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### Emiif C14G-A-S7

# Emiif 7-Pin Proportional Valve Plug Connector

## USER MANUAL

### 1. Introduction

This user manual provides essential information for the proper use, installation, and maintenance of the Emiif 7-Pin Proportional Valve Plug Connector. Designed for industrial applications, this connector ensures reliable electrical connections for various proportional and hydraulic valves. Please read this manual thoroughly before using the product.



Figure 1: Overview of the Emiif 7-Pin Proportional Valve Plug Connector.

## 2. Product Features

The Emiif 7-Pin Proportional Valve Plug Connector is engineered with robust features to ensure high performance and durability in demanding environments:

- **Standard Compliance:** Designed to meet the DIN EN175 201-804 standard, ensuring broad compatibility and reliability.
- **Versatile Connectivity:** Features a 7-pin configuration suitable for various electrical connections, including solenoid valves, valves with integrated electronics, and position/pressure sensors.
- **Durable Construction:** Constructed from high-quality metal, providing excellent mechanical strength and longevity.
- **High Protection Rating:** Boasts an IP67 waterproof rating, offering robust protection against dust ingress and temporary immersion in water.
- **Wide Compatibility:** Compatible with proportional valves from leading brands such as Atos, Rexroth, Moog, Vickers, and Parker.



Figure 2: Detail of the 7-pin connector interface.

### 3. Compatibility and Application

This proportional valve plug connector is specifically designed for a wide range of industrial applications, ensuring seamless integration with various hydraulic and servo valve systems. It is compatible with the following specific models and brands:

- **Bosch-Rexroth 7P Proportional Valve Plugs:** Compatible with models such as R900021267, R900217845, R900223890.
- **Moog 7P Proportional Valve Plugs:** Compatible with model DB97007061.
- **Vickers 7P Proportional Valve Plugs:** Compatible with models 694534 (plastic version) and 934939 (metal version).
- **Parker 7P Proportional Valve Plugs:** Compatible with model 5004072.
- **Atos Seven-Core Proportional Valve Plugs:** Compatible with models including SP-336, SP-345, SP-664, SP-

666(2), SP-667-24, SP-667-110, SP669-220, SP-669(2), SP-ZH-4P/M8, SP-ZH-4P, SP-ZH-5P, SP-ZH-7P, SP-ZH-12P, SP-ZM-3P, SP-ZM-4P, SP-ZM-7P.

The connector facilitates the electrical connection of solenoid valves, valves with integrated electronics, and various position and pressure sensors within hydraulic and pneumatic systems.

## 4. Setup and Installation

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Proper installation is crucial for the reliable operation of the proportional valve system. Follow these general guidelines for connecting the Emiif 7-Pin Proportional Valve Plug Connector:

- 1. Preparation:** Ensure that the power to the valve system is disconnected before beginning installation. Verify that the valve's receptacle is clean and free of debris.
- 2. Cable Connection:** If assembling the connector with a cable, ensure proper wire stripping and crimping according to the pinout diagram of your specific valve. Secure the cable within the connector's strain relief mechanism.
- 3. Mating the Connector:** Align the 7-pin connector with the corresponding receptacle on the proportional valve. Gently push the connector straight in until it seats firmly.
- 4. Securing the Connection:** Tighten the threaded coupling nut on the connector to secure it to the valve's receptacle. Ensure it is hand-tight or tightened to the manufacturer's specified torque to prevent loosening due to vibration.
- 5. Verification:** After installation, visually inspect the connection to ensure it is fully seated and secured.

*Note: Always refer to the specific valve's documentation for detailed wiring diagrams and installation instructions.*



Figure 3: The cable gland end of the connector, where wiring is secured.

## 5. Operating Principles

The Emiif 7-Pin Proportional Valve Plug Connector functions as a critical interface for transmitting electrical signals and power between a control system and a proportional valve. Its operation is passive, meaning it facilitates the connection without active processing.

- **Signal Transmission:** The 7 pins provide dedicated pathways for control signals (e.g., analog voltage or current for proportional control), feedback signals from sensors, and power supply to the valve's internal electronics or solenoids.
- **Secure Connection:** Once properly installed, the connector maintains a stable and low-resistance electrical connection, crucial for accurate and responsive valve control.
- **Environmental Protection:** The IP67 rating ensures that the electrical contacts remain protected from dust and moisture, preventing signal degradation or short circuits in harsh industrial environments.

The connector itself does not require user interaction during system operation beyond ensuring it remains securely fastened.

## 6. Maintenance

Regular maintenance helps ensure the longevity and reliable performance of the Emiif 7-Pin Proportional Valve Plug Connector:

- **Visual Inspection:** Periodically inspect the connector for any signs of physical damage, corrosion on the pins, or wear on the sealing elements.
- **Cleaning:** If necessary, gently clean the exterior of the connector with a soft, dry cloth. For stubborn dirt, a slightly damp cloth can be used, ensuring the connector is completely dry before re-energizing the system. Do not use abrasive cleaners or solvents.
- **Connection Check:** Verify that the connector remains securely tightened to the valve. Loose connections can lead to intermittent signals or system malfunctions.
- **Environmental Protection:** While the connector is IP67 rated, avoid prolonged exposure to extreme conditions or harsh chemicals that could degrade the material over time.

