

OMEGA

RH62C
HYGROMETER



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6311114
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INTRODUCTION


This instrument is a portable 3½ digit, compact-sized digital Thermo-Hygrometer designed for simple one hand operation. Uses Platinum Resistance Temperature Detector Pt385/1000W (Alpha=0.00385) as temperature sensor, and uses thin film polymer capacitive type relative humidity sensor as hygrometer sensor.

SAFETY INFORMATION

It is recommended that you read the safety and operation instructions before using the hygrometer.

CAUTION

- Do not immerse the hygrometer sensor head into liquids since this causes permanent damage to the sensor.
- The meter when not in use, please use protective metal cap cover the sensor head and rotate clockwise it to extend sensors life.

The  symbol on the instrument indicates that the operator must refer to an explanation in this manual.

SPECIFICATIONS

GENERAL

Display: 3½ digit liquid crystal display (LCD) with maximum reading of 1999.

Overtemperature: "OL" mark indication.

Low battery indication: The "🔋" is displayed when the battery voltage drops below the operating level.

Measurement rate: 2.5 times per second, nominal.

Accuracy: Stated accuracy at 23°C ± 5°C, <75% relative humidity.

Temperature Coefficient: 0.1 times the applicable accuracy specification per °C from °C to 18°C and 28°C to 50°C.

Operating environment: 0°C to 50°C at <75% relative humidity.

Storage environment: -20°C to 60°C at <80% relative humidity.

Battery: 4 pcs 1.5V (AAA size).

Battery Life: 200 hours typical.

Dimensions: 170mm(H) x 44mm(W) x 40mm(D).

Weight: 160g (including probe and batteries).

ELECTRICAL TEMPERATURE

Temperature Scale: Celsius.

Temperature Sensor: RTD Pt385/1000W.

Measurement Range: -20°C to 100°C.

Resolution: 0.1°C.

Accuracy: $\pm 0.5^{\circ}\text{C}$ 0°C to 50°C
 $\pm 1^{\circ}\text{C}$ -20°C to 0°C , 50°C to 100°C

RELATIVE HUMIDITY

Humidity Sensor: Electronic capacitance polymer film sensor. (The sensor is unaffected by water condensate, is immune to most reagent vapors)

Measurement Range: 0% to 100%RH.

Resolution: 0.1%RH.

Accuracy: $\pm 2.5\% \text{RH}$ (10% to 90%RH)
 $\pm 5\% \text{RH}$ (<10%, > 90%RH)

Sensor Response Time for 90% of Total Range: 60sec typical.


Sensor Stability: $\pm 2\% \text{RH}$, 2 years typical.

Sensor Hysteresis (excursion of 10% to 90% to 10% RH): $\pm 1\%$ RH typical.
Sensor Temperature Dependence: Negligible between 0°C to 50°C.


OPERATING INSTRUCTIONS

Push Button

Display Back-Light Button

Press "" button to toggle between turn on and turn off the Back-Light.

DATA HOLD Button

Press the DATA HOLD key to enter the DATA HOLD mode, the "" annunciator is displayed. When DATA HOLD mode is selected, the hygrometer holds the present readings and stops all further measurements.

Press the DATA HOLD key again cancels DATA HOLD mode, causing hygrometer to resume taking measurements.

MAX HOLD Button

Press the MAX HOLD key to enter the MAX HOLD mode. The hygrometer then records and updates the maximum absolute values and the MAX annunciator appears on the display. Press the MAX HOLD key again to exit the MAX HOLD recording mode.

In the MAX HOLD mode, press DATA HOLD key to stop the recording, press DATA HOLD key again to resume recording.

OPERATION


1. Rotate counter clockwise to remove the protective metal cap.
2. Set the power switch to the desired %RH or °C range.
3. Read the display.
4. Cover sensor head to extend sensor life when not in use.

SPECIAL CONSIDERATIONS

- Before a reliable measurement can be made, the measuring hygrometer and medium to be measured must be in temperature and humidity equilibrium.
- Temperature measurement errors
Due to too short measurement time, sunshine during the measurement, heating, cold outer walls, air draft (e.g. fans), radiating hand and / or body heat etc.
- Humidity measurement errors
Due to steam, water splashes, dripping water or condensation (not water condensate) on the sensor etc. However, repeatability and long-term stability are not impaired by this.
- Contamination
By dust in the air or measurements in powdery substances. This can be largely avoided by using a corresponding filter. The filter must be cleaned or replaced periodically depending upon the degree of contamination of the measuring site.

OPERATOR MAINTENANCE

Battery Replacement

Power is supplied by four 1.5V (AAA size) batteries. The "" appears on the LCD display when replacement is needed. To replace the batteries, remove the screw from the back of the meter and lift off the battery cover. Remove the batteries from battery contacts.

Cleaning

Periodically wipe the case with a damp cloth and detergent, do not use abrasives or solvents.

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. This includes 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

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.

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Every precaution for accuracy has been taken in the preparation of this manual; however, OMEGA ENGINEERING, INC. neither assumes responsibility for any omissions or errors that may appear nor assumes liability for any damages that result from the use of the products in accordance with the information contained in the manual.

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.

It is the policy of OMEGA to comply with all worldwide safety and EMC/EMI regulations that apply. OMEGA is constantly pursuing certification of its products to the European New Approach Directives. OMEGA will add the CE mark to every appropriate device upon certification.

The information contained in this document is believed to be correct but OMEGA Engineering, Inc. accepts no liability for any errors it contains, and reserves the right to alter specifications without notice.

WARNING: These products are not designed for use in, and should not be used for, patient connected application.

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

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

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