

Ace Instruments BW Solo Single-Gas Oxygen Detector

BW Solo Single-Gas Oxygen Detector User Manual

MODEL: BW SOLO SINGLE-GAS OXYGEN DETECTOR

Brand: Ace Instruments

1. Introduction

This user manual provides essential information for the safe and effective operation, maintenance, and troubleshooting of the Ace Instruments BW Solo Single-Gas Oxygen Detector. This device is designed for high accuracy and fast sensor response, making it ideal for monitoring oxygen levels in various industrial environments.

The BW Solo is a robust and easy-to-service single-gas detector, suitable for applications in confined spaces, industrial safety, and the oil, gas, and petrochemical industries.

2. Safety Information

Always read and understand all safety warnings and instructions before operating the BW Solo detector. Failure to do so may result in serious injury or death.

- Ensure the detector is regularly calibrated and bump tested according to local regulations and company policies.
- Do not attempt to repair or alter the device. Refer all servicing to qualified personnel.
- Operate the device within the specified temperature and humidity ranges to ensure accurate readings.
- Be aware of alarm signals (visual, vibrating, audible) and respond appropriately.
- The device is certified with ATEX, IECEx, FCC ID, IC, RED approvals. Adhere to all relevant safety standards.

3. Product Overview

The BW Solo Single-Gas Oxygen Detector is designed for ease of use and durability. Key components include:

- **Sensor:** High-accuracy 1-Series O2 sensor.
- **Display:** Easy-to-read display for multiple languages.
- **Alarms:** Visual, vibrating, and audible (95 dB) alarms for Low, High, TWA, STEL, and non-compliance conditions.
- **Clip:** Durable clip for secure attachment to clothing or equipment.
- **Connectivity:** Bluetooth Low Energy (BLE) for connection to the Safety Communicator App.



Figure 1: Back view of the BW Solo Single-Gas Oxygen Detector, highlighting the robust belt clip and product information labels.

The detector features an option to activate IntelliFlash or non-compliance flash, and the ability to assign detectors to workers and locations for improved safety management.

4. Setup

The BW Solo detector is typically supplied ready for use. Follow these steps for initial setup:

1. **Unpacking:** Carefully remove the detector and instruction manual from the packaging.
2. **Initial Activation:** The device performs a self-test upon activation, checking sensor integrity, circuitry, battery, and alarms. Ensure all tests pass.
3. **Battery Check:** Verify the battery status on the display. The typical battery life for the 1-Series O2 sensor is 6 months.
4. **Attachment:** Use the integrated clip to securely attach the detector to your clothing (e.g., belt, pocket) in an area where it can effectively monitor the surrounding atmosphere.

5. Operating Instructions

Operating the BW Solo is straightforward:

- **Power On/Off:** Refer to the device's specific button sequence for powering on and off. This is typically a long press of the main button.
- **Reading Display:** The display shows the current oxygen concentration (0-30% v/v) with a resolution of 0.1% v/v.
- **Alarm Response:**
 - When an alarm activates (visual, vibrating, audible), immediately follow your company's safety protocols for gas detection.
 - Move to fresh air if a high alarm is triggered.
 - Do not re-enter the area until it has been deemed safe by qualified personnel.
- **Data Logging:** The device logs data with a rolling 24-hour peak reading. This data can be accessed via the Safety Communicator App.

- **Bluetooth Connectivity:** Use Bluetooth Low Energy (BLE) to connect the detector to the Safety Communicator App on a compatible mobile device for configuration, data download, and reporting.

6. Maintenance

Proper maintenance ensures the longevity and accuracy of your BW Solo detector:

- **Sensor Replacement:** The BW Solo is designed for easy sensor replacement without needing to disassemble the unit. Replace sensors as indicated by the device or maintenance schedule.
- **Battery Replacement:** Replace the battery when the low battery indicator appears. The device uses a standard battery type, refer to specifications for details.
- **Cleaning:** Clean the exterior of the detector with a damp cloth. Do not use abrasive cleaners or solvents. Ensure the sensor opening is clear of debris.
- **Calibration and Bump Testing:** Regular calibration and daily bump testing are crucial for verifying sensor response and accuracy. Follow manufacturer guidelines and local regulations.
- **Storage:** Store the detector in a clean, dry environment within the specified temperature range when not in use.

7. Troubleshooting

If you encounter issues with your BW Solo detector, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Device does not power on.	Low or dead battery.	Replace the battery.
Sensor error displayed.	Sensor malfunction or end-of-life.	Perform a self-test. If error persists, replace the sensor.
Alarms not activating during bump test.	Blocked sensor, faulty alarm, or incorrect gas concentration.	Check sensor opening. Ensure correct test gas. If issue persists, send for service.
Inaccurate readings.	Needs calibration, sensor contamination, or extreme environmental conditions.	Perform calibration. Clean sensor area. Ensure operating within specified temperature/humidity.

For issues not listed here, or if solutions do not resolve the problem, contact Ace Instruments customer support or an authorized service center.

8. Specifications

Parameter	Value
Measuring Range (O2)	0-30% v/v

Parameter	Value
Resolution	0.1% v/v
Operating Temperature	-40°C to +60°C (-40°F to +140°F)
Humidity	0% - 95% RH (non-condensing)
Alarm Type	Visual, vibrating, audible (95 dB)
Alarm Levels	Low, High, TWA, STEL, non-compliance
Self-test	Sensor integrity, circuitry, battery, audible/visual alarms
Connectivity	Bluetooth Low Energy (BLE)
Typical Battery Life (1-Series O2)	6 months
Size (1-Series sensor models)	7.0 x 6.7 x 3.6 cm
Weight	103 to 116 g (depending on sensor)
Certifications & Approvals	ATEX, IECEx, FCC ID, IC, RED
Power Source	Battery Powered

9. Warranty and Support

For information regarding product warranty, technical support, or service, please contact Ace Instruments directly or visit their official website. Ensure you have your product model and serial number available when seeking support.

Regularly check the manufacturer's website for updated documentation, software, and firmware for your device.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question