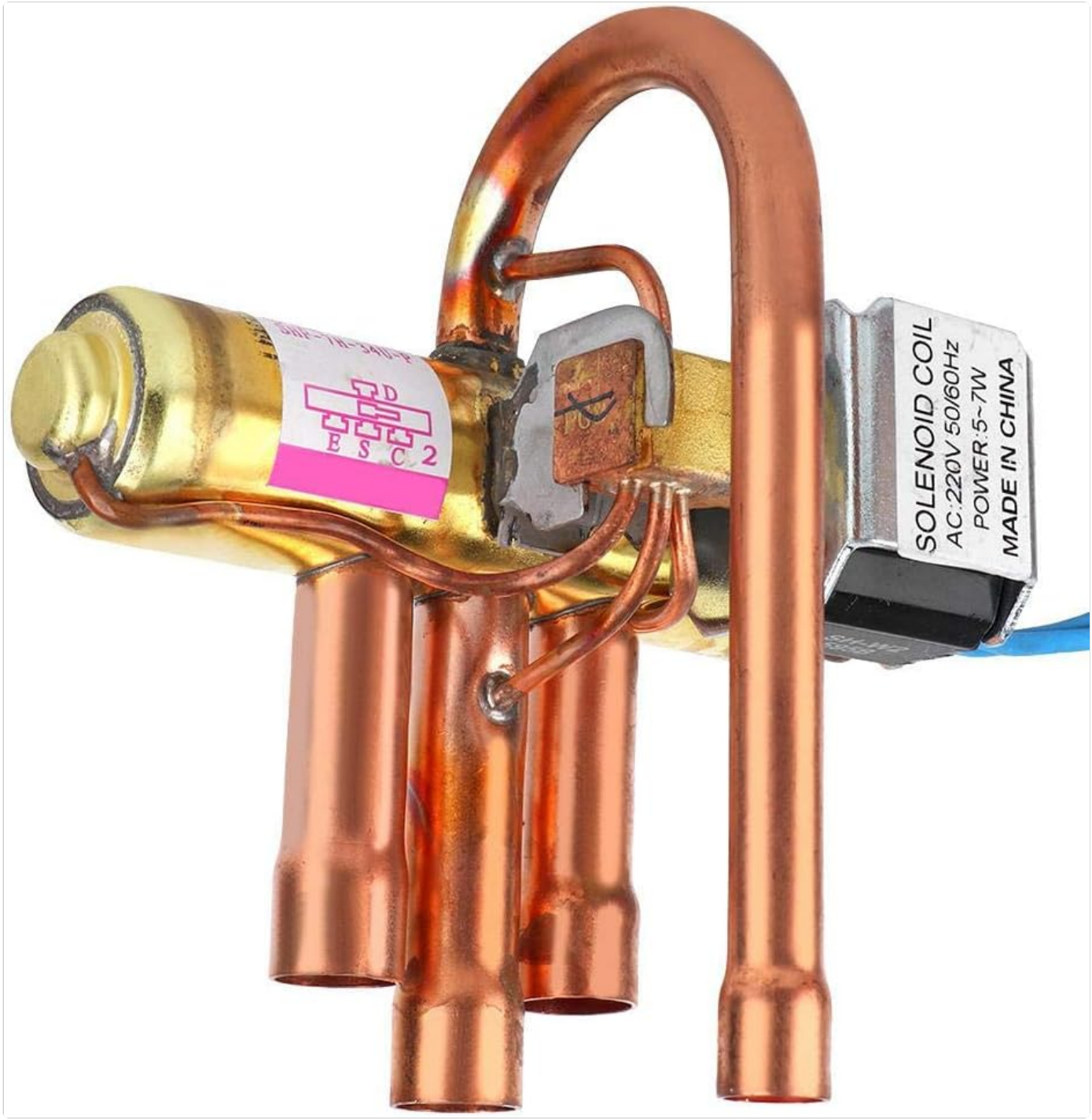


Figure 2: Side view of the valve, showing the solenoid coil assembly. The coil must be removed before welding or desoldering.

Operating Principles

The four-way reversing valve operates by changing the direction of refrigerant flow within a heat pump system. When the solenoid coil is energized, it actuates an internal mechanism that redirects the high-pressure and low-pressure refrigerant lines, effectively switching the system between cooling and heating modes. This allows a single refrigeration circuit to provide both functions.

Maintenance

The Strnek Four-way Reversing Valve is designed for durability and requires minimal routine maintenance once installed. However, periodic system checks by a qualified technician are recommended to ensure optimal performance of the entire HVAC system, including the valve's function.

- Ensure electrical connections to the solenoid coil are secure and free from corrosion.
- Check for any signs of refrigerant leaks around the valve connections during system servicing.
- Verify proper switching operation during system mode changes (cooling to heating and vice-versa).

Troubleshooting

Issues with the four-way reversing valve typically manifest as a failure to switch between heating and cooling modes, or inefficient operation in one or both modes. Always consult a qualified HVAC technician for diagnosis and repair.

Common Issues and Initial Checks:

- **Valve Not Switching:**
  - Verify electrical power to the solenoid coil.
  - Check the solenoid coil for continuity and proper resistance. A faulty coil may need replacement.
  - As noted in installation, ensure the internal slider is not stuck. If accessible and safe, a gentle tap on the valve body might dislodge a stuck slider, but this should only be attempted by a professional.
- **Reduced Performance:**
  - Internal leakage within the valve can lead to reduced efficiency. This often requires valve replacement.
  - System refrigerant charge issues can mimic valve problems. Ensure the system has the correct refrigerant level.

Warning: *Attempting repairs on refrigeration systems without proper training and tools can be dangerous and may violate environmental regulations. Always defer to certified professionals for complex diagnostics and repairs.*

Warranty and Support

For information regarding warranty coverage, technical support, or replacement parts for your Strnek Four-way Reversing Valve, please contact your original point of purchase or refer to the documentation provided with your complete HVAC system. Strnek is committed to providing quality components for your air conditioning and refrigeration needs.
For general inquiries, you may visit the Strnek brand page on Amazon.

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