



OM-CP-PRTEMP140

High Temperature and Pressure Data Logger

INSTRUCTION SHEET

MQS5093/1216

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NPT Top

Flush Top

Product Overview

The OM-CP-PRTEMP140 is a pressure and high temperature data logger all in one, created specifically for use in autoclave validation, mapping studies and pressurized processes. Featuring the familiar body style of the 140 series of data loggers and made of rugged stainless steel, this dual purpose device is less than 2.5 inches in length, allowing it to fit discretely inside small spaces. The OM-CP-PRTEMP140 is able to measure and record temperatures from -20°C to +140°C, and pressure from 0 bar to 5 bar, accommodating a wide range of applications even in the harshest conditions.

Submergibility

The OM-CP-PRTEMP140 is fully submersible and is rated IP68.

O-Rings

O-ring maintenance is a key factor when properly caring for the OM-CP-PRTEMP140. The O-rings ensure a tight seal and prevent liquid from entering the inside of the device.

Note: This product is rated for use up to 140 °C. Please heed the battery warning. The product will explode if exposed to temperatures above 140 °C.

Troubleshooting Tips

Why is the data logger not appearing in the software?

If the OM-CP-PRTEMP140 doesn't appear in the Connected Devices panel, or an error message is received while using the OM-CP-PRTEMP140, 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-BAT110.
- 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.

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.

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.

Installation Guide

Installing the Interface cable

- OM-CP-IFC400 or OM-CP-IFC406

Refer to the "Quick Start Guide" included in the package.

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.

Device Operation

Connecting and Starting the data logger

1. Once the software is installed and running, plug the interface cable into the docking station.
2. Connect the USB end of the interface cable into an open USB port on the computer. Place the data logger into the docking station.
3. The data logger will automatically appear under **Connected Devices** within the software.
4. 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.)
5. The status of the device will change to "**Running**", "**Waiting to Start**" or "**Waiting to Manual Start**", depending upon your start method.
6. 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. At this point the device cannot be restarted until it has been re-armed by the computer.

Downloading data from a data logger

1. Connect the logger to the docking station.
2. Highlight the data logger in the **Connected Devices** list. Click "**Stop**" on the menu bar.
3. Once the data logger is stopped, with the logger highlighted, click "**Download**". You will be prompted to name your report.
4. Downloading will offload and save all the recorded data to the PC.

Product Maintenance

Battery Replacement

Materials: OM-CP-BAT110

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

Recalibration

The OM-CP-PRTEMP140 standard calibration points are +30°C and +140°C for the temperature channel and 1 bar, 2.5 bar and 5 bar for the pressure channel.

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

OM-CP-PRTEMP140 General Specifications

Pressure Sensor	Strain Gauge
Pressure Range	0 bar to 5 bar
Pressure Resolution	0.0001 bar
Calibrated Accuracy	±0.03 bar (+20°C to +140°C)
Temperature Sensor	Resistance Temperature Detector (RTD)
Temperature Range	-20°C to +140°C (-4°F to +284°F)
Temperature Resolution	0.01°C
Calibrated Accuracy	±0.1°C (+20°C to +140°C)
Memory	32,767 readings
Reading Rate	1 reading every second up to 1 reading every 24 hours
Battery Life	2 years typical (1 minute reading rate)
Required Interface Package	OM-CP-IFC400 or OM-CP-IFC406 USB docking station required
Operating System Compatibility	XP SP3/Vista/Windows 7/Windows 8/10
Omega Software Compatibility	Standard software version 4.2.3.0 or later Secure software version 4.2.2.0 or later
Operating Environment	-20°C to +140°C (-4°F to +284°F), 0%RH to 100%RH, 0.002 PSIA to 100 PSIA
Material	316 Stainless Steel
Dimensions (Body)	Flush Top: 1.98" x 0.97" x 0.97" (50.2mm x 24.6mm x 24.6mm) NPT Top: 2.3" x 0.97" x 0.97" (58.2mm x 24.6mm x 24.6mm)
Weight	Flush Top: 90g (3.2oz) NPT Top: 100g (3.5oz)
IP Rating	IP68
Approvals	CE

Battery Warning

WARNING: FIRE, EXPLOSION, AND SEVERE BURN HAZARD. DO NOT SHORT CIRCUIT, CHARGE, FORCE OVER DISCHARGE, CRUSH, PENETRATE OR INCINERATE. BATTERY MAY LEAK OR EXPLODE IF HEATED ABOVE 150°C (302°F).

*Specifications subject to change.
See Omega's terms and conditions at www.omega.com*



omega.com info@omega.com

Servicing North America:

U.S.A. Headquarters:

Omega Engineering, Inc.
Toll-Free: 1-800-826-6342 (USA & Canada only)
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The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

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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.

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