OUMIFAND QDW90A

OUMIFAND QDW90A G1-4 Hydraulic Pressure Transmitter User Manual

Model: QDW90A (0-1Mpa RS485 Output)

1. Introduction

This manual provides essential information for the safe and effective use of the OUMIFAND QDW90A G1-4 Hydraulic Pressure Transmitter. This device is designed for precise measurement of hydraulic pressure in various industrial applications. Please read this manual thoroughly before installation and operation to ensure optimal performance and safety.

2. Safety Information

- Always ensure the power supply is disconnected before installation or maintenance.
- Installation should only be performed by qualified personnel.
- Verify that the pressure range of the transmitter matches the application requirements.
- Do not exceed the maximum rated pressure or temperature.
- Protect the device from mechanical shock and excessive vibration.
- Ensure proper grounding to prevent electrical hazards.

3. Product Overview

The OUMIFAND QDW90A is a robust hydraulic pressure transmitter featuring a G1/4 thread for easy mechanical connection and an RS485 output for digital communication. It is engineered for stable and accurate pressure measurement, even in environments with varying temperatures.



Figure 1: Front view of the OUMIFAND QDW90A Hydraulic Pressure Transmitter, showing the electrical connector and G1/4 threaded pressure port. The label indicates model QDW90A, 0-1Mpa range, and power supply requirements.

A key feature of the QDW90A series is its advanced design for**low temperature drift**, ensuring consistent and reliable performance across a range of ambient temperatures. This minimizes measurement inaccuracies caused by temperature fluctuations.



Figure 2: Illustration emphasizing the low temperature drift capability of the QDW90A pressure transmitter, indicating stable performance despite ambient temperature changes.

4. Specifications

Parameter	Value
Model Number	QDW90A
Measurement Range	0-1 Mpa (0-10 bar)
Output Signal	RS485
Power Supply	24 VDC
Thread Size	G1/4
Accuracy	0.2% (typical)

Parameter	Value
Manufacturer	OUMIFAND
Approximate Dimensions (L x W x H)	2.54 x 2.54 x 2.54 cm
Approximate Weight	50 g

5. Setup

5.1 Mechanical Installation

1. Ensure the system is depressurized and drained before installation.
2. Locate a suitable G1/4 threaded port on your hydraulic system.
3. Apply appropriate thread sealant (e.g., PTFE tape) to the G1/4 thread of the transmitter.
4. Carefully screw the transmitter into the port. Tighten firmly but do not overtighten to avoid damaging the thread or the sensor.
5. Verify there are no leaks after installation.

5.2 Electrical Connection (RS485 Output)

The QDW90A transmitter requires a 24 VDC power supply and communicates via RS485. Refer to the following general wiring guidelines:

- **Power Supply:** Connect the positive (+) terminal of a stable 24 VDC power supply to the appropriate power input pin on the transmitter's connector. Connect the negative (-) terminal (GND) to the corresponding ground pin.
- **RS485 Data Lines:** Connect the RS485 A (Data+) and B (Data-) lines from the transmitter to your RS485 master device (e.g., PLC, data acquisition system). Ensure correct polarity.
- **Shielding:** If using shielded cable, connect the shield to earth ground at one end only (typically at the master device) to prevent ground loops.
- **Termination:** For RS485 networks, ensure proper termination resistors (typically 120 ohms) are used at both ends of the bus, especially for longer cable runs.

Note: Specific pin assignments for the electrical connector may vary. Always consult the product's physical label or detailed wiring diagram if available for precise connections.

6. Operating Instructions

1. After mechanical and electrical installation, apply 24 VDC power to the transmitter.
2. Initiate communication with the transmitter using your RS485 master device. The transmitter will respond with pressure data according to its configured RS485 protocol (e.g., Modbus RTU).
3. Refer to the programming guide or communication protocol documentation for the QDW90A (if provided separately) to understand the specific registers and commands for reading pressure values.
4. Monitor the pressure readings from the transmitter. Ensure they are within the expected range for your application.
5. The transmitter continuously measures and outputs pressure data. No further user interaction is typically required during normal operation.

7. Maintenance

- **Regular Inspection:** Periodically inspect the transmitter and its connections for any signs of damage, corrosion, or leaks.
- **Cleaning:** Keep the exterior of the transmitter clean. Use a soft, damp cloth. Do not use abrasive cleaners or solvents.
- **Calibration:** While the QDW90A is factory calibrated, periodic recalibration may be necessary depending on application requirements and industry standards. This should be performed by qualified personnel using certified calibration equipment.
- **Pressure Port:** Ensure the pressure port remains free of debris or blockages that could affect measurement accuracy.

8. Troubleshooting

Problem	Possible Cause	Solution
No pressure reading / No communication	Incorrect wiring, no power, RS485 configuration error, damaged cable.	Check power supply (24 VDC), verify wiring connections (power and RS485 A/B), ensure RS485 master settings (baud rate, parity, address) match the transmitter. Inspect cables for damage.
Inaccurate pressure readings	Incorrect calibration, sensor damage, pressure port blockage, electrical interference.	Check for blockages in the pressure port. Consider recalibration. Ensure proper grounding and shielding to minimize electrical noise. If damage is suspected, replace the unit.
Pressure leaks at connection	Improper thread sealant, insufficient tightening, damaged threads.	Depressurize system. Reapply thread sealant and retighten the transmitter. If threads are damaged, replace the component or use an adapter.

9. Warranty and Support

For warranty information, technical support, or service inquiries, please contact your supplier or the manufacturer, OUMIFAND. Keep your purchase receipt and product model number (QDW90A) handy when contacting support. Please visit the official OUMIFAND website or contact their customer service for the most up-to-date warranty terms and conditions.

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