 **OMEGA**
ENGINEERING, INC.
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 **MODEL CDH-30**
Conductivity Meter



Operator's Manual



GENERAL DESCRIPTION

The OMEGA® CDH-30 is a hand held digital conductivity meter with an extremely wide measurement range. It is excellent for use in solutions ranging from deionized water to seawater, all without having to change the probe. Temperature compensation is manual, and the ½" LCD indicates whether the measurements made are microsiemens or millisiemens. The CDH-30 comes with a vinyl carrying case and a conductivity probe.

UNPACKING

Remove the packing list and verify that all equipment has been received. If there are any questions about the shipment, please call OMEGA Customer Service Department at (203) 359-1660.

Upon receipt of the shipment, inspect the container and equipment for any signs of damage. Take particular note of any evidence of rough handling in transit. Immediately report any damage to the shipping agent.

NOTE

The carrier will not honor any claims unless all shipping material is saved for their examination. After examining and removing contents, save packing material and carton in the event reshipment is necessary.

CALIBRATION

To calibrate the conductivity meter, use a standard conductivity solution.

1. Press the "ON" key.
2. Press the "COND/TEMP" key; the Centigrade symbol will appear on the display.
3. Measure the temperature of the calibration solution and adjust the temperature knob until the same temperature appears on the display.
4. Press the "COND/TEMP" key to make the "C" symbol disappear.
5. Set the conductivity meter to the appropriate range to read the conductivity of the solution.
6. Stir the liquid and tap the electrode against the bottom of the bottle to ensure that all the air bubbles come out of the electrode through the holes in the sleeve.
7. Find the value of the conductivity of the calibration solution at 25°C.
8. Adjust the calibration screw through the hole in the left side of the meter until the display reads this conductivity value.

To ensure maximum accuracy, calibrate the instrument at a temperature within $\pm 5^{\circ}\text{C}$ from the measurement temperature. Keep the bottles with standard solutions capped, to minimize contamination by carbon dioxide.

OPERATING PROCEDURE

After the instrument has been calibrated, immerse the electrode in the liquid to be measured.

If the reading is higher than the range selected, the display will read "1" in the far left digit position, while the other digits will be blank. If this happens, select a higher range. For example, if the solution to be measured is 350 μS and the instrument is initially set at the 199.9 μS range, only "1" will be displayed. Select the 1999 μS range by pressing the appropriate key to correct display reading.

TEMPERATURE COMPENSATION

The actual conductivity of a solution is heavily dependent on the temperature. For chlorides and most commonly used solutions, the temperature coefficient of the conductivity is about 1.9 to 2% per Centigrade. To obtain a standard value, the conductivity value is corrected and the display shows the conductivity value the solution would have at 25°C.

To perform this correction, the temperature knob should be set to the appropriate temperature value. To set the temperature knob, measure the temperature of the solution, and press the "COND/TEMP" key to make the Centigrade symbol appear on the display. Adjust the knob until the displayed temperature agrees with the temperature of the solution, then press the "COND/TEMP" key to display the conductivity value and symbols.

CLEANING THE ELECTRODE

After every set of measurements, rinse the electrode with tap water. If a more effective cleaning is required, take the protective sleeve off and clean the electrode with a cloth or a mild detergent. Do not use abrasives. To maximize electrode life, keep it dry when not in use and avoid high temperature exposures.

SPECIFICATIONS

RANGE: 0.0 to 199.9 μS , 0 to 1999 μS , 0 to 19.99 mS, 0 to 199.9 mS

ACCURACY: 1% of full scale

RESOLUTION: 0.1 μS

TEMPERATURE COMPENSATION: Manual, 0 to 50°C

PROBE: PVC body, 4.7" long, 0.8" diameter, 1 m cable

POWER: 9 V battery, approximately 100 hours continuous use with alkaline battery

DIMENSIONS: 7.1" x 3.3" x 1.8"

WEIGHT: 0.8 lb

WARRANTY

OMEGA warrants this unit to be free of defects in materials and workmanship and to give satisfactory service for a period of two (2) years from date of purchase. If the unit should malfunction, it must be returned to the factory for evaluation. Our Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective it will be repaired or replaced at no charge. However, this WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of being damaged as a result of excessive current, heat, moisture, vibration, or misuse. Components which wear or which are damaged by misuse are not warranted. These include contact points, fuses, and triacs.

THERE ARE NO WARRANTIES EXCEPT AS STATED HEREIN. THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND OF FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL OMEGA ENGINEERING, INC. BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL OR SPECIAL DAMAGES. THE BUYER'S SOLE REMEDY FOR ANY BREACH OF THIS AGREEMENT BY OMEGA ENGINEERING, INC. OR ANY BREACH OF ANY WARRANTY BY OMEGA ENGINEERING, INC. SHALL NOT EXCEED THE PURCHASE PRICE PAID BY THE PURCHASER TO OMEGA ENGINEERING, INC. FOR THE UNIT OR UNITS OR EQUIPMENT DIRECTLY AFFECTED BY SUCH BREACH.



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One Omega Drive, Box 4047

Stamford, Connecticut 06907-0047

(203)359-1660 Telex: 996404 Cable: OMEGA FAX: (203) 359-7700

Return Requests/Inquiries

Direct all warranty and repair requests/inquiries to OMEGA Customer Service Department, telephone number (203) 359-1660. Before returning any instrument, please contact the OMEGA Customer Service Department to obtain an authorized return (AR) number. The designated AR number should then be marked on the outside of the return package.

To avoid processing delays, also please be sure to include:

1. Returnee's name, address, and phone number.
2. Model and Serial numbers.
3. Repair instructions.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. That way our customers get the latest in technology and engineering.

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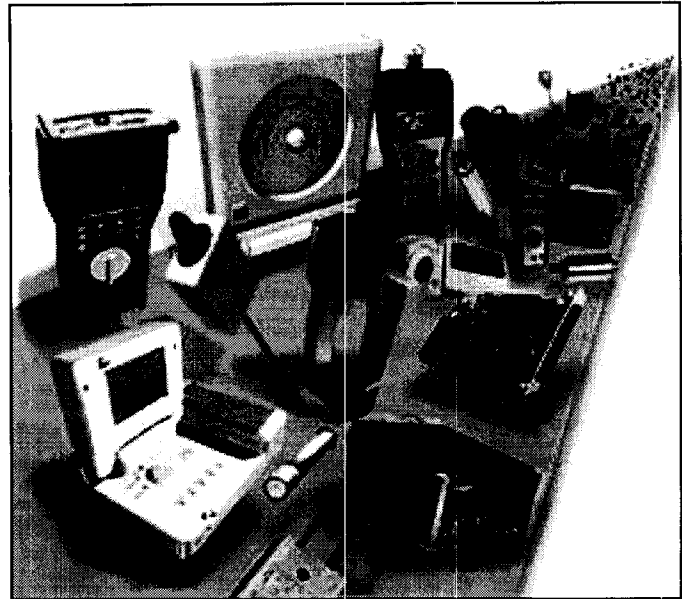
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