

Aoleaby SX711

Aoleaby SX711 pH/mV/ORP Meter Instruction Manual

Model: SX711

1. INTRODUCTION

The Aoleaby SX711 is a portable water quality monitoring instrument designed for accurate measurement of pH, mV, and ORP (Oxidation-Reduction Potential). This device is engineered for reliability and ease of use across various applications, including water treatment, power generation, and food processing.

Key features of the SX711 include:

- **High Accuracy:** Built-in pH sensor provides stable readings with minimal error.
- **Wide Application:** Suitable for diverse industrial and laboratory environments.
- **Excellent Stability:** Durable pH electrode ensures consistent performance.
- **Compact Design:** Small size for enhanced portability and convenient use.
- **User-Friendly Operation:** Intuitive interface simplifies measurement processes.



Figure 1: The Aoleaby SX711 pH/mV/ORP Meter, showing its display and control buttons.

2. SETUP

2.1. Battery Installation

The SX711 meter operates on two (2) AA batteries (1.5V x 2). To install or replace batteries:

1. Locate the battery compartment cover on the back of the instrument.
2. Slide or unclip the cover to open.
3. Insert the two AA batteries, ensuring correct polarity (+/-) as indicated inside the compartment.
4. Close the battery compartment cover securely.

2.2. Electrode Connection

Connect the pH/ORP electrode to the designated BNC connector on the bottom of the meter. Ensure the connection is firm to prevent signal interference.

3. OPERATION

3.1. Power On/Off

Press the **ON/OFF** button to power on the instrument. Press and hold the **ON/OFF** button again to power off.

3.2. Mode Selection

Press the **MODE** button to switch between pH, mV, and ORP measurement modes. The current mode will be displayed on the screen.

3.3. pH Calibration

For accurate pH measurements, regular calibration is essential. Follow these steps:

1. Prepare standard pH buffer solutions (e.g., pH 4.00, 7.00, 10.00).
2. Rinse the electrode with distilled water and blot dry.
3. Immerse the electrode into the first buffer solution (e.g., pH 7.00).
4. Press the **CAL** button. The meter will automatically recognize the buffer and begin calibration.
5. Wait for the reading to stabilize and the calibration indicator to confirm completion.
6. Rinse the electrode and repeat the process with the next buffer solution (e.g., pH 4.00 or 10.00) as needed for multi-point calibration.
7. Press **ENTER** to confirm and save calibration.

3.4. Taking Measurements

After calibration, immerse the electrode into the sample solution. Allow sufficient time for the reading to stabilize before recording the measurement. The meter automatically compensates for temperature variations within its specified range.

3.5. Data Storage and Recall

The SX711 can store measurement data. Use the **M+/RM** button to save current readings or recall previously stored data. The meter supports storage of up to 200 groups for pH/mV and 100 groups for ORP, including serial number, measured value, unit, and temperature.

4. MAINTENANCE

4.1. Electrode Care

- **Cleaning:** Always rinse the electrode with distilled or deionized water before and after each measurement. For stubborn deposits, use a mild cleaning solution recommended for pH electrodes.
- **Storage:** Store the pH electrode in a suitable electrode storage solution or a 3M KCl solution when not in use. Never store the electrode dry.

4.2. Instrument Cleaning

Wipe the meter's body with a soft, damp cloth. Do not use abrasive cleaners or solvents. Ensure no liquid enters the battery compartment or connectors.

4.3. Battery Replacement

Replace batteries when the low battery indicator appears on the display to ensure continuous accurate operation.

4.4. Storage Conditions

When storing the instrument for extended periods, remove the batteries. Store the meter in a dry place with an ambient temperature between 5 - 35 °C and relative humidity not exceeding 85%.

The SX711 has an IP57 rating, indicating it is dust-proof and waterproof against temporary immersion.

5. TROUBLESHOOTING

5.1. Unstable Readings

- **Cause:** Dirty electrode, air bubbles on the electrode, expired buffer solutions, or damaged electrode.
- **Solution:** Clean the electrode, gently tap to remove air bubbles, use fresh buffer solutions, or replace the electrode if damaged.

5.2. Calibration Errors

- **Cause:** Incorrect buffer solutions, electrode not properly immersed, or electrode malfunction.
- **Solution:** Verify buffer values, ensure electrode is fully immersed, or clean/replace electrode.

5.3. Meter Does Not Power On

- **Cause:** Dead or incorrectly installed batteries.
- **Solution:** Check battery polarity, replace with new AA batteries.

6. SPECIFICATIONS

The following tables detail the technical specifications for the Aoleaby SX711 pH/mV/ORP Meter.

