User's Guide

AQUASOL DIGITAL

AM-AL-01

Multi Parameter Handheld Meter
pH/ORP/Conductivity/TDS/Salt/Temp

RAKIRO

www.rakiro.net


AQUASOL
DIGITAL
WaterProof
Hand Held Testers
6 Months Warranty
RAKUNO
AQUASOL
RAKUNO
pH
TDS
Conductivity
ORP

Introduction :

We thank you for having purchased Multi Parameter Handheld Meter. Before using the instrument, please read the operation instructions carefully, which will help you to operate and maintain the instrument, as well as to avoid trouble caused by unsuitable operation and maintenance.

The pocket meter employs leading edge technology with integrated microprocessor, which is suitable for measurement in water solutions for institutes, industrial labs and production fields.

Features:

1. Microprocessor based designed.
2. Large LCD displays readings and temperature simultaneously.
3. Rugged design with waterproof housing. It floats on water.
4. Measuring 5 parameters: pH, Conductivity, TDS, Salinity, and temperature by just on combo electrode.
5. Automatic Temperature Compensation (ATC).
6. Simple to calibrate by one keyboard.
7. Auto power shut off after 10 minutes of non use.
8. Easy replaced electrode module.

Specifications :

	pH	ORP	Temp.
Range	-2.00~16.00 pH	-1999 ~ -200 mV -199.9 ~ 499.9 mV 500 ~ 2000 mV	0~110 °C
Accuracy	±0.01+1 digit	±2+1 digit	±0.2+1 digit
Resolution	0.01 pH	0.1/1 mV	0.1 °C
Compen-sation	ATC: 0~100 °C	N/A	

	Conductivity	TDS	Salt
Range	0.0~ 199.9i S 200~ 1999i S 2.00~ 19.99 mS 20.0~ 100.0 mS	0.0~131.9 ppm 132~1319 ppm 1.32~13.19 ppt 13.2~66.0 ppt	0.0~99.9 ppm 100~999 ppm 1.00~9.99 ppt 10.0~50.0 ppt
Accuracy	±2% FS	±2% FS	±2% FS
Resolution	0.1/1?S/0.01/0.1 mS	0.1/1ppm/0.01/0.1ppt	0.1/1ppm/0.01/0.1ppt
Compen-sation	ATC: 0~50 °C	ATC: 0~50 °C	ATC: 0~50 °C

Accessories :

Meter with 3-in-1 electrode

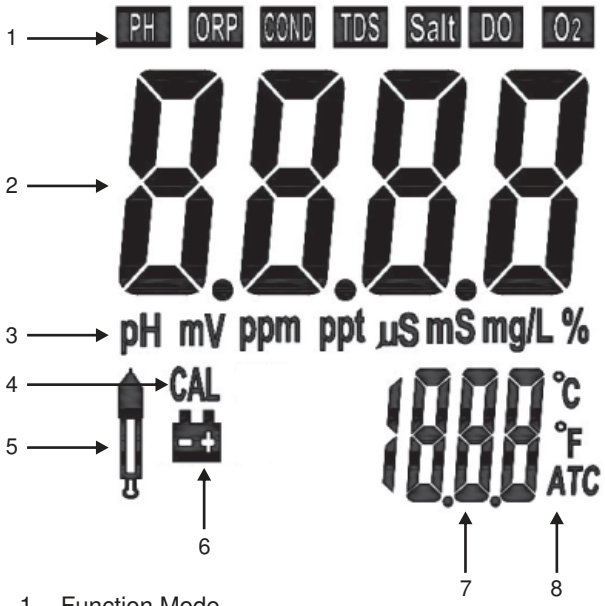
Pouch

Instruction manual

AAA battery x 4 (installed in the meter)

ORP electrode (Optional).

Display Description :



1. Function Mode
2. Measuring Reading
3. unit
4. Calibration Mode
5. Calibration error indicator
6. Battery power low Indicator
7. Temperature Indicator
8. Auto Temperature Compensation


AQUASOL
pH/Cond/TDS/°C
0.0
AM-AL-01
CAL
Mode
RAKIRO
Collar
Soaking bottle
3-in-1 electrode
Protection cap

Functions of Keyboard :

	Choose different function mode. Press 3 sec. to switch °C/°F
	Turn on or off power. Press 3 sec. to enter calibration mode

Preparation:

1. Remove the protection cap and protection bottle from the electrode.
2. Rinse the electrode with clean water and wipe it dry.

