OM-CP-RHTEMP1000IS-A

Intrinsically Safe Rugged Humidity and Temperature Data Logger

INSTRUCTION SHEET

MQS5095/1216

Shop online at omega.com℠ e-mail: info@omega.com
For latest product manuals: www.omegamanual.info

Product Overview

The OM-CP-RHTEMP1000IS-A Intrinsically Safe humidity and temperature logger is a rugged, battery powered, stand alone device which can be used to automatically record humidity and temperature. This compact, portable, easy to use device is able to measure and record up to 16,350 humidity and temperature measurements per channel.

Intrinsically Safety Approval
The OM-CP-RHTEMP1000IS-A has been certified by FM Approvals as Intrinsically Safe (IS) for use in Class I, Division 1, groups A, B, C, D, and Non-incendive (NI) for use in Class I, Division 2, groups A, B, C, D Hazardous (Classified) Locations. The rating listed in the FM Approvals guide is as follows:

- OM-CP-RHTEMP1000IS-A. Temperature and Humidity Recorder.
  IS / I / 1 / ABCD T4A Ta=80 °C; NI / I / 2 / ABCD / T4A Ta=80 °C

These are the only safety ratings relevant to the use of this product. Use of this product in hazardous environments not specifically covered by this rating, is prohibited, unless the user takes the appropriate steps to ensure the safety of the product and assumes full responsibility for its safe use.

Installation Guide

Installing the Software
Insert the Omega Software Flash Drive in an open USB port. If the autorun does not appear, locate the drive on the computer and double click on **Autorun.exe**. Follow the instructions provided in the Installation Wizard.

Installing the Interface Cable
- OM-CP-IFC400 or OM-CP-IFC406
  Refer to the "Quick Start Guide" included in the package.

Device Operation
Connecting and Starting the Data Logger
- Once the software is installed and running, plug the interface cable into the docking station.
- Connect the USB end of the interface cable into an open USB port on the computer.
- Place the data logger into the docking station.
- The data logger will automatically appear under Connected Devices within the software.
- For most applications, select "**Custom Start**" from the menu bar and choose the desired start method, reading rate and other parameters appropriate for the data logging application and click "**Start**". *("**Quick Start**" applies the most recent custom start options, "**Batch Start**" is used for managing multiple loggers at once, "**Real Time Start**" stores the dataset as it records while connected to the logger.)*
- The status of the device will change to "**Running**", "**Waiting to Start**" or "**Waiting to Manual Start**", depending upon your start method.
- Disconnect the data logger from the docking station and place it in the environment to measure.

Note: The device will stop recording data when the end of memory is reached or the device is stopped, unless user selectable memory wrap is enabled. At this point the device cannot be restarted until it has been re-armed by the computer.

Stopping and Downloading Data from the Data Logger
- Connect the data logger via the OM-CP-IFC400 or OM-CP-IFC406 docking station.
- Highlight the data logger in the Connected Devices list. Click "**Stop**" on the menu bar.
- Once the data logger is stopped, with the logger highlighted, click "**Download**". You will be prompted to name your report.
- Downloading will offload and save all the recorded data to the PC.

Communication
To ensure desired operation of the OM-CP-RHTEMP1000IS-A, **please keep the surface clear of any foreign objects or substances**. The OM-CP-RHTEMP1000IS-A's data is downloaded through **external contact** with the OM-CP-IFC400 or OM-CP-IFC406 docking station. Covering the surface with foreign objects **(i.e. Calibration Labels)** can prevent the communication and/or downloading process.

Troubleshooting Tips

Why is the data logger not appearing in the software?

If the OM-CP-RHTEMP1000IS-A doesn't appear in the Connected Devices panel, or an error message is received while using either, try the following:

- Check that the OM-CP-IFC400 is properly connected. For more information, see Troubleshooting Interface Cable problems (below).
- Ensure that the battery is not discharged. For best voltage accuracy, use a voltage meter connected to the battery of the device. If possible, try switching the battery with a new OM-CP-BAT102.
- Ensure that no other Omega software is running in the background.
- Ensure that **Omega Software** is being used.
- Ensure that the **Connected Devices** panel is large enough to display devices. This can be verified by positioning the cursor on the edge of the Connected Devices panel until the resize cursor appears, then dragging the edge of the panel to resize it. The screen layout may also be reset in the options menu by selecting **File**, **Options**, and scrolling to the bottom.

Troubleshooting Interface Cable problems

Check that the software properly recognizes the connected OM-CP-IFC400 interface cable.

If the data logger is not appearing in the **Connected Devices** list, it may be that the OM-CP-IFC400 is not properly connected.

