

## Walfront Walfront6byhrcuzok-02

# Walfront 100 Psi Pressure Transducer Sensor User Manual

Model: Walfront6byhrcuzok-02

## 1. INTRODUCTION

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This manual provides essential information for the proper installation, operation, and maintenance of your Walfront 100 Psi Pressure Transducer Sensor. Designed for high accuracy and reliability, this stainless steel sensor is suitable for detecting pressure in various media including oil, fuel, air, and water. Please read this manual thoroughly before using the product to ensure safe and efficient performance.



*Image: Walfront 100 Psi Pressure Transducer Sensor with attached wiring harness. This image shows the Walfront 100 Psi Pressure Transducer Sensor, a compact stainless steel device with an 1/8 inch NPT thread for connection. It includes a pre-attached wiring harness for electrical integration.*

## 2. PRODUCT FEATURES

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The Walfront 100 Psi Pressure Transducer Sensor incorporates advanced technology for precise pressure measurement. Key features include:

- **Small Output Error:** Achieves  $\pm 2\%$ FS small output error across the full temperature range, ensuring high sensitivity and accuracy.
- **Durable Construction:** Features a robust stainless steel body with a high-quality ceramic pressure chip for long-lasting performance.
- **Advanced Design:** Represents an advanced pressure transducer compared to traditional mechanical pressure transducers.
- **Compact and Lightweight:** Designed with light weight and small dimensions for convenient installation and operation.
- **Versatile Usage:** Widely applicable in various systems to detect oil, fuel, gas, water, or air pressure.

# Powerful

6 major features to meet the needs



Image: Walfront pressure transducer with close-ups of wiring and connector. This image provides a closer look at the wiring and the water-sealed quick disconnect connector of the pressure transducer, showing the individual wires (red, green, black) and the connector pins.

## 3. SPECIFICATIONS

Attribute	Detail
Input Range	0-100 psi
Output	0.5V-4.5V linear voltage output (0 psi outputs 0.5V, 50 psi outputs 2.5V, 100 psi outputs 4.5V)
Accuracy	Within 2% of reading (full scale)
Thread Type	1/8"-27 NPT
Wiring Connector	Water sealed quick disconnect. Mating connector and wire harness (pigtail) included.
Wiring	Red: +5V; Black: Ground; Blue: Signal Output
Material	Stainless Steel
Maximum Supply Voltage	5 Volts (DC)
Item Weight	0.04 Kilograms
Model Number	Walfront6byhrcuzok-02

# 100 psi

Input: 0-100 psi

Output: 0.5V~4.5V linear voltage output. 0 psi outputs 0.5V, 50 psi outputs 2.5V, 100 psi outputs 4.5V.

Accuracy: within 2% of reading (full scale).

Thread: 1/8"-27 NPT

Wiring Connector: Water sealed quick disconnect. Mating connector and wire harness (pigtail) is included.

Wiring: Red for +5V; Black for ground; Blue for signal output.



*Image: Detailed specifications for the 100 Psi Walfront pressure transducer. A table outlining the key specifications of the 100 Psi pressure transducer, including input range (0-100 psi), output (0.5V-4.5V linear), accuracy (within 2% of reading), thread type (1/8"-27 NPT), wiring connector type, and wire color assignments (Red for +5V, Black for ground, Blue for signal output).*

## 4. SETUP AND INSTALLATION

Proper installation is crucial for the accurate and reliable operation of the pressure transducer. Follow these steps carefully:

### 4.1 Mechanical Installation

1. Ensure the system where the sensor will be installed is depressurized and free of any media flow.
2. Locate a suitable 1/8" NPT threaded port for installation. Ensure the port is clean and free of debris.
3. Apply a suitable thread sealant (e.g., PTFE tape or pipe sealant) to the sensor's 1/8" NPT thread.
4. Carefully thread the sensor into the port. Tighten it sufficiently to create a seal, but avoid over-tightening, which can damage the sensor or the port.
5. Verify there are no leaks after installation and repressurizing the system.

### 4.2 Electrical Wiring

The sensor uses a water-sealed quick disconnect connector. Connect the wires as follows:

- **Red Wire:** Connect to the +5V DC power supply.
- **Black Wire:** Connect to the Ground (GND) or public terminal.
- **Blue Wire:** This is the Signal Output (0.5V-4.5V). Connect to your measurement or control equipment's analog input.

