

## DEWIN WT8821

# DEWIN WT8821 Portable Oxygen Detector User Manual

Model: WT8821 | Brand: DEWIN

## 1. INTRODUCTION

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The DEWIN WT8821 Portable Oxygen Detector is a high-performance device designed for accurate and stable measurement of oxygen concentration in various environments. Equipped with a high-quality electrochemical O<sub>2</sub> sensor, this detector provides reliable readings and features an alarm function to alert users to abnormal gas concentrations, ensuring safety.

Its compact design and user-friendly interface make it suitable for a wide range of applications, including household use, chemical industries, mining operations, environmental protection, gas transmission and distribution, biochemical medicine, and agricultural scientific research.



Figure 1: The DEWIN WT8821 Oxygen Detector is suitable for diverse applications such as industrial laboratories, mountaineering, downhole operations, and chemical fields.

## 2. SAFETY INFORMATION

- Read this manual thoroughly before operating the device.
- Do not attempt to disassemble or modify the detector. This may compromise its safety features and void the warranty.
- Ensure the device is used in environments within its specified operating temperature and humidity ranges.
- Replace batteries only with the specified type (3 x 1.5V AAA alkaline batteries). Do not mix old and new batteries or different battery types.
- In case of an alarm, immediately follow safety protocols for the specific environment, which typically involves evacuating to a safe area.
- Keep the sensor area clean and free from obstructions to ensure accurate readings.

## 3. PRODUCT OVERVIEW

### 3.1 Key Features

- **High-Quality Gas Sensor:** Ensures precise and stable oxygen measurement.
- **Data Hold Function:** Allows users to freeze the current measurement on the display for easy recording.
- **Max/Min Mode:** Displays the maximum and minimum oxygen concentration detected during a measurement session.
- **Adjustable Alarm Setting:** Configurable alarm thresholds for abnormal oxygen levels.
- **Calibration Function:** For maintaining measurement accuracy.
- **Timed Shutdown:** Automatic power-off feature to conserve battery life.
- **LCD Display:** Clear digital display for oxygen concentration and temperature.

### 3.2 Components



Figure 2: Front view of the DEWIN WT8821 Oxygen Detector. It features an LCD screen displaying O<sub>2</sub> concentration and temperature, along with buttons for Light, Hold, Max/Min, and Unit.



Figure 3: Side view of the DEWIN WT8821 Oxygen Detector, illustrating its compact dimensions of approximately 120mm height, 70mm width, and 28mm depth.

# WT8821



## Oxygen detector

Figure 4: The DEWIN WT8821 Oxygen Detector features a high-quality gas sensor for accurate and stable performance, ensuring safety and reliability.

### 4. SETUP

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#### 4.1 Battery Installation

The DEWIN WT8821 requires three (3) 1.5V AAA alkaline batteries (not included) for operation.

1. Locate the battery compartment on the back of the device.
2. Slide the battery cover downwards or outwards to open it.
3. Insert three AAA batteries, ensuring correct polarity (+ and -) as indicated inside the compartment.
4. Close the battery cover securely until it clicks into place.

Power supply:  
3x1.5V AAA batteries  
(Not included)



Figure 5: The battery compartment of the DEWIN WT8821 Oxygen Detector, designed for three 1.5V AAA batteries.

## 5. OPERATING INSTRUCTIONS

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### 5.1 Power On/Off

- To power on: Press and hold the **LIGHT** button for a few seconds. The LCD display will illuminate and show current oxygen levels.
- To power off: Press and hold the **LIGHT** button again until the display turns off. The device also features a timed shutdown function.

### 5.2 Reading Measurements

Once powered on, the device will continuously display the current oxygen concentration in %VOL and the ambient temperature in °C.

### 5.3 Data Hold Function

- Press the **HOLD** button to freeze the current readings on the display. The 'HOLD' indicator will appear.
- Press the **HOLD** button again to release the data hold and resume live measurements.

## 5.4 Max/Min Mode

- Press the **MAX/MIN** button to cycle through maximum, minimum, and current readings.
- The display will show 'MAX' or 'MIN' to indicate the respective value.
- Press **MAX/MIN** repeatedly to return to live measurement.

## 5.5 Alarm Setting

The device is equipped with an audible alarm. Refer to the detailed instructions in the included manual for specific steps on how to set and adjust the alarm thresholds for oxygen concentration. When an abnormal gas concentration is detected, the device will emit an alarm.

## 5.6 Calibration

The WT8821 features a calibration function to ensure measurement accuracy over time. Consult the comprehensive manual provided with the product for detailed calibration procedures. Regular calibration is recommended for optimal performance.

## FUNCTIONS

HOLD data holding  
MAX maximum value  
/MIN minimum value  
Alarm setting  
Calibration  
On/Off(Timed Shutdown)



Figure 6: Overview of the DEWIN WT8821's functions, including data holding, maximum/minimum value tracking, alarm setting, calibration, and timed shutdown.

## 6. SPECIFICATIONS

<b>Measurement Range</b>	0 ~ 25 % VOL
<b>Maximum Overload</b>	30 % Oxygen
<b>Response Time</b>	<15 seconds
<b>Sensor Type</b>	Electrochemical O2 Sensor
<b>Power Supply</b>	3 x 1.5V AAA Batteries (not included)
<b>Weight (without battery)</b>	111.9 g
<b>Dimensions (L x W x H)</b>	119.98 x 67.98 x 28.47 mm
<b>Alarm Type</b>	Audible
<b>Manufacturer Reference</b>	IDQDYXQRQ-D105055



Figure 7: Back view of the DEWIN WT8821 Oxygen Detector, displaying the product label with key specifications and the battery compartment.

## 7. MAINTENANCE

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- **Cleaning:** Wipe the device with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Storage:** Store the detector in a cool, dry place away from direct sunlight and extreme temperatures. If storing for extended periods, remove the batteries to prevent leakage.
- **Sensor Care:** Avoid exposing the sensor to harsh chemicals or physical impact.
- **Battery Replacement:** Replace batteries promptly when the low battery indicator appears to ensure continuous and accurate operation.

## 8. TROUBLESHOOTING

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- **Device not powering on:** Check if batteries are inserted correctly and are not depleted. Replace batteries if necessary.
- **Inaccurate readings:** Ensure the sensor area is clean. Perform a calibration as per the detailed manual. Avoid using the device in environments with extreme temperature fluctuations.
- **Alarm not sounding:** Check alarm settings. Ensure the device's speaker is not obstructed.
- **Display issues:** If the display is dim or flickering, replace the batteries.

## 9. WARRANTY AND SUPPORT

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Specific warranty information for the DEWIN WT8821 Portable Oxygen Detector is not detailed in the provided product description. Please refer to the warranty card included with your purchase or contact DEWIN customer support for warranty terms and service inquiries.

For technical support or further assistance, please contact your retailer or the manufacturer directly.