1. In the software, click the **File** button, then click **Options**.
2. In the **Options** window, click **Communications**.
3. The **Detected Interfaces** box will list all of the available communication interfaces. If the OM-CP-IFC400 is listed here, then the software has correctly recognized and is ready to use it.

Check that Windows recognizes the connected OM-CP-IFC400 interface cable.

If the software does not recognize the OM-CP-IFC400, there may be a problem with Windows or the USB drivers.

1. In Windows, click **Start**, right-click **Computer** and choose **Properties** or press **Windows+Break** as a keyboard shortcut.
2. Click **Device Manager** in the left hand column.
3. Double click **Universal Serial Bus Controllers**.
4. Look for an entry for **Data logger Interface**.
5. If the entry is present, and there are no warning messages or icons, then windows has correctly recognized the connected OM-CP-IFC400.
6. If the entry is not present, or has an exclamation point icon next to it, the USB drivers may need to be installed. These are available on the software flash drive included with the OM-CP-IFC400.

Ensure that the USB end of the OM-CP-IFC400 is securely connected to the computer.

1. Locate the USB-A plug of the OM-CP-IFC400.
2. If the interface cable is connected to the PC, unplug it. Wait ten seconds.
3. Reconnect the cable to the PC.
4. Check to make sure that the red LED is lit, indicating a successful connection.

Product Maintenance

Battery Replacement

Materials: Replacement Battery (OM-CP-BAT102)

- Unscrew the bottom of the logger and remove the battery.
- Place the new battery into the logger. Note the polarity of the battery.
- Screw the cover back onto the logger.

O-Rings

O-Ring maintenance is a key factor when properly caring for the OM-CP-RHTEMP1000IS-A. The O-Rings ensure a tight seal and prevent liquid from entering the inside of the device.

Recalibration

The OM-CP-RHTEMP1000IS-A standard calibration is one temperature point at 25°C and two humidity points at 25%RH and 75%RH.

Recalibration is recommended annually for any Omega data logger; a reminder is automatically displayed in the software when the device is due.

Still need help? For more troubleshooting tips and information, refer to the built in help section visit us online at www.omega.com or contact us for support at 1 (800) 872-9436.

OM-CP-RHTEMP1000IS-A General Specifications

Description	OM-CP-RHTEMP1000IS-A
Temperature Sensor	Resistance Temperature Detector (RTD)
Temperature Range	-40°C to +80°C (-40°F to +176°F)
Temperature Resolution	0.01°C
Calibrated Accuracy	±0.5°C (0°C to 55°C)
Humidity Sensor	Capacitive Polymer
Humidity Range	0%RH to 100%RH (non-condensing)
Humidity Resolution	0.1%RH
Calibrated Accuracy	±3%RH maximum
Memory	16,350 readings per channel
Memory Wrap	Yes
Reading Rate	1 reading every second up to 1 reading every 24 hours
Time Accuracy	±1 minute/month at 25°C
Data Format	Date and time stamped °C, °F, K, °R; %RH, mg/mL, Dew Point
Required Interface Package	OM-CP-IFC400 or OM-CP-IFC406
Baud Rate	125,000 baud
Typical Battery Life	2 years typical at 25°C (15 minute reading rate)
Operating System Compatibility	Windows XP SP3/Vista/Windows 7/Windows 8
Operating Environment	-40°C to +80°C (-40°F to +176°F), 0%RH to 100%RH (non-condensing)
Material	316 Stainless Steel/PEEK
Dimensions	1.7” x 0.97” x 0.97” (42mm x 24.6mm x 24.6mm)
Weight	2.3oz (65g)
Approvals	CE; Intrinsically Safe for Class I, Div 1, groups ABCD; Non-incendive for Class I, Division 2, groups ABCD Hazardous (Classified) Locations

Battery Warning

WARNING: Fire, explosion and severe burn hazard. Do not recharge, disassemble, heat above 100°C (212°F), incinerate, crush, or expose contents to water. Failure to use a OM-CP-BAT102 (Tadiran TL-2150) battery will void the Intrinsically Safe/Non-Incendive ratings.

Compliance Information

• "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."

• "To satisfy FCC RF Exposure requirements for mobile and base station transmission devices, a separation distance of 20cm or more should be maintained between the antenna of this device and persons during operation. To ensure compliance, operation at closer than this distance is not recommended. The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter."

• "This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement."

• "Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante."

omega.com info@omega.com

Servicing North America:

U.S.A. Headquarters: Omega Engineering, Inc.
Toll-Free: 1-800-826-6342 (USA & Canada only)
Customer Service: 1-800-622-2378 (USA & Canada only)
Engineering Service: 1-800-872-9436 (USA & Canada only)
Tel: (203) 359-1660 Fax: (203) 359-7700
e-mail: info@omega.com

For Other Locations Visit omega.com/worldwide

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.