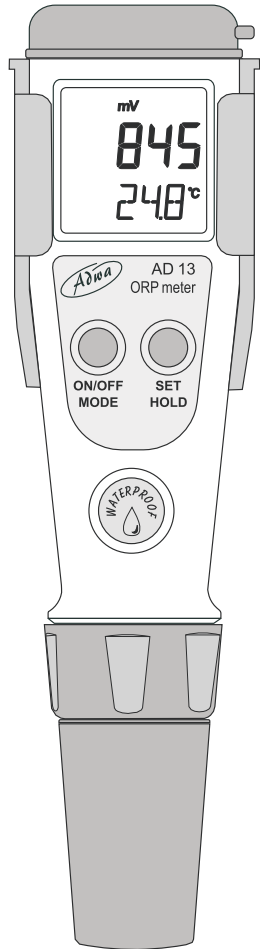




USER MANUAL

AD13 Waterproof ORP Tester



Dear Customer,
Thank you for choosing an Adwa product.
Please read carefully this manual before starting operations.

This instrument is in compliance with the EMC Directive 89/336/EEC and Low Voltage Directive 73/23/EEC for electrical equipments.
For additional technical information, please e-mail us at sales@adwainstruments.com.

INTRODUCTION

AD13 is a waterproof ORP and temperature tester. The housing has been completely sealed against humidity.

Temperature values can be displayed in °C or °F units.

The meter is factory calibrated both for ORP (mV) and temperature ranges.

Measurements are highly accurate with a unique stability indicator right on the LCD. The model is also provided with a low battery symbol which warns the user when the batteries need to be replaced.

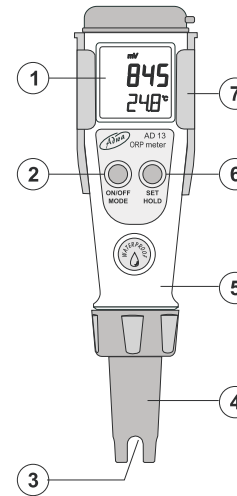
The **AD13P** ORP electrode, supplied with the meter, is interchangeable and can be easily replaced by the user.

The encapsulated temperature sensor allows fast and accurate temperature measurement.

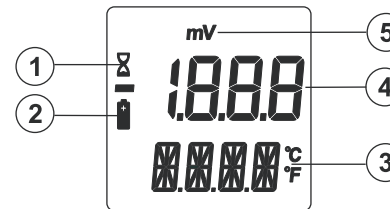
The meter is supplied complete with:

- **AD13P** ORP electrode
- 4 x 1.5V batteries, button type
- User manual

FRONT PANEL & DISPLAY



1. Dual line LCD
2. ON/OFF/ MODE button
3. ORP electrode & temperature sensor
4. Electrode body
5. Battery compartment (inside)
6. SET/HOLD button
7. Clip holder



1. Stability indicator (hourglass symbol)
2. Low battery warning indicator
3. Secondary LCD level
4. Primary LCD level
5. Measurement unit for primary level

TECHNICAL DATA

Range	±1000 mV -5.0 to 60.0°C / 23.0 to 140.0°F
Resolution	1 mV 0.1°C / 0.1°F
Accuracy (@20°C/68°F)	±2 mV / ±0.5°C / ±1°F
Calibration	Factory calibrated
Electrode	AD13P ORP electrode (included)
Battery Type	4 x 1.5V button type
Battery Life	Approx. 300 h of use
Auto-off	After 8 minutes of non-use
Environment	-5 to 50°C (23 to 122°F); RH 100%
Dimensions	175.5 x 39 x 23 mm
Weight	100 g

OPERATIONAL GUIDE

Turn the meter on

- Press and hold the ON/OFF/MODE button until the LCD lights up. All the used segments will be visible for one second (or as long as the button is pressed).

Freeze the display

- While in measurement mode, press the SET/HOLD button. The reading will be frozen on the LCD. Press any button to return to normal mode.

Turn the meter off

- While in measurement mode, press the ON/OFF/MODE button. OFF will appear on the secondary display. Release the button.

Note: If measurements are taken in different samples successively, rinse the probe thoroughly to eliminate cross-contamination. After cleaning, rinse the probe with some of the sample to be measured.

MEASUREMENT & CALIBRATION

- Submerge the electrode in the solution to be tested while stirring it gently.
- Measurements should be taken when the stability indicator (hourglass) disappears.
- The ORP (mV) value is shown on the primary LCD level while the secondary one shows the sample temperature.

Note: The ORP (mV) range is factory calibrated.

SETUP

Setup mode allows the selection of temperature unit.

To enter the setup mode, press the ON/OFF/MODE button until CAL on the secondary display is replaced by TEMP and the current temperature unit (e.g. TEMP °C).

Then use the SET/HOLD button to select the desired option.

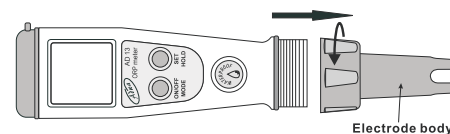
After the temperature unit has been selected, press the ON/OFF/MODE button to return to the normal measuring mode.

ELECTRODE MAINTENANCE

When not in use, rinse the electrode with water and store it with a few drops of **A7071S** electrolyte solution in the protective cap.

NEVER STORE THE ELECTRODE IN DISTILLED OR DEIONIZED WATER!

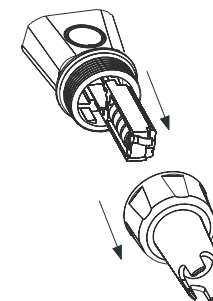
- If the electrode has been left dry, soak the tip in electrolyte solution for at least one hour to reactivate it.
- To prolong the electrode life, it is recommended to clean it monthly by immersing the tip in deionized water for 30 minutes. Afterwards, rinse it thoroughly with tap water and recalibrate the meter.
- The electrode can be easily replaced by unscrewing the body as shown below.



BATTERY REPLACEMENT

When the batteries become weak, the battery symbol on the LCD lights up to indicate a low battery condition. Batteries should be replaced soon.

To change the batteries, unscrew and release the electrode body. Take out the battery compartment and carefully replace all four batteries while paying attention to their polarity.



Reattach and tighten the electrode body properly to ensure a watertight seal.