

1 YEAR
WARRANTY

Ω OMEGA® User's Guide

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CDH-80 **Conductivity Meter**



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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 then 90° or 180° measurement position.
2. Energize by depressing the On/Off switch once.
3. Immerse cell into the solution approximately 1/2 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 μmhos , 0 to 20,000 μmhos , 0 to 2,000 μmhos , and 0 to 200 μmhos . 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:	6 1/4" x 1 1/4" x 2 1/4"
WEIGHT:	8.5 oz.

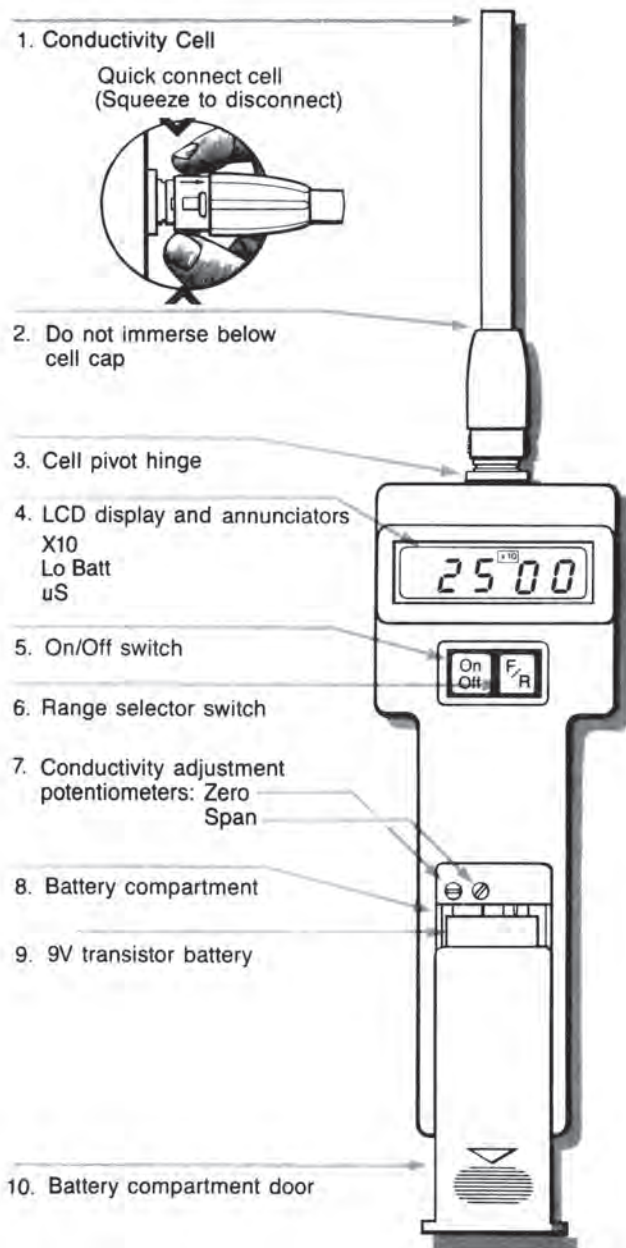


Figure 1. CDH-80 Conductivity Meter

WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's 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 malfunctions, 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. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been 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 in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

OMEGA is pleased to offer suggestions on the use of its various products. However, OMEGA neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use of its products in accordance with information provided by OMEGA, either verbal or written. OMEGA warrants only that the parts manufactured by the company will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive, and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.

CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a "Basic Component" under 10 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY/DISCLAIMER language, and, additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

RETURN REQUESTS/INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA 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.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

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

1. Purchase Order 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, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

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

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