

## Walfront SEAFRONToewafv0c9q-03

# Walfront IP65 G3/8 Analog Pressure Sensor Instruction Manual (0-10 BAR)

Model: SEAFRONToewafv0c9q-03

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## 1. PRODUCT OVERVIEW

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The Walfront IP65 G3/8 Analog Pressure Sensor is a high-precision device designed for industrial applications requiring accurate pressure measurement. It features a robust stainless steel shell, an advanced ceramic core, and a customized process chip for stable and reliable performance. This sensor is equipped with EMC protection and offers easy operation due to its compact and lightweight design, ensuring low long-term drift.



**Figure 1:** Close-up view of the Walfront IP65 G3/8 Analog Pressure Sensor, showing the G3/8 screw fitting and the cable connection point. This image highlights the robust construction and connection interface of the sensor.

## 2. TECHNICAL SPECIFICATIONS

Feature	Specification
Protection Level	IP65
Input Voltage	$5 \pm 0.25$ VDC / 5 ~ 32 VDC
Technology	Piezo-resistance
Screw Fitting	G3/8
Output Signal	Analog Signal
Measurement Range	0 ~ 10 BAR
Output Model	Three-wire
Overpressure	2 times full pressure range

Feature	Specification
Burst Pressure	3 times full pressure range
Full Scale Accuracy (Non-linearity + Repeatability + Hysteresis)	$\pm 1\%$ FS (0 ~ 80°C), $\pm 1.5\%$ FS (-20 ~ 100°C), $\pm 3\%$ FS (-40 ~ 125°C)
Electrical Connection	Compatible with Packard connector (three conductors)
Material	Stainless Steel, Ceramic
Model Number	SEAFRONTowafv0c9q-03
UPC	724316058530

### 3. SETUP AND INSTALLATION

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Before installation, ensure that the power supply is disconnected from the system where the sensor will be integrated. Verify that the pressure range of the sensor (0-10 BAR for this model) matches the requirements of your application.

#### 1. Mechanical Installation:

The sensor features a G3/8 screw fitting. Carefully thread the sensor into the designated pressure port. Ensure a tight seal using appropriate sealing tape or compound if necessary, to prevent leaks. Do not overtighten, as this may damage the sensor or the port.



**Figure 2:** The G3/8 screw fitting of the pressure sensor, ready for mechanical installation into a compatible port. This image emphasizes the connection type.

## 2. Electrical Connection:

The sensor uses a three-wire electrical connection, compatible with a Packard connector. Identify the power supply (VCC), ground (GND), and analog output signal (OUT) wires. Connect them according to your system's wiring diagram. Ensure correct polarity to prevent damage.

- **Red Wire:** Power Supply ( $5 \pm 0.25$  VDC or 5 ~ 32 VDC)
- **Black Wire:** Ground (GND)
- **Green/Blue Wire:** Analog Output Signal



**Figure 3:** The Walfront pressure sensor showing its three-wire cable connection. This image illustrates the wiring for electrical integration.

### 3. Power On and Testing:

After securing both mechanical and electrical connections, apply power to the system. Monitor the analog output signal to ensure it responds correctly to pressure changes. Initial calibration or verification with a known pressure source is recommended.

## 4. OPERATING INSTRUCTIONS

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The Walfront IP65 G3/8 Analog Pressure Sensor operates by converting applied pressure into a proportional analog electrical signal. This signal can then be read by a compatible control system, PLC, or data acquisition unit.

- **Signal Interpretation:** The analog output signal will vary linearly with the applied pressure within the specified measurement range (0-10 BAR). Refer to your system's documentation for converting the analog voltage or current into pressure units.
- **Environmental Conditions:** Ensure the sensor operates within its specified temperature range (-40°C to 125°C) and protection level (IP65). Avoid exposing the sensor to corrosive substances or extreme vibrations that could affect its performance or lifespan.
- **Overpressure Protection:** The sensor is designed to withstand overpressure up to 2 times its full

pressure range and burst pressure up to 3 times. However, continuous operation beyond the rated measurement range is not recommended and may lead to reduced accuracy or damage.



**Figure 4:** The pressure sensor shown in an industrial setting, integrated with a robotic arm. This demonstrates a typical application environment for the sensor.

## 5. MAINTENANCE

The Walfront IP65 G3/8 Analog Pressure Sensor is designed for low maintenance. Regular checks can help ensure its longevity and accurate performance.

- **Visual Inspection:** Periodically inspect the sensor for any signs of physical damage, corrosion, or loose connections. Ensure the cable insulation is intact.
- **Cleaning:** If necessary, gently clean the exterior of the sensor with a soft, damp cloth. Do not use abrasive cleaners or solvents that could damage the stainless steel housing or seals.
- **Recalibration:** For critical applications, periodic recalibration by a qualified technician is recommended to maintain optimal accuracy. The frequency of recalibration depends on the application's demands and environmental conditions.

## 6. TROUBLESHOOTING

If you encounter issues with your Walfront IP65 G3/8 Analog Pressure Sensor, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
No output signal	<ul style="list-style-type: none"><li>◦ No power supply</li><li>◦ Incorrect wiring</li><li>◦ Damaged cable or sensor</li></ul>	<ul style="list-style-type: none"><li>◦ Check power supply voltage and connections.</li><li>◦ Verify wiring against the electrical connection diagram.</li><li>◦ Inspect cable and sensor for visible damage. Replace if necessary.</li></ul>
Inaccurate readings	<ul style="list-style-type: none"><li>◦ Sensor not calibrated</li><li>◦ Operating outside specified range</li><li>◦ Environmental interference</li></ul>	<ul style="list-style-type: none"><li>◦ Perform recalibration.</li><li>◦ Ensure pressure is within 0-10 BAR range.</li><li>◦ Check for strong electromagnetic fields or temperature fluctuations.</li></ul>
Intermittent signal	<ul style="list-style-type: none"><li>◦ Loose electrical connection</li><li>◦ Vibration</li></ul>	<ul style="list-style-type: none"><li>◦ Secure all electrical connections.</li><li>◦ Ensure sensor is mounted securely to minimize vibration.</li></ul>

## 7. WARRANTY AND SUPPORT

For warranty information or technical support regarding your Walfront IP65 G3/8 Analog Pressure Sensor, please refer to the documentation provided at the time of purchase or contact your vendor. Ensure you have your model number (SEAFRONT0ewafv0c9q-03) and UPC (724316058530) available when seeking support.

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