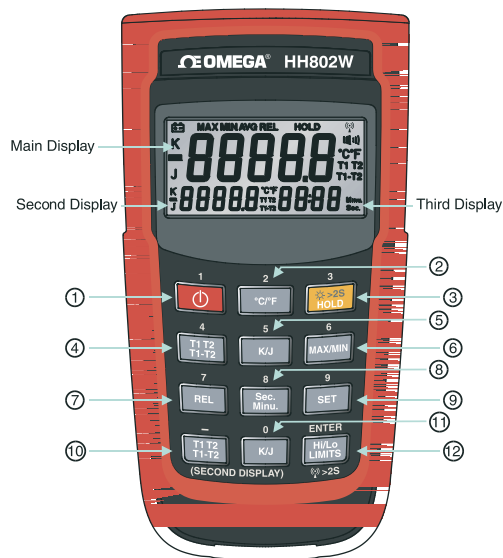


HH802W
WIRELESS DUAL INPUT K/J
DIGITAL THERMOMETER



MADE IN TAIWAN

omega.com® ΩOMEGA®	
OMEGAnet® On-Line Service omega.com	Internet e-mail info@omega.com

Servicing North America:

U.S.A.: One Omega Drive, Box 4047
Stamford, CT 06907-0047
Tel: (203) 359-1660 FAX: (203) 359-7700
e-mail: info@omega.com

ISO 9001 Certified

Canada: 976 Bergar
Laval (Quebec) H7L 5A1, Canada
Tel: (514) 856-6928 FAX: (514) 856-6886
e-mail: info@omega.ca

For immediate technical or application assistance:

U.S.A 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: En Espanol: (001) 203-359-7803
e-mail: espanol@omega.com
FAX: (001) 203-359-7807 info@omega.com.mx

Servicing Europe:

Benelux: Postbus 8034, 1180 LA Amstelveen, The Netherlands
Tel: +31 (0)20 3472121 FAX: +31 (0)20 6434643
Toll Free in Benelux: 0800 0993344
e-mail: sales@omegaeng.nl

Czech Republic: Frystaska 184, 733 01 Karviná, Czech Republic
Tel: +420 (0)59 6311899 FAX: +420 (0)59 6311114
Toll Free: 0800-1-66342 e-mail: info@omegashop.cz

France: 11, rue Jacques Cartier, 78280 Guyancourt, France
Tel: +33 (0)1 61 37 2900 FAX: +33 (0)1 30 57 5427
Toll Free in France: 0800 466 342
e-mail: sales@omega.fr

Germany/Austria: Daimlerstrasse 26, D-75392 Deckenpfronn, Germany
Tel: +49 (0)7056 9398-0 FAX: +49 (0)7056 9398-29
Toll Free in Germany: 0800 639 7678
e-mail: info@omega.de

United Kingdom: One Omega Drive, River Bend Technology Centre
Northbank, Irlam, Manchester
M44 5BD United Kingdom
ISO 9002 Certified Tel: +44 (0)161 777 6611 FAX: +44 (0)161 777 6622
Toll Free in United Kingdom: 0800-488-488
e-mail: sales@omega.co.uk

It is the policy of OMEGA Engineering, Inc. 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 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, human applications.

INTRODUCTION

This instrument is a 5 digit, compact-sized portable digital thermometer designed to use external K-type and J type thermocouples as temperature sensor. Temperature indication follows Reference Temperature/Voltage Tables (N.I.S.T. Monograph 175 Revised to ITS-90) for K-type and J-type thermocouples. Two K-type thermocouple are supplied with the thermometer.

SAFETY INFORMATION

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

WARNING

To avoid electrical shock, do not use this instrument when working voltages at the measurement surface over 24V AC or DC.

WARNING

To avoid damage or burns, do not make temperature measurement in microwave ovens.

CAUTION

Repeated sharp flexing can break the thermocouple leads. To prolong lead life, avoid sharp bends in the leads, especially near the connector.

FEDERAL COMMUNICATIONS COMMISSION

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection. This equipment generates, uses and can radiated radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Shielded interface cables must be used in order to comply with emission limits.

Changes or modifications not expressly approved by

the party responsible for compliance could void user's authority to operate the equipment.

WIRELESS NOTE

Wireless receiver must keep a distance at least 40cm from the meter and meter to meter must keep a distance at least 30cm.

