

 **CDH-80**

 **Conductivity Meter**



Operator's Manual



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GENERAL DESCRIPTION

The OMEGA® CDH-80 meter is a handheld four range conductivity meter that may be used to test samples ranging from distilled water to seawater. For accuracy of measurement, automatic temperature compensation is provided from 0 to 70°C. The meter is supplied complete with probe, 9 V battery, screwdriver and carrying case. Optional items for this meter include the extension cable (length - two meters) - OMEGA part number PHEC-8200, and replacement conductivity probe - OMEGA part number CDE-8002.

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.

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.

OPERATING INSTRUCTIONS

1. Set the conductivity cell to either the 90° or 180° measurement position.
2. Energize by depressing the On/Off switch once.
3. Immerse cell into the solution approximately ½ its length.
4. When energized, the LCD will indicate the conductivity range being measured.
5. The CDH-80 measures 4 ranges of conductivity in the following sequence: 0 to 200,000 μ mhos, 0 to 20,000 μ mhos, 0 to 2,000 μ mhos, and 0 to 200 μ mhos. For each range change desired, depress the F/C switch once. Observe reading.
6. A "1" will appear in the indicator if the solution exceeds the measurement range.
7. Rinse off electrode thoroughly after each use.

OPERATING TIPS

1. Electrodes should be rinsed off thoroughly after each test.
2. When possible, test samples of a lower conductivity value first.
3. If conductivity cell does not zero in the air, it may indicate dried solids on the sensing portion of the cell (gold bands). Clean with a mild detergent solution remembering not to use abrasive materials that might scratch the sensor's surface.
4. When possible choose a conductivity calibration solution with values that are near the samples normally being measured.
5. If the instrument will be stored for long periods of time, remove the battery.

CALIBRATION

Your instrument has been pre-calibrated prior to shipment. Calibrations should be performed periodically with known conductivity solutions.

1. Rinse the cell thoroughly in distilled water prior to calibration.
2. Wipe off conductivity probe and allow to dry.
3. Once dry, conductivity should read 0 in air.
4. Adjust the Zero screw if the reading is incorrect.
5. Immerse the cell in a known conductivity solution.
6. Adjust the Span screw to the corresponding conductivity value.
7. Only a single point calibration in the 2,000 range is required to standardize. However, if the unit is to be used primarily in a higher or lower range, it is recommended that the single point calibration be performed near point of use and in the correct range for best accuracy and resolution.
8. Rinse off cell thoroughly.

Figure 1 shows the CDH-80 conductivity meter.

SPECIFICATIONS

RANGE	RESOLUTION	ACCURACY
0 to 200 μ S	0.1	$\pm 1\%$ full scale
0 to 2,000 μ S	1.0	$\pm 1\%$ full scale
0 to 20,000 μ S	10.0	$\pm 1\%$ full scale
0 to 200,000 μ S	100.0	$\pm 1.5\%$ full scale *

* The accuracy for the 0 to 200,000 μ S scale is $\pm 2\%$ to 133,400 only.

CALIBRATION ADJUSTMENT:	Zero and Span
TEMPERATURE COMPENSATION:	Automatic 0 to 70°C
POWER:	9 V Battery
DIMENSIONS:	6¼" x 1¼" x 2¼"
WEIGHT:	8.5 oz

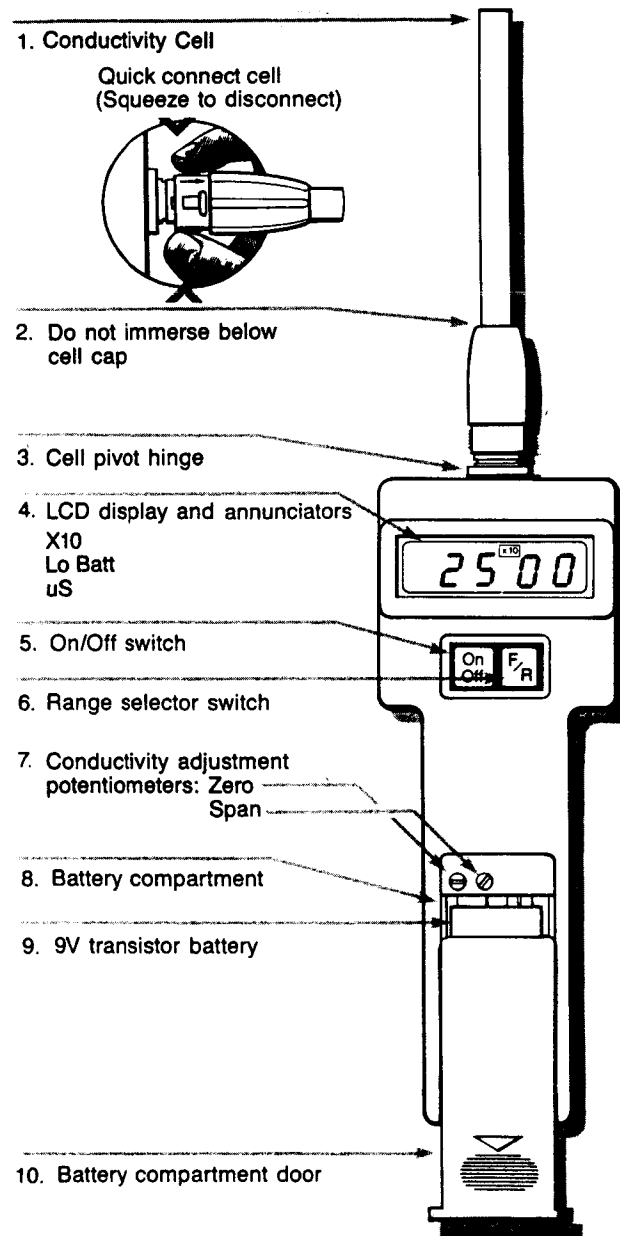


Figure 1. CDH-80 Conductivity Meter



WARRANTY

OMEGA warrants this unit to be free of defects in materials and workmanship and to give satisfactory service for a period of **13 months** from date of purchase. OMEGA Warranty adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product. If the unit should malfunction, it must be returned to the factory for evaluation. OMEGA's 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 corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components which wear or which are damaged by misuse are not warranted. These include contact points, fuses, and triacs.

OMEGA is glad to offer suggestions on the use of its various products. Nevertheless, OMEGA only warrants that the parts manufactured by it will be as specified and free of defects.

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SPECIAL CONDITION: Should this equipment be used in or with any nuclear installation or activity, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the equipment in such a manner.

RETURN REQUESTS / INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA ENGINEERING Customer Service Department. **BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS).** The assigned AR number should then be marked on the outside of the return package and on any correspondence.

FOR **WARRANTY** RETURNS, please have the following information available **BEFORE** contacting OMEGA:

1. P.O. number under which the product was **PURCHASED**,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS OR **CALIBRATION**, consult OMEGA for current repair/calibration charges. Have the following information available **BEFORE** contacting OMEGA:

1. P.O. number to cover the **COST** of the repair/calibration,
2. Model and serial number of product, and
3. Repair instructions and/or specific problems relative to the product.

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