

**5 YEAR**  
WARRANTY



# **Ω OMEGA<sup>®</sup>** **User's Guide**



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**OM-CP-PRTEMP1000IS**  
**Intrinsically Safe Pressure and**  
**Temperature Data Logger**

## Product Notes

### Getting Started

To access the COM Port for the interface cable, unscrew the key-ring end cap. Screw the end cap back onto the data logger until the o-ring cannot be seen, before deploying the data logger.

### Intrinsic Safety Approval

The OM-CP-PRTemp1000IS 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 Factory Mutual approval guide is as follows: OM-CP-PRTemp1000IS. Pressure & Temperature Recorder. IS / I / 1 / ABCD T4A Ta=80 °C; NI / I / 2 / ABCD / T4A Ta=80 °C

Special Condition of Use:

1. Use only with Tadiran Battery P/N TL-2150: 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.

### Pressure Sensor

To use the pressure sensor for gauge measurements, screw the ¼" male NPT fitting into the pipe to be measured with a 9/16" wrench. The NPT fitting can be used for absolute and submersible applications, but it is preferable to use the submersible fitting.

### O-Rings

O-ring maintenance is a key factor when properly caring for the OM-CP-PRTEMP1000IS. The O-rings ensure a tight seal and prevent liquid from entering the inside of the device.

## Installation Guide

### Installing the Interface cable

- OM-CP-IFC200

Insert the device into a USB port. The drivers will install automatically.

-OM-CP-IFC110

Plug the serial cable into the port and verify it is secure.

### 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 data logger.
2. Connect the USB end of the interface cable into an open USB port on the computer.
3. The device will appear in the **Connected Devices** list, highlight the desired data logger.
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.)

# Quick Start Manual

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

# Product Maintenance

## Battery Replacement

### Materials:

Snap ring Pliers, 9/16” (15 mm)

Replacement Battery (OM-CP-BAT102)

1. Remove the end cap of the data logger, the retaining clip using pliers and the white Teflon washer.
2. VERY CAREFULLY use a 9/16” (15 mm) wrench to remove the NPT end of the data logger.
3. Once the NPT end is completely unscrewed, gently slide the circuit board out of the enclosure. Be careful not to break or sharply bend the cable between the level sensor and the electronics.
4. The battery is the purple cylinder on the circuit board, gently pull out the battery.
5. Insert the new battery one lead at a time, pressing firmly with your index finger to make sure the lead is secure in its terminal. The battery should be flat against the circuit board, and the positive lead should be closest to the communications jack.
6. Insert the electronics back into the tube. Make sure the cable is not twisted, sharply bent, or kinked. From the connection to the circuit board, it should run up towards the battery, then down the sensor.
7. VERY CAREFULLY screw the NPT end cap back onto the tube, making sure the electronics rotate with the end cap.
8. Insert the Teflon washer and retaining clip to secure the electronics and replace the end cap.

## Recalibration

The OM-CP-PRTEMP1000IS standard temperature calibration is one point at 25 °C. The pressure calibration is dependant on the range.

Range (PSIA)	0-30	0-100	0-300	0-500	0-1000	0-5000
Range (PSIG)	0-30	0-100	0-300	0-500	-	-
Calibration Point (PSIA)	~14.7 and 27-30	~14.7 and 90-100	~14.7 and 270-300	~14.7 and 270-300	~14.7 and 450-500	~14.7 and 450-500

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

## OM-CP-PRTEMP1000IS General Specifications

Temperature Sensor	Internal semiconductor
Temperature Range	-40 °C to +80 °C (-40 °F to +176 °F)
Temperature Resolution	0.1 °C (0.18 °F)
Calibrated Accuracy	+0.5 °C (+0.9 °F)
Pressure Range	*See table for details
Pressure Resolution	
Pressure Accuracy	
Memory	16,383/channel
Reading Rate	1 reading every 2 seconds up to 1 reading every 12 hours
Units	PSIA(G), inches, altitude, Torr, mmHg, Pascals
Required Interface Package	OM-CP-IFC110 or OM-CP-IFC200
Baud Rate	2,400
Typical Battery Life	1 year
Operating Environment	-40 °C to +80 °C (-40 °F to +176 °F), 0 %RH to 100 %RH
Material	303 Stainless Steel
Dimensions	6.4 in x 1.25 in dia. (163 mm x 32 mm dia.)
Weight	12 oz (340 g)
Approvals	CE, IS Rated

\*OM-CP-PRTEMP1000IS Range, Accuracy and Resolution

Range (PSI)	0-30	0-100	0-300	0-500	0-1000	0-5000
Accuracy	2 % FSR, 0.25 % @ 25 °C typical					
Resolution (PSI)	0.002	0.005	0.02	0.05	0.05	0.2

### **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.  
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**WARNING:** These products are not designed for use in, and should not be used for, human applications.



### WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **61 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **five (5) 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.

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### 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.

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