Calibration:

<pH>

1. Make sure the sensor is 3-in-1 electrode, remove the soaking bottle, and switch to pH mode.
2. Dip the electrode into the buffer solution pH 7.00. Stir gently and wait until the reading is stable. Press and hold 

for 3 sec. to enter calibration mode. The display will appear CAL and flashing 7.00. When the display stops flashing and indicates “SA", then "End” while calibration ends, and will return to measurement mode.
2. Rinse the electrode with clean water and wipe it dry. Dip the electrode into the buffer solution pH 4.01 as previous steps.
3. After slope calibration, pH 4.01 or pH 10.01, the display will indicate the percentage of slope (PTS) to show the status of the electrode. If the PTS is below 70% or above 130%, the electrode must be replaced. A slope of 100% is ideal.

Note :

1. Calibration error indicator icon will appear, and “Err” instead of “SA”, if calibration fails.
2. When doing a 2 or 3 point calibration, Calibrate with buffer pH 7 first, and then follow with buffer pH 4 or pH 10.

<ORP>

Calibration is not necessary for ORP. However, it could be tested with specific ORP standard solution to check whether the electrode is good.

<COND, TDS, Salt>

1. Make sure the probe is 3-in-1 electrode, remove the soaking bottle, and switch to Conductivity mode.
2. Dip the cell into the standard solution 1413 ì S/cm. Stir gently and wait until the reading is stable. Press and hold 

for 3 sec. to enter calibration mode. The display will appear CAL and flashing 1413ì S/cm. When the display stops flashing and indicates “SA", then "End” while calibration ends, and will return to measurement mode.

Note :

1. Calibrated by 12.88 mS/cm standard solution would be better for measuring high conductivity solution.
2. Calibration error indicator icon will appear, and “Err” instead of “SA”, if calibration fails.
3. If the reading is not 0 ì S/cm while the electrode is in the air and not dipped into any solution, calibrate it in the air to make reading become 0 ì S/cm.
4. The calibration points of Conductivity are 0, 84 ì S/cm, 1413 ì S/cm, 12.88 mS/cm and 80.0 mS/cm.

Measurement :

<pH>

1. Press Mode to choose pH mode.
2. After calibration, rinse the 3-in-1 electrode with clean water and wipe it dry. Dip the electrode into the sample solution which is going to be measured. Stir gently and wait until a stable reading can be obtained.

<ORP>

1. Insert ORP electrode, and press Mode to choose ORP mode.
2. Rinse the ORP electrode with clean water and wipe it dry. Dip the electrode into the sample solution which is going to be measured. Stir gently and wait until a stable reading can be obtained.

Note :

1. The display will appear “----” when it is over measuring range.
2. After measurement, rinse the pH or ORP electrode with clean water. Replace the soaking bottle. The soaking bottle should be always filled with soaking solution.

<COND, TDS, Salt>

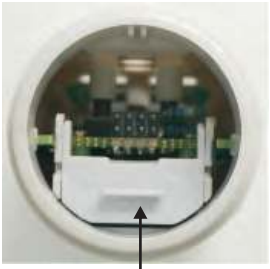
1. Presse Mode to choose COND, TDS or Salt mode.
2. After calibration, rinse the 3-in-1 electrode with clean water and wipe it dry. Dip the electrode into the sample solution which is going to be measured. Stir gently and wait until a stable reading can be obtained.

Note :

1. The display will appear “----” when it is over measuring range.
2. The units will auto-range to ì S/cm or mS/cm, or ppm or ppt.
3. After measurement, rinse the cell with clean water and replace the protective cap.
4. Don't touch or wipe the surface of the inner black plate of the conductivity cell.

Battery Change :

1. Please loosen the collar, and remove the electrode.
2. Lift the battery cap to open it.
3. Please mind the polarity of the batteries when install them into the meter.



Battery Cap

AQUASOL DIGITAL

Multi Parameter Handheld Meter

pH/ORP/Conductivity/ TDS/Salt/Temp

Warranty Card*

Customer Name/ Address : _____

_____

_____

_____

Dealer Name/ Address: _____

_____

_____

_____

Bill No. _____

Date -: _____

Product details

Dealer Stamp & Sign

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An ISO 9001 : 2008 Company