

FIGARO KE-25

FIGARO KE-25 Oxygen Sensor Instruction Manual

1. PRODUCT OVERVIEW

The FIGARO KE-25 series oxygen sensor is a galvanic cell type oxygen sensor designed for various applications requiring precise oxygen detection. This sensor is known for its long life and stable output signal, operating effectively in normal ambient temperatures without requiring an external power supply or warm-up time.

Key features of the KE-25 sensor include:

- Long operational life.
- Minimal interference from common gases such as CO₂, CO, H₂S, NO_x, and H₂.
- Cost-effective solution for oxygen sensing.
- Functions within standard ambient temperature ranges.
- Provides a stable and reliable output signal.
- Does not require an external power source for operation.
- No warm-up period is necessary before use.



This image displays the FIGARO KE-25 Oxygen Sensor, showing its cylindrical body and the screw connector for installation.

2. SETUP AND INSTALLATION

The KE-25 sensor is designed for straightforward installation using its integrated screw connector. Follow these guidelines for proper setup:

1. **Unpacking:** Carefully remove the sensor from its packaging. Inspect for any visible damage.
2. **Mounting:** Securely fasten the sensor using the GSYUASA screw nipple or a compatible screw connector. Ensure a tight seal to prevent environmental interference.
3. **Environmental Conditions:** Ensure the operating environment adheres to the specified conditions:
 - **Temperature:** 5°C to 40°C (41°F to 104°F)
 - **Humidity:** 10% to 90% Relative Humidity (non-condensing)
4. **Power:** The sensor operates without an external power supply. Connect it directly to your measurement circuit as per your system's design.

3. OPERATING INSTRUCTIONS

The FIGARO KE-25 sensor is designed for continuous oxygen detection. No specific warm-up time is required, allowing for immediate operation upon installation.

- **Target Gas:** The sensor is specifically designed to detect Oxygen (O₂).
- **Detection Range:** The typical detection range for oxygen is 0-100% O₂.
- **Sensing Principle:** The sensor utilizes a galvanic cell principle for oxygen measurement.
- **Output Signal:** The sensor provides a stable electrical output signal proportional to the oxygen concentration. Refer to your system's documentation for interpreting the sensor's output.

4. MAINTENANCE

The FIGARO KE-25 oxygen sensor is designed for long-term stability and minimal maintenance. Adhering to the following general guidelines will help ensure optimal performance:

- **Cleaning:** Keep the sensor's exterior clean and free from dust or debris. Use a soft, dry cloth for cleaning. Avoid using harsh chemicals or abrasive materials.
- **Environmental Control:** Maintain the operating environment within the specified temperature and humidity ranges to prevent premature sensor degradation.
- **Inspection:** Periodically inspect the sensor and its connections for any signs of physical damage or corrosion.
- **Calibration:** While the sensor offers stable output, periodic calibration according to your application's requirements and industry standards is recommended to ensure accuracy over its lifespan. Consult your system's manual for calibration procedures.

5. TROUBLESHOOTING

If you encounter issues with your FIGARO KE-25 oxygen sensor, consider the following troubleshooting steps:

- **No Output/Incorrect Reading:**
 - Verify all connections are secure and correctly wired.
 - Check if the sensor is exposed to the target gas (oxygen) within its detection range.
 - Ensure the operating temperature and humidity are within the specified limits.
 - Confirm that the measurement circuit or device connected to the sensor is functioning correctly.
- **Unstable Output:**
 - Check for sudden changes in environmental conditions (temperature, humidity).
 - Ensure the sensor is not exposed to strong electromagnetic interference.
 - Verify the sensor is securely mounted and not subject to vibrations.
- **Sensor Not Responding:**
 - If the sensor has been in use for an extended period, it may have reached the end of its operational life. Consider replacement.
 - Ensure there is no physical obstruction or damage to the sensor's sensing element.

If problems persist after performing these checks, contact your supplier or a qualified technician for further assistance.

6. SPECIFICATIONS

Brand	FIGARO
Model	KE-25 (also KE25, KE25-F3)
Target Gases	Oxygen (O2)
Sensing Principle	Galvanic Cell
Typical Detection Range	0-100% O2

Operating Temperature	5°C ~ 40°C (41°F ~ 104°F)
Operating Humidity	10 ~ 90% R.H. (no condensation)
Power Source	No external power supply required
Dimensions (Diameter x Height)	φ28 × 47.3mm (1.1"D x 1.1"W x 1.86"H)
Item Weight	Approx. 24g (0.353 ounces)
Connector Type	Screw Connector (GSYUASA compatible)
Warm-up Time	None required
Interference	Virtually no influence from CO ₂ , CO, H ₂ S, NO _x , H ₂