# Cardy Twin EC Meter

# **PRODUCT MANUAL**

Item 2205

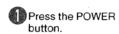




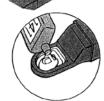
## Use in the Following Order Calibration with standard solution Measurement

# 1 How to Calibrate Using Standard Solution

(Before measurement)



Drop 1.41 standard solution onto the sensor cell.



Press the CAL/MODE button to display the 🚮 mark and 1.41.



Calibration is complete when the 🚮 mark disappears. Wash the sensor with tap water, and wipe any residual water with a tissue.



Note: A binking a mark indicates that the unit is not calibrated. Check that the correct standard solution was used and calibrate again.

Occasionally calibrate using the standard solution to achieve more accurate measurement. (At least once a day is recommended.)

## 2 How to Measure

The two parameters of conductivity and salinity can be measured.

#### ■ To Measure Conductivity

Check that the ▶mark indicates either of the mS/cm or  $\mu$ S/cm modes, and drop the of sample solution onto the sensor cell.



When the 🔾 mark appears, read the figure.

Note: The range automatically switches between the mS/cm and µS/cm ranges according to the concentration of the sample solution.

#### ■ To Measure Salinity

Check that the mark indicates the % mode, and drop the of sample solution onto the sensor cell.



When the 🔾 mark appears, read the figure.

 Each press of the CAL/MODE button changes the ▶mark in order : mS/cm or µS/cm, (A) and % mode.

Note: When the figure to be measured is outside of the measurable range (20mS/cm or more for conductivity and 1.1% or more for salinity), the displayed figure will blink. Use this figure as a reference value.)

There are two ways of measuring depending on the condition of the sample.

#### Immersion Measurement

Drop the sample onto the

Immerse the sensor in the sample. Do not immerse past the immersion level line.



sensor cell using a pipet.

Flat Surface Measurement

In both cases, read the displayed figure when the 
mark appears.

Note: Drop an appropriate amount of standard or sample solution onto the cell as shown in the figure. If there is not enough solution or the solution contains bubbles, the measurement will be inaccurate.

Appropriate amount Not enough solution 'Sensor Side view of sensor

#### Use the hold function as it aids measurement.

#### Manual Hold

#### **Automatic Hold**





To cancel the hold mode, press the HOLD button again.

#### After Measurement

- Press the POWER button to turn the power OFF.
- 2 Wash the sensor with tape water, and wipe off any residual water on the sensor with a tissue.
- Replace the protection cap over the sensor.

#### Accessories

Electrode (×1)	No. 0413	
Liquid set (1.41 mS/cm×1, washing liquid×4)	No. Y023	I0040950000-C

# How to Set and Replace the Sensor and Batteries

#### To set batteries:

Place both batteries as shown in the figure. Be sure the plus-side up.

#### To replace batteries:

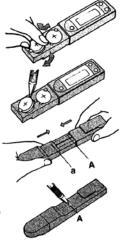
Remove the batteries as shown in the figure using a ball point pen or similar.

# To set the sensor:

Align hole "a" on the back of the sensor with catch "A" on the back of the unit body, then it is ready to use.

#### To replace the sensor:

push catch "A" on the back of the unit body with the tip of a ball point pen as shown in the figure and pull out the sensor.



#### **Specifications**

Model name	B-173
Measurement type	AC bipolar method
Measurement mode	Conductivity/sodium chloride (NaCl) salinity conversion
Display method	Digital LCD
Measurement range	Conductivity 0-19.9mS/cm Sodium chloride salinity conversion: o~1.1%
Repeatability	± 1% F. S.
Measurement tempera- ture	5~35°C
Functions	Automatic calibration (with calibrated value back-up function) Manual or automatic holding Automatic power off Automatic range switch
Dimensions	150×27×16mm
Power supply	3V × 2, two CR-2032 lithium batteries
Material	ABS resin
Accessories	Standard solution (1.4tmS/cm) Washing liquid (purified water) Two CR-2032 lithium batteries Pipet Storage pouch

#### **WARRANTY**

This product is warranted to be free from defects in material or work-manship for one year from the date of purchase. During the warranty period Spectrum will, at its option, either repair or replace products that prove to be defective. This warranty does not cover damage due to improper installation or use, lightning, negligence, accident, or unauthorized modifications, or to incidental or consequential damages beyond the Spectrum product. Before returning a failed unit, you must obtain a Returned Materials Authorization (RMA) from Spectrum. Spectrum is not responsible for any package that is returned without a valid RMA number or for the loss of the package by any shipping company.

# **Spectrum**<sup>®</sup> Technologies, Inc.

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