Ensure all electrical connections are secure and insulated to prevent short circuits or interference.

# Electrical wiring diagram

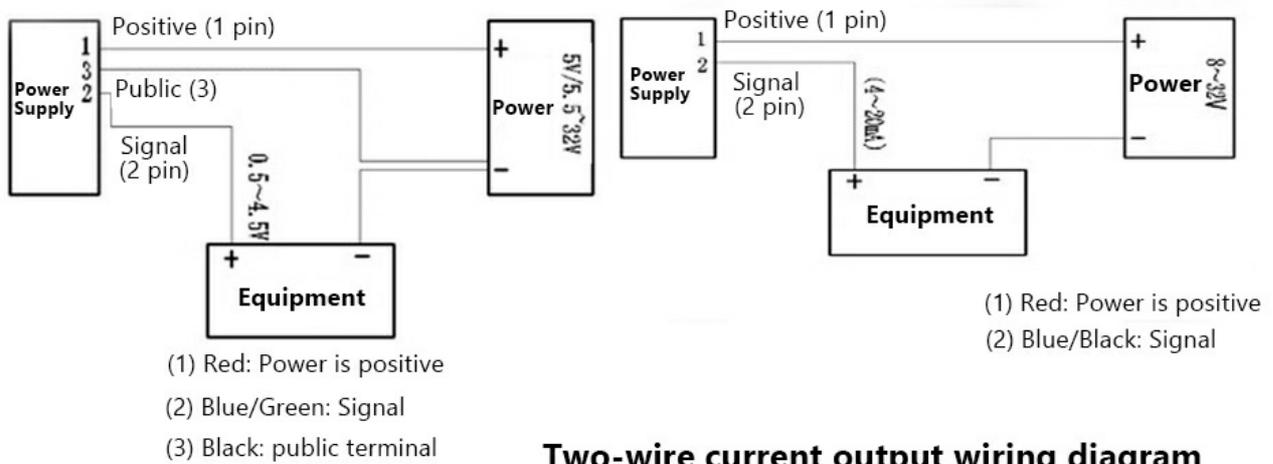


Image: Electrical wiring diagram for the Walfront pressure transducer sensor. This diagram illustrates the electrical connections for the pressure transducer, showing how to connect the sensor to a power supply and equipment for both 0.5-4.5V output and two-wire current output configurations. Red wire is positive, Blue/Green is signal, and Black is public terminal/ground.

## 5. OPERATING PRINCIPLES

The Walfront 100 Psi Pressure Transducer Sensor converts applied pressure into a proportional analog voltage signal. It operates on a 0.5V to 4.5V linear output scale for a pressure range of 0 to 100 psi.

- At 0 psi, the sensor outputs 0.5V.
- At 50 psi, the sensor outputs 2.5V.
- At 100 psi, the sensor outputs 4.5V.

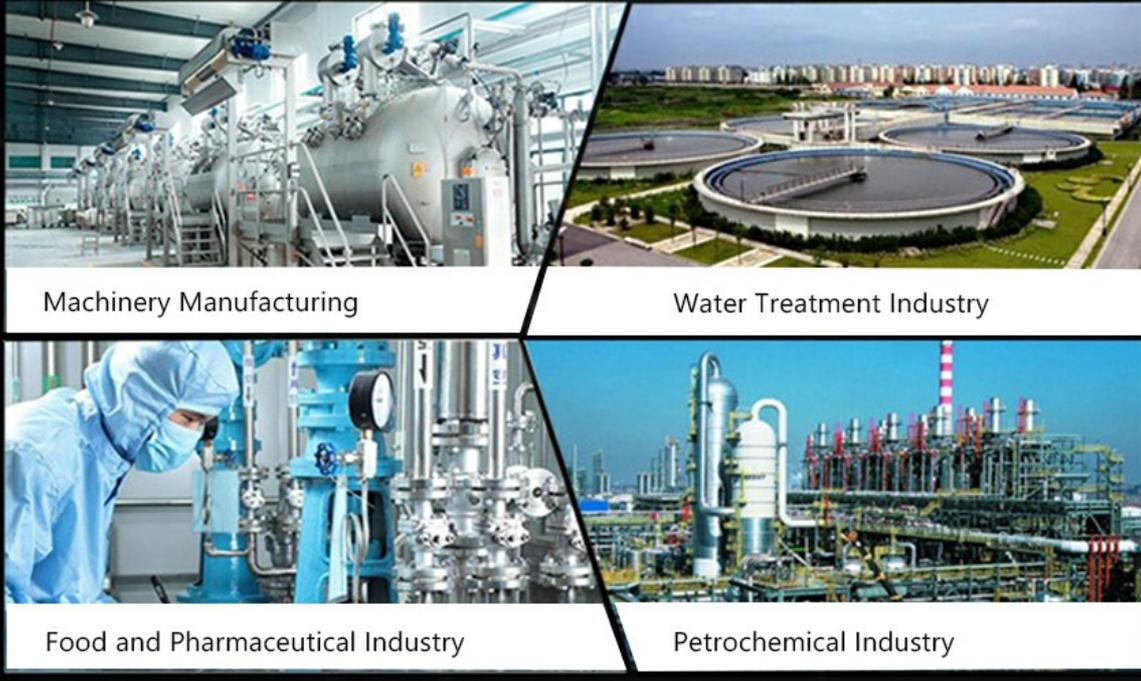
This linear relationship allows for straightforward conversion of the voltage signal back into a pressure reading using appropriate data acquisition or control systems. Calibration may be required for optimal accuracy in specific applications.