6.1. pH and mV Specifications

Attachment Category	Product Name	Basic Functions and Specifications
PH	Measurement Range	(-2.00 - 19.99) pH
	Resolution	0.1/0.01 pH
	Accuracy	Electrometer: ± 0.01 pH, Matching: ± 0.02 pH
	Input Current	$\leq 2 \times 10^{-12}$ A
	Input Impedance	$\geq 1 \times 10^{12} \Omega$
	Stability	± 0.01 pH/3h
	Temperature Compensation Range	(0 - 100) °C (Automatic)
mV	Measurement Range	-1999mV - 0 - 1999mV
	Resolution	1mV
	Accuracy	Electrometer: $\pm 0.1\%$ FS
Other Technical Parameters	Data Storage	200 groups
	Storage Content	Serial number, measured value, unit of measurement, and temperature value.
	Power Supply	2 AA batteries (1.5V $\times$ 2)
	Dimensions and Weight	Instrument: (65 $\times$ 120 $\times$ 31)mm/180g; Carrying Case: (255 $\times$ 210 $\times$ 50)mm/790g
Operating Conditions	Ambient Temperature	5 - 35 °C (0.01 level)
	Relative Humidity	$\leq 85\%$
	IP Rating	IP57 Dust - proof and Waterproof

Figure 2: Detailed specifications for pH and mV measurements.

Table 1: pH and mV Basic Functions and Specifications

Attachment Category	Product Name	Basic Functions and Specifications
pH	Measurement Range	(-2.00 - 19.99) pH
	Resolution	0.1/0.01 pH
	Accuracy	Electrometer: ± 0.01 pH, Matching: ± 0.02 pH
	Input Current	$\leq 2 \times 10^{-12}$ A
	Input Impedance	$\geq 1 \times 10^{12} \Omega$
	Stability	± 0.01 pH/3h
	Temperature Compensation Range	(0 - 100) °C (Automatic)
mV	Measurement Range	-1999mV - 0 - 1999mV
	Resolution	1mV
	Accuracy	Electrometer: $\pm 0.1\%$ FS

Attachment Category	Product Name	Basic Functions and Specifications
Other Technical Parameters	Data Storage	200 groups
	Storage Content	Serial number, measured value, unit of measurement, and temperature value.
	Power Supply	2 AA batteries (1.5V×2)
	Dimensions and Weight	Instrument: (65×120×31)mm/180g; Carrying Case: (255×210×50)mm/790g
Operating Conditions	Ambient Temperature	5 - 35 °C (0.01 level)
	Relative Humidity	≤85%
	IP Rating	IP57 Dust - proof and Waterproof

6.2. ORP Specifications

ORP	Measurement Range	-1999mV - 0 - 1999mV
	Resolution	1mV
	Accuracy	Electrometer: ±0.1% FS, Matching: ±15mV
Other Technical Parameters	Data Storage	100 groups
	Storage Content	Serial number, measured value, unit of measurement
	Power Supply	2 AA batteries (1.5V×2)
	Dimensions and Weight	Instrument: (65×120×31)mm/180g; Carrying Case: (255×210×50)mm/790g
Operating Conditions	Ambient Temperature	5 - 35 °C (0.01 level)
	Relative Humidity	≤85%
	IP Rating	IP57 Dust - proof and Waterproof

Figure 3: Detailed specifications for ORP measurements.

Table 2: ORP Basic Functions and Specifications

Attachment Category	Product Name	Basic Functions and Specifications
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Attachment Category	Product Name	Basic Functions and Specifications
ORP	Measurement Range	-1999mV - 0 - 1999mV
	Resolution	1mV
	Accuracy	Electrometer: ±0.1% FS; Matching: ±15mV
Other Technical Parameters	Data Storage	100 groups
	Power Supply	2 AA batteries (1.5V×2)
	Dimensions and Weight	Instrument: (65×120×31)mm/180g; Carrying Case: (255×210×50)mm/790g
Operating Conditions	Ambient Temperature	5 - 35 °C (0.01 level)
	Relative Humidity	≤85%
	IP Rating	IP57 Dust - proof and Waterproof

6.3. General Specifications

Table 3: General Product Specifications

Parameter	Value
Package Dimensions	0.39 x 0.39 x 0.39 inches
Item Weight	1.32 pounds
Manufacturer	Aoleaby
ASIN	B0G51HSLG9
Date First Available	December 4, 2025

7. WARRANTY AND SUPPORT

For specific warranty information, please refer to the documentation provided with your purchase or contact the seller directly. Aoleaby is the manufacturer of this product.

For technical support or service inquiries, please contact your authorized dealer or the manufacturer's customer service department.

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