OMEGA

RH62C-MV
Humidity Temperature Transducer

omega.com™
OMEGA

OMEGAnet℠ On-Line Service http://www.omega.com	Internet e-mail info@omega.com

Servicing North America:

USA: ISO 9001 Certified
One Omega Drive, Box 4047
Stamford, CT 06907-0047
Tel: (203) 359-1660
FAX: (203)359-7700
e-mail: info@omega.com

Canada:
976 Bergar
Laval (Quebec) H7L5A1
Tel: (514) 856-6928
FAX: (514) 856-6886
e-mail: info@omega.com

For immediate technical or application assistance:

USA and Canada:
Sales Service: 1-800-826-6342 / 1-800-TC-OMEGA℠
Customer Service: 1-800-622-2378 / 1-800-622-BEST℠
Engineering Service: 1-800-872-9436 / 1-800-USA-WHEN℠
TELEX: 996404 EASYLINK: 62968934 CABLE: OMEGA

Mexico and Latin America:
Tel: (95) 800-TC-OMEGA℠
FAX: (95) 203-359-7807
En Español: (203) 359-7803
e-mail: espanol@omega.com

Servicing Europe:

Benelux:
Postbus 8034, 1180 LA Amstelveen,
The Netherlands
Tel: (31) 20 6418405 FAX: (31) 20 6434643
Toll Free in Benelux: 06 0993344
e-mail: nl@omega.com

Czech Republic:
ul. Rude armady 1868, 733 01 Karvina-
Hranice, Czech Repubic
Tel: 420 (69) 6311627 FAX: 420 (69)
6311114
e-mail: czech@omega.com

France:
9, rue Denis Papin, 78190 Trappes
Tel: (33) 130-621-400 FAX: (33)130-699-120
Toll Free in France: 0800-4-06342
e-mail: france@omega.com

Germany/Austria:
Daimlerstrasse 26, D-75392
Deckenpfronn, Germany
Tel: 49 (07056) 3017 FAX: 49 (07056) 8540
Toll Free in Germany: 0800 82 66342
e-mail: germany@omega.com

United Kingdom: ISO 9002 Certified
One Omega Drive
Riverbend Technology Centre Northbank, Irlam,
Manchester, M44 5EX, England
Tel: 44 (161) 777-6611 FAX: 44 (161) 777-6622

Toll Free in England: 0800-488-488
e-mail: sales@omega.com.uk

INTRODUCTION

This instrument is a portable, compact-sized Humidity Temperature Transducer 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 humidity temperature transducer.

CAUTION

- Do not immerse the transducer 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

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

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: 200g (including probe and batteries).

ELECTRICAL

TEMPERATURE

Temperature Scale: Celsius.
Temperature Sensor: RTD Pt385/1000W.
Measurement Range: -20°C to 100°C.
Temperature Output: 10mV/°C.
Accuracy: ±0.5°C 0°C to 50°C
±1°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.
Relative Humidity Output: 10mV/%RH.
Accuracy: ±2.5%RH (10% to 90%RH)
±5%RH (<10%, > 90%RH)
Sensor Response Time for 90% of Total Range: 60sec typical.
Sensor Stability: ±2%RH, 2 years typical.

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

OPERATON

1. Plug the humidity temperature transducer test leads into the Vdc input jack and common or ground input jack on the DMM. Observe polarity.
2. Set the DMM to the 200mV range.
3. Rotate counter clockwise to remove the protective metal cap.
4. Set the power switch to the desired %RH or °C range.
5. If the DMM display is over-range. Set the DMM to the 2V range.
6. Read the DMM display. (10mV/°C, 10mV/%RH)
7. 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 eguilibrium.
- 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 "LOW BATT" red LED lighted 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 of 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.

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.

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 indemnity 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.

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. OMEGA is a registered trademark of OMEGA ENGINEERING, INC.

Where Do I Find Everything I Need for Process Measurement and Control? OMEGA...Of Course!

HEATERS
- ☑ Heating Cable
- ☑ Cartridge & Strip Heaters
- ☑ Immersion & Band Heaters
- ☑ Flexible Heaters
- ☑ Laboratory Heaters

PRESSURE/STRAIN AND FORCE
- ☑ Transducers & Strain Gauges
- ☑ Load Cells & Pressure Gauges
- ☑ Displacement Transducers
- ☑ Instrumentation & Accessories

FLOW/LEVEL
- ☑ Rotameters, Gas Mass Flowmeters & Flow Computers
- ☑ Air Velocity Indicators
- ☑ Turbine/Paddlewheel Systems
- ☑ Totalizers & Batch Controllers

TEMPERATURE
- ☑ Thermocouple, RTD & Thermistor Probes, Connectors, Panels & Assemblies
- ☑ Wire: Thermocouple, RTD & Thermistor
- ☑ Calibrators & Ice Point References
- ☑ Recorders, Controllers & Process Monitors
- ☑ Infrared Pyrometers

ENVIRONMENTAL MONITORING AND CONTROL
- ☑ Metering & Control Instrumentation
- ☑ Refractometers
- ☑ Pumps & Tubing
- ☑ Air, Soil & Water Monitors
- ☑ Industrial Water & Wastewater Treatment
- ☑ pH, Conductivity & Dissolved Oxygen Instruments

pH/CONDUCTIVITY
- ☑ pH Electrodes, Testers & Accessories
- ☑ Benchtop/Laboratory Meters
- ☑ Controllers, Calibrators, Simulators & Pumps
- ☑ Industrial pH & Conductivity Equipment

DATA ACQUISITION
- ☑ Data Acquisition & Engineering Software
- ☑ Communications-Based Acquisition Systems
- ☑ Plug-in Cards for Apple, IBM & Compatibles
- ☑ Datalogging Systems
- ☑ Recorders, Printers & Plotters

M-2862/0799