## 6. APPLICATIONS

This pressure transducer is versatile and can be used in a wide range of industrial and commercial applications, including but not limited to:

- Hydraulic systems
- Air conditioning, heating, and ventilation (HVAC) systems
- Constant pressure water supply systems
- Machinery manufacturing
- Water treatment industry
- Food and pharmaceutical industry processes
- Petrochemical industry applications

# APPLICATION



*Image: Industrial applications of the Walfront pressure transducer. This image showcases various industrial sectors where the Walfront pressure transducer can be applied, including Machinery Manufacturing, Water Treatment Industry, Food and Pharmaceutical Industry, and Petrochemical Industry.*

## 7. MAINTENANCE

The Walfront pressure transducer is designed for minimal maintenance. However, regular checks can help ensure its longevity and accurate performance:

- **Visual Inspection:** Periodically inspect the sensor body and wiring for any signs of physical damage, corrosion, or wear.
- **Connection Integrity:** Ensure the electrical connections remain secure and the water-sealed connector is properly seated.
- **Cleaning:** If necessary, gently clean the exterior of the sensor with a soft, damp cloth. Avoid using abrasive cleaners or harsh chemicals that could damage the stainless steel or sealing materials.
- **Environmental Conditions:** Ensure the sensor operates within its specified temperature and humidity ranges to prevent premature failure.

## 8. TROUBLESHOOTING

If you encounter issues with your pressure transducer, consider the following troubleshooting steps:

Problem	Possible Cause	Solution
No output or 0V output	No power supply; Incorrect wiring; Sensor failure.	Verify +5V DC power is supplied to the red wire. Check black wire for proper ground connection. Confirm blue wire is connected to signal input. If connections are correct, sensor may be faulty.

Output stuck at 4.5V (max output)	Over-pressure condition; Short circuit on signal line; Sensor failure.	Check if system pressure exceeds 100 psi. Inspect signal wire for shorts to +5V. If neither, sensor may be faulty.
Inaccurate or erratic readings	Electrical interference; Loose connections; Sensor damage; Incorrect calibration.	Ensure wiring is shielded and away from noise sources. Check all connections for tightness. Inspect sensor for physical damage. Recalibrate your measurement system if necessary.
Leaks at installation point	Insufficient thread sealant; Improper tightening; Damaged threads.	Depressurize system, remove sensor, reapply thread sealant, and reinstall with proper torque. Inspect threads for damage.

If problems persist after troubleshooting, contact customer support for further assistance.

## 9. WARRANTY INFORMATION

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Specific warranty details for the Walfront 100 Psi Pressure Transducer Sensor are not provided in this manual. For information regarding product warranty, please refer to the purchase documentation or contact the seller directly.

## 10. SUPPORT

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For technical support, product inquiries, or assistance with your Walfront pressure transducer, please contact Walfront customer service through the retailer where the product was purchased or visit the official Walfront store page on Amazon.

**Walfront Store Link:** <https://www.amazon.com/stores/Walfront/page/FECAC109-E5D3-4C74-B6F1-3FA643B2EA7D>