

## Rexroth 4WE6J6X-EG24N9K4

# Rexroth Hydraulic Electromagnetic Directional Valve 4WE6J6X-EG24N9K4 User Manual

## 1. INTRODUCTION

This manual provides essential information for the safe and effective installation, operation, and maintenance of the Rexroth Hydraulic Electromagnetic Directional Valve, model 4WE6J6X-EG24N9K4. Please read this manual thoroughly before attempting any procedures to ensure proper function and to prevent damage or injury. Keep this manual for future reference.

## 2. SAFETY INFORMATION

Working with hydraulic systems requires strict adherence to safety protocols. Failure to follow these instructions can result in serious injury, death, or property damage.

- **Qualified Personnel:** Installation, maintenance, and repair must only be performed by trained and qualified personnel familiar with hydraulic systems and electrical components.
- **Pressure Hazard:** Hydraulic systems operate under high pressure. Always depressurize the system completely before performing any work on the valve or associated components.
- **Electrical Hazard:** The electromagnetic coil operates with electrical power. Disconnect all power to the valve before installation, maintenance, or troubleshooting.
- **Fluid Hazard:** Hydraulic fluid can be hot and under pressure. Wear appropriate personal protective equipment (PPE), including eye protection and gloves, to prevent skin contact and burns.
- **System Compatibility:** Ensure the valve is compatible with the hydraulic fluid, pressure, and flow rates of your system.
- **Environmental Considerations:** Dispose of hydraulic fluid and components according to local environmental regulations.

## 3. PRODUCT OVERVIEW

The Rexroth 4WE6J6X-EG24N9K4 is a high-performance hydraulic electromagnetic directional valve designed for controlling the direction of fluid flow in hydraulic systems. It features a robust construction suitable for industrial applications, ensuring reliable operation and precise control.



**Figure 1:** Rexroth Hydraulic Electromagnetic Directional Valve, Model 4WE6J6X-EG24N9K4. This image displays the Rexroth hydraulic electromagnetic directional valve, model 4WE6J6X-EG24N9K4. The valve features a blue central body with the 'Rexroth' logo and model number '4WE 6 J62/EG24N9K4' clearly visible. It also indicates a maximum pressure of 350 bar. Transparent plastic covers are visible on both ends, protecting the electrical connections.

## 4. SETUP AND INSTALLATION

Proper installation is crucial for the valve's performance and longevity. Always refer to the system's hydraulic schematic and electrical diagrams.

- 1. Preparation:** Ensure the hydraulic system is depressurized and all electrical power is disconnected. Clean the mounting surface and valve ports to prevent contamination.
- 2. Mounting:** Mount the valve securely to the manifold or subplate using appropriate bolts and torque specifications. Ensure O-rings or gaskets are correctly seated to prevent leaks.
- 3. Hydraulic Connections:** Connect the hydraulic lines to the designated ports (P, A, B, T) according to the system's schematic. Double-check all connections for tightness.
- 4. Electrical Connections:** Connect the electrical wiring to the solenoid coil(s) as per the electrical diagram. Ensure correct voltage (24V DC for EG24N9K4) and polarity. Secure all electrical connections and protect them from moisture.
- 5. System Start-up:** Slowly re-pressurize the hydraulic system and check for leaks. Restore electrical power and test the valve's operation. Bleed air from the system if necessary.

## 5. OPERATING INSTRUCTIONS

The 4WE6J6X-EG24N9K4 valve is an electromagnetically actuated directional control valve. Its operation is controlled by applying electrical power to the solenoid coil(s).

- Solenoid Activation:** When the solenoid coil is energized, it shifts the valve spool, directing hydraulic fluid flow to the desired port (e.g., from P to A and B to T, or P to B and A to T).
- De-energized State:** When the solenoid is de-energized, the spool returns to its neutral or spring-centered position, typically blocking all ports or allowing a specific flow path depending on the valve

configuration.

- **Monitoring:** Continuously monitor system pressure, temperature, and fluid levels during operation.

## 6. MAINTENANCE

Regular maintenance ensures optimal performance and extends the lifespan of the valve.

- **Fluid Quality:** Maintain clean hydraulic fluid. Contamination is a leading cause of valve failure. Regularly check and replace filters.
- **Leak Inspection:** Periodically inspect the valve and connections for any signs of hydraulic fluid leaks. Address leaks immediately.
- **Electrical Connections:** Check electrical connections for corrosion or looseness. Ensure wiring is intact and properly insulated.
- **Mounting Security:** Verify that the valve remains securely mounted.
- **Component Replacement:** If any part of the valve, such as the solenoid coil or seals, shows signs of wear or damage, replace it with genuine Rexroth spare parts.

## 7. TROUBLESHOOTING

Before troubleshooting, ensure all safety precautions are observed.

Problem	Possible Cause	Solution
Valve does not shift	No electrical power to solenoid Solenoid coil faulty Spool jammed by contamination	Check wiring and power supply Test and replace solenoid coil Depressurize system, inspect and clean valve spool
Valve leaks externally	Loose connections Damaged O-rings/seals	Tighten hydraulic connections Replace O-rings/seals
Incorrect flow direction	Incorrect wiring Valve spool malfunction	Verify electrical connections against schematic Inspect valve spool for damage or obstruction
Reduced flow or pressure	Contaminated fluid/filters Partial spool blockage	Check and replace hydraulic filters Inspect and clean valve spool

## 8. SPECIFICATIONS

Specification	Detail
Product Type	Hydraulic Electromagnetic Directional Valve
Brand	Rexroth
Model Number	4WE6J6X-EG24N9K4
Maximum Operating Pressure	350 bar (as indicated on product)
Electrical Voltage	24V DC (EG24N9K4 designation)

Specification	Detail
Item Weight	Approximately 1 pound
Product Dimensions (L x W x H)	Approximately 1 x 1 x 1 inches
Manufacturer	Original factory (Rexroth)
Date First Available	August 21, 2024

## 9. WARRANTY AND SUPPORT

For specific warranty terms, technical support, or replacement parts, please contact your original point of purchase or the authorized Rexroth distributor. Keep your purchase receipt and product model number readily available when seeking support.