SPECIFICATIONS

ELECTRICAL

Temperature Scale: Celsius or Fahrenheit user-select

Measurement Range:
J-TYPE -200°C to 1050°C, (-328°F to 1922°F)
K-TYPE -200°C to 1370°C, (-328°F to 2498°F)

Resolution: 0.1°C or 0.2°F

Accuracy: Accuracy is specified for operating temperatures over the range of 18°C to 28°C (64°F to 82°F), year, not including thermocouple error.
±(0.05% rdg + 0.3°C) -50°C to 1370°C
±(0.05% rdg + 0.7°C) -50°C to -200°C
±(0.05% rdg + 0.6°F) -58°F to 2498°F
±(0.05% rdg + 1.4°F) -58°F to -328°F

Temperature Coefficient:
0.1 times the applicable accuracy specification per from 0°C to 18°C and 28°C to 50°C (32°F to 64°F to 82°F to 122°F).

Input Protection:
24V dc or 24V ac rms maximum input voltage on combination of input pins.

Maximum Differential Common Mode Voltage (Maximum Voltage between T1 and T2 during measurement): 1volt.

Reading Rate: 1 time per second.

Wireless Features:
Frequency range: 904-927.83MHz
Low current consumption less than 5 to 20mA
Viewable distance 25M.

ENVIRONMENTAL

Ambient Operating Ranges:
0°C to 50°C (32°F to 122°F) <80% R.H.

Storage Temperature:
-20°C to 60°C (-4°F to 140°F) <70% R.H.

GENERAL

Display: 5 digit liquid crystal display (LCD).

Overload: "----." or "OL" is display.

Battery: 1.5V x 4 PCS (SIZE AAA) UM-4 R03.

Battery Life: 190 hours typical with carbon zinc battery.

Auto power off: 30 minutes, press power key to resume operation.

Dimensions: 160mm(H) x 83mm(W) x 38mm(D).

Weight: Approx. 265g including batteries.

Supplied Thermocouples (2 per input):
1 meter (40") type K insulated beaded wire thermocouple. Maximum insulation temperature is 482°C (900°F). Thermocouple accuracy is ±1.1°C or 0.4% of reading (whichever is greater) from 0°C to 1250°C.

OPERATING INSTRUCTIONS

1. “⏻” Power Switch

The ⏻ key turns the thermometer on or off. In the SET mode the unit cannot be powered off. Exit SET mode to power off.

APO function mode

Press ⏻ power key for more than 6 seconds to disable the auto-power function. The display will show “APO OFF”.

2. °C/°F Selecting the Temperature Scale

Readings are displayed in either degrees Celsius(°C) or degrees Fahrenheit(°F). When the thermometer is turned on, it is set to the temperature scale that was in use when the thermometer was last turned off. To change the temperature scale, press the °C/°F key.

3. ^{*/28}HOLD Button (only Main display)

Press this key to enter the Data Hold mode, the “HOLD” annunciator is displayed. When HOLD mode is selected, the thermometer holds the present readings and stops all further measurements. Press the ^{*/28}HOLD key again to cancel HOLD mode and resume measurement. In the MIN/MAX recording mode, press ^{*/28}HOLD key to stop the recording. Press ^{*/28}HOLD key again to resume recording. (Previously recorded readings are not erased).

Backlight function mode

Press the ^{*/28} button for more than two seconds to turn on the backlight Press the button again for more than two seconds to turn off the backlight. The backlight will switch-off automatically after 30 seconds.

4. T1 T2/T1-T2 Main display Input Selection

The input selection indicates which input is selected for main display; T1 thermocouple, T2 thermocouple or the difference between the two thermocouples (T1-T2), when the thermometer is turned on, it is set to T1.

5. K/J T1 Input Thermocouple Type Select (only Main display)

The K/J key selects the T1 thermocouple type, when the main display is showing T1. When the thermometer is turned on, it is set to the type selected when the thermometer was last turned off.

6. MIN MAX with Time record mode (only Main display)

Press MIN MAX key to enter the MIN MAX Recording mode, (displays the Maximum reading with time, Minimum reading with time and Average reading stored in record mode). In the this mode the automatic power-off feature is disabled and ⏻ key, °C/°F key, REL key, SET key, Hi/Lo Limits key and main display T1 T2 T1-T2 key, K/J key are disabled. The beeper emits a tone when a new minimum or maximum value is recorded. Push MIN MAX key to cycle through the MAX, MIN and AVG readings. If an overload is recorded, the averaging function is stopped. In this mode, press the HOLD key to stop the recording of readings, all values are held, press again to restart recording.

To prevent accidental loss of MIN, MAX and AVG data, this mode can only be cancelled by pressing and holding the MIN MAX key for 2 seconds. All recorded readings are erased.