*Note: Always disconnect power to the system before performing any maintenance or inspection.*

## 7. Troubleshooting

If you experience issues with your proportional valve system that may be related to the connector, consider the following troubleshooting steps:

| Problem                                      | Possible Cause  | Solution   |
|--|---|--|
| Intermittent valve operation or signal loss. | Loose connector connection; corroded or damaged pins; faulty wiring within the cable. | Ensure the connector is securely tightened. Disconnect power, inspect pins for corrosion or damage, clean if necessary. Check cable wiring for breaks or poor crimps.                                      |
| Connector does not fit the valve receptacle. | Incorrect connector type or model; physical obstruction in the receptacle.            | Verify that the connector model (C14G-A-S7) is compatible with your specific valve. Inspect the valve receptacle for any foreign objects or damage.  |
| System not responding after connection.      | No power to the system; incorrect wiring; internal valve issue.                       | Confirm power supply to the system. Double-check wiring against the valve's pinout diagram. If the connector and wiring are confirmed good, the issue may lie with the valve itself or the control system. |

If troubleshooting steps do not resolve the issue, contact a qualified technician or the product supplier for further assistance.

## 8. Technical Specifications

| Attribute       | Detail                  |
|-----------------|-------------------------|
| Product Name    | Proportional Valve Plug |
| Model           | C14G-A-S7               |
| Brand           | Emiif                   |
| Number of Cores | 7-pin                   |

| Attribute           | Detail                 |
|---------------------|------------------------|
| Material            | Metal                  |
| Certifications      | CE, RoHS               |
| Waterproof Rating   | IP67                   |
| Standard Compliance | DIN EN175 201-804      |
| Product Dimensions  | 5 x 3 x 3 cm (approx.) |

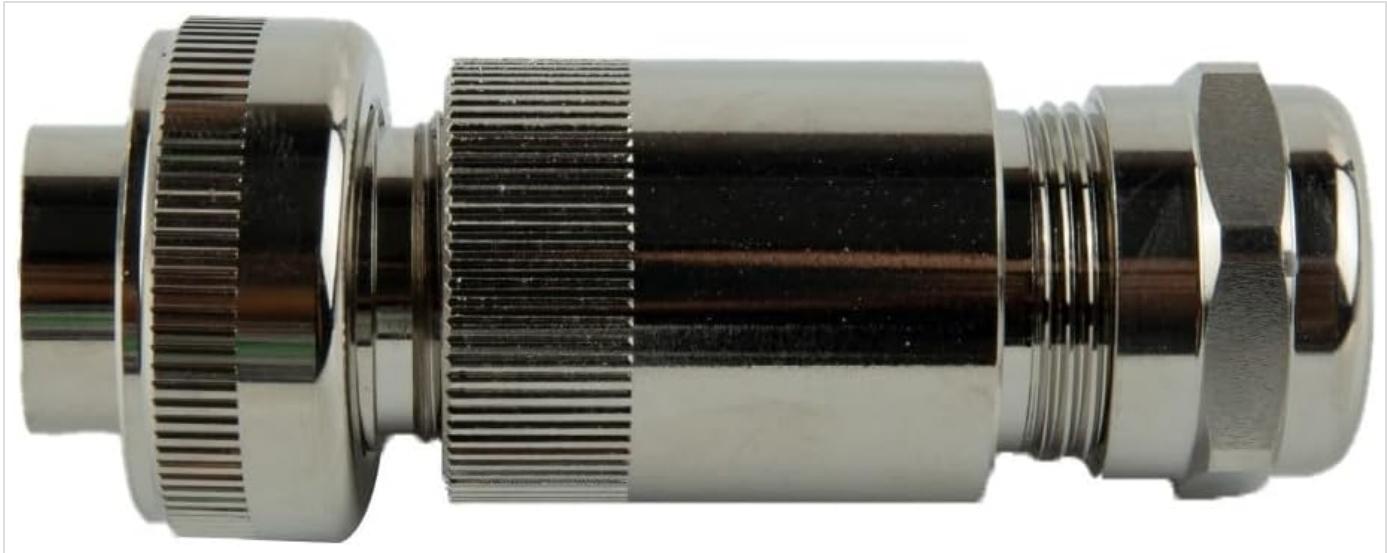


Figure 4: Side profile of the Emiif 7-Pin Proportional Valve Plug Connector.

## 9. Warranty and Support

**Warranty Information:** Specific warranty terms and conditions for the Emiif 7-Pin Proportional Valve Plug Connector are provided by the manufacturer or the point of purchase. Please retain your proof of purchase for any warranty claims. For detailed warranty information, refer to the documentation included with your product or contact the seller directly.

**Technical Support:** For technical assistance, questions regarding compatibility, or troubleshooting beyond the scope of this manual, please contact your product supplier or the Emiif customer support team. When contacting support, please have your product model (C14G-A-S7) and purchase details ready.