Conductivity Probe

850083

Instruction Manual

SPER
SCIENTIFIC LTD.
TABLE OF CONTENTS

I. INTRODUCTION ............................................................................. 2
II. PANEL DESCRIPTION ................................................................... 2
III. MEASUREMENT PROCEDURES .................................................. 3
IV. CALIBRATION ................................................................................ 3
V. SPECIFICATIONS .......................................................................... 4
VI. WARRANTY .................................................................................... 4

I. INTRODUCTION

This probe measures conductivity and temperature in °C or °F. Features a long-life carbon rod electrode and built-in automatic temperature compensation (ATC), or selectable uncompensated readings. With the plug-and-play feature of this probe, calibration procedures are generally not required. The meter features Hold, Max./Min, RS232 and Auto Shut Off.

II. PANEL DESCRIPTION

1. LCD Display
2. POWER Button
3. REC. Button
4. HOLD Button
5. A & Up (°C/°F) Button
6. B & Left (Range) Button
7. C & Down Button
8. D (TEMP. C) Button
9. Battery
10. pH BNC Input Socket
11. Probe Lock
12. Probe Input Socket
13. Probe Head
14. Probe Handle
III. MEASUREMENT PROCEDURES

- Plug probe into the PROBE INPUT SOCKET.
- Make sure the PROBE LOCK is in the lock position.
- Turn on the instrument by pressing the POWER button.
- The default ATC factor is 2% per °C, adjustable between 0 to 5.0%. To adjust the ATC factor, press the D (TEMP.C) button once, then use the UP, LEFT, and DOWN buttons to set the desired ATC factor. Press the D (TEMP.C) button again to lock in the new ATC factor.
- Press the RANGE button to select the optimum range. The meter features an overload indicator. If the LCD displays "— — — —", select the next higher range. Select the next lower range if the LCD displays "- - - -".
- Immerse the PROBE HEAD in the solution to be measured. The unit of measure ("mS") and the measured results are displayed, along with the ATC reading.
- Press the A (°C/°F) button to select Centigrade or Fahrenheit. The temperature is shown on the lower display.

Refer to the Water Quality Meter 850081 Instruction Manual for instructions about Hold, Max./Min, RS232, Auto Shut Off, and other functions.

IV. CALIBRATION

Although calibration is not generally needed, the following procedures should be performed the first time a new conductivity probe is used, or after long periods of use.

Range 1 Calibration (2 mS range)

1. Prepare a 1.413 mS calibration solution and select RANGE 2 mS.
2. Immerse the PROBE HEAD in the solution.
3. Set the temperature coefficient factor to 2.0% of °C.
4. Press both the REC and HOLD buttons at the same time, "CAL" and "1.413" will flash on the display. Release the buttons.
5. To cancel the calibration setup (before the display stops flashing), release the REC and HOLD buttons and press the HOLD button again.

Range 2 Calibration (20 mS range)

1. Prepare a 12.88 mS calibration solution and select RANGE 20 mS.
2. Follow steps 2 to 5 above. NOTE: In step 4, "CAL" and "12.88" will flash on the display, not "1.413".
### V. SPECIFICATIONS

<table>
<thead>
<tr>
<th>Unit of Msrmt.</th>
<th>Range</th>
<th>Resolution</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>mS</td>
<td>0.2 ~ 1.999</td>
<td>0.001</td>
<td>±(3%fs + 1d) Full Scale</td>
</tr>
<tr>
<td>mS</td>
<td>2 ~ 19.99</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td>ºC</td>
<td>0 ~ 60</td>
<td>0.1</td>
<td>0.8</td>
</tr>
<tr>
<td>ºF</td>
<td>32 ~ 140</td>
<td></td>
<td>1.5</td>
</tr>
</tbody>
</table>

- Operating Temperature (meter) 0°C to 50°C (32°F to 122°F).
- Operating Humidity Max. 80% RH.
- Probe Size Diameter: " (22mm). Length: " (120mm).

Refer to the Water Quality Meter 850081 Instruction Manual for meter specifications.

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**ONE YEAR WARRANTY**

Sper Scientific warrants this product against defects in materials and workmanship for a period of one year from the date of purchase, and agrees to repair or replace any defective unit without charge. If your model has since been discontinued, an equivalent Sper Scientific product will be substituted if available. This warranty does not cover damage resulting from accident, misuse, or abuse of the product. In order to obtain warranty service, simply ship the unit postage prepaid to:

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