7. REL Relative mode (only Main display)

Press the REL key to enter the Relative mode, zero the display, and store the displayed Reading as a reference value. REL is shown on the display. Press REL key again

to exit the relative mode. The relative reference value can also be entered by the user. (See “SET mode” later in this manual.) When the desired Relative value has been entered, press REL key to enter the Relative mode and then press SET key use the entered Relative value as a reference value. Press REL key again to exit the relative mode. In the Relative mode, the value (can not >±3000.0 counts) shown on the LCD is always the difference between the stored reference and the present reading.

8. Sec. Minu. Selecting the Time scale

Press this key to display the elapsed time on the third display in either hours and minutes or minutes and seconds. When the thermometer is turned on, it is set to seconds. To change the time scale, press sec. Minus. key. Maximum elapsed time reading is 100 hours. If 100 hours is exceeded, the elapsed time resets to zero.

9. SET mode (Relative value set, Time set and Hi/Lo Limits value set)

9.1 Press the SET key to enter Relative value SET mode (Press ENTER key to skip setting relative value). == == is displayed on the main display. The Relative value is entered via overlay numbers, press overlay ENTER key to store the relative value, and advance to elapsed time set mode.

9.2 Elapsed Time set mode, (Press ENTER key to skip Elapsed Time set mode) == == : == is displayed in second and third display. Time (hours, minutes, seconds) value is entered via overlay numbers, press overlay ENTER key to store Time value. Elapsed Time starts from set time value.

9.3 Hi Limit value set mode, (H) is displayed (Press ENTER key to skip Hi Limit value set mode), == == is displayed in main display, Hi Limit value is entered via overlay numbers, then press ENTER key to store the Hi Limit value. == == is displayed in main display, Lo Limit value is entered via overlay numbers, then press overlay ENTER key to store the Lo Limit value and exit SET mode.

9.4 When the thermometer is turned on it uses the Relative value and Hi/Lo Limits values that were entered when thermometer was last in use.

10. T1/T2 T1-T2 second display Input Selection

The input selection indicates which input is selected for second display; T1 thermocouple, T2 thermocouple or the difference between the two thermocouples (T1-T2). When the thermometer is turned on, it is set to T2 input. To select a different type of thermocouple use the K/J button.

11. K/J T2 Input thermocouple type select (second display)

The K/J button for T2 input selects K-type or J-type thermocouple as input, when the second display has T2 shown. When the thermometer is turned on, it is set to the type selected when the thermometer was last turned off.

12. Hi/Lo Limits mode (only Main display)

Press Hi/Lo Limits key to enter the Hi/Lo Limits comparative mode. (H) is displayed. When the input temperature value exceeds the Hi or Lo Limit value, the beeper emits a continuous or pulsed tone. Press Hi/Lo Limits key again to exit the Hi/Lo Limits mode.

13. WIRELESS MODE:

Press the (W) button for more than two seconds to start wireless function. Press the (W) button again for another two seconds to stop wireless function. The wireless mode will shut down if there is no wireless signal for two minutes.

To SET CH/ID to 00,00, press the Hi/Lo Limits button and ⏻ power button for more than 6 seconds with the meter powered down. The meter will set channel and ID to 00,00 status. The second display will show 00, which means that the channel and ID has been set to 00.

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.

OMEGA is a registered trademark of OMEGA ENGINEERING, INC.


© Copyright 2007 OMEGA ENGINEERING, INC. All rights reserved. This document may not be copied, photocopied, reproduced, translated, or reduced to any electronic medium or machine-readable form, in whole or in part, without the prior written consent of OMEGA ENGINEERING, INC.

OPERATOR MAINTENANCE

WARNING

To avoid possible electrical shock, disconnect the thermocouple connectors from the thermometer before removing the cover.

Battery Replacement

1. Power is supplied by 4pcs 1.5V (AAA SIZE) UM-4 R03.
2. The “” appears on the LCD display when replacement is needed. To replace battery remove screw back of meter and lift off the battery cover.
3. Remove the battery from battery contacts and replace
4. When not in use for long periods remove battery.
5. Do not store in locations with high temperatures, high humidity.

Cleaning

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

*Software Operation manual is on the Software disk.

Where Do I Find Everything I Need for Process Measurement and Control?

OMEGA...Of Course!

Shop online at omega.com

TEMPERATURE

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

PRESSURE, STRAIN AND FORCE

- Transducers & Strain Gages
- Load Cells & Pressure Gages
- Displacement Transducers
- Instrumentation & Accessories

FLOW/LEVEL

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

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

HEATERS

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

ENVIRONMENTAL MONITORING AND CONTROL

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