User's Guide

PACIFIC SENSOR TECHNOLOGIES

MEASURING THE WORLD AND BEYOND

8200/8200M

pH/ORP/Conductivity/TDS/Salt/Temp. Meter

8200

8200M

CE

Index

Introduction:

We thank you for having purchased 8200/8200M pocket pH/Cond/TDS/Salt/Temp 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.

8200/8200M pocket meter employs leading edge technology with integrated microprocessor, which is suitable for measurement in water solutions for institutes, industrial labs and production fields.

The information presented in this manual is subject to change without notice as improvements are made.

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). °C or °F are switchable.
6. Memory function stores and recalls up to 150 points. MAX/MIN and data Lock (8200M only).
7. Simple to calibrate by one keyboard for 5 points buffer.
8. Indicate percentage of slope (PTS) after calibration
9. Auto power shut off after 10 minutes of non use.
10. Easy replaced electrode module.

Specifications:

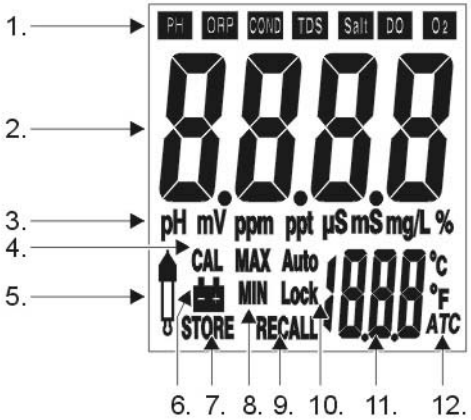
	pH	ORP	Temp.
Range	–2.00~16.00 pH	–1999 ~ –200 mV –199.9 ~ 499.9 mV 500 ~ 2000 mV	0~110 °C
Accuracy	±0.01+1 digit	±2+1 digit	±0.2+1 digit
Resolution	0.01 pH	0.1/1 mV	0.1 °C
Compensation	ATC: 0~100 °C	N/A	

	Conductivity	TDS	Salt
Range	0.0~199.9µS 200~1999µS 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	0.1/1µS/0.01/0.1 mS	0.1/1ppm/0.01/0.1 ppt	0.1/1ppm/0.01/0.1ppt
Compensation	ATC: 0~50 °C	ATC: 0~50 °C	ATC: 0~50 °C

Accessories:

pH/Conductivity/Temperature 3-in-1 electrode
Buffer 7.00 x 50ml
Buffer 4.01 x 50ml
1413µS x 50ml
12.88mS x 50ml
Soaking solution x 5ml
Instruction manual
carrying case
AAA battery x 4
Optional: ORP electrode.

Display Description:



1. Function Mode
2. Measuring Reading
3. unit
4. Calibration Mode
5. Calibration error indicator
6. Battery power low Indicator
7. Reading stored indicator
8. MAX & MIN Value
9. Recall Mode
10. Lock/Hold current reading
11. Temperature Indicator
12. Auto Temperature Compensation

Device Description:

Protection bottle 3-in-1 electrode Protection cap

Functions of Keyboard:

	8200M only. Lock the current reading Press for 3 sec. to enter or exit MAX/MIN mode.
	8200M only. Store the current reading. Press 3 sec. to enter Recall mode.
 	8200M only In Recall mode, browse records.
	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 (CAL) 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.
3. Rinse the electrode with clean water and wipe it dry. Dip the electrode into the buffer solution pH 4.01 as previous steps.
4. 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.
3. The calibration points of "USA" are 1.68, 4.01, 7.00, 10.01 and 12.45.

<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 µS/cm. Stir gently and wait until the reading is stable. Press and hold (CAL) for 3 sec. to enter calibration mode. The display will appear **CAL** and flashing 1413µS/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 µS/cm while the electrode is in the air and not dipped into any solution, calibrate it in the air to make reading become 0 µS/cm.
4. The calibration points of Conductivity are 0, 84 µS/cm, 1413 µS/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 electrode with clean water. Replace the soaking bottle. The soaking bottle should be always filled with soaking solution (4M KCL).

<COND, TDS, Salt>

1. Press (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 unit will auto-range to µS/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.

Store and Recall mode (8200M only):

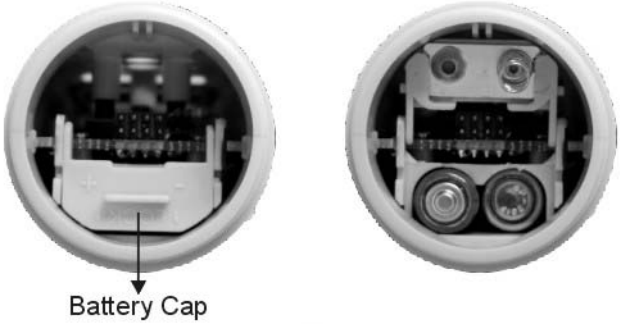
1. In measuring mode, press STORE RECALL to store the current reading. The Store icon and the ordinal of this record will appear on the display.
2. Press and hold STORE RECALL for 3 sec. to enter Recall mode. In this mode, use ▼ or ▲ to browse records. Press and hold STORE RECALL to exit this mode and return to measuring mode.
3. In Recall mode, press ▼ ▲ together for 3 sec. to clean all the records in the memory.

MAX/MIN mode (8200M only):

1. Press and hold (LOCK MAX/MIN) button until the display appear flashing **MAX** and **MIN** icons to enter MAX/MIN. Press (LOCK MAX/MIN) lightly to browse MAX and MIN value during this mode.
2. To exit this mode, press and hold (LOCK MAX/MIN) button again until the flashing **MAX** and **MIN** icons disappear and return to measuring mode.

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.



Distributor in Australia & New Zealand
Pacific Sensor Technologies Pty Ltd
Unit 7, 14 Commercial Dr,
Pakenham VIC 3810 Australia
1300 662 720 | sales@pacificsensortech.com.au
www.pacificsensortech.com.au