MADGETECH Pressure and Temperature Data Logger PR1000 User Guide

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Product Overview

The PR1000 is a pressure and temperature data logger used to accurately monitor and record pressure and temperature at user programmable reading intervals. The rugged stainless steel design allows for the device to be placed in harsh environments, which makes it well suited for use with air conditioning systems, chilled water, hot water, air, gas, oil and steam pressure systems. The PR1000 also monitors and records transient pressure through software configuration. Once the user defined threshold is met, the PR1000 will record at up to 128Hz for a user defined time period.

Water Resistance

The PR1000 is fully submersible and is rated IP68. It can be placed in environments with up to 230 ft (70 m) of water.

Installation Guide

Installing the Software
The Software can be downloaded from the MadgeTech website at madgetech.com. Follow the instructions provided in the Installation Wizard.

Installing the Docking Station
IFC400 or IFC406 (sold separately) — Connect the device into a USB port with the interface cable and install the drivers.

Ordering Information

- 902244-00 — PR1000-1000-PSIA
- 902241-00 — PR1000-100-PSIA
- 902247-00 — PR1000-100-PSIG
- 902242-00 — PR1000-300-PSIA
- 902248-00 — PR1000-300-PSIG
- 902240-00 — PR1000-30-PSIA
- 902246-00 — PR1000-30-PSIG
- 902245-00 — PR1000-5000-PSIA
- 902243-00 — PR1000-500-PSIA
- 902249-00 — PR1000-500-PSIG
- 902274-00 — PR1000-1000-PSIA-KR

- 902271-00 — PR1000-100-PSIA-KR
- 902277-00 — PR1000-100-PSIG-KR
- 902272-00 — PR1000-300-PSIA-KR
- 902278-00 — PR1000-300-PSIG-KR
- 902270-00 — PR1000-30-PSIA-KR
- 902276-00 — PR1000-30-PSIG-KR
- 902275-00 — PR1000-5000-PSIA-KR
- 902273-00 — PR1000-500-PSIA-KR
- 902279-00 — PR1000-500-PSIG-KR
- 900319-00 — IFC400
- 900325-00 — IFC406
- 901745-00 — TL-2150/S Replacement Battery

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.
3. Place the data logger into the docking station.
4. The data logger will automatically appear under Connected Devices within the software.
5. For most applications, select Custom Start from the menu bar and choose the desired start method, reading rate and other parameters appropriate for thedata 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.)
6. The status of the device will change to Running or Waiting to Start, depending upon your start method.
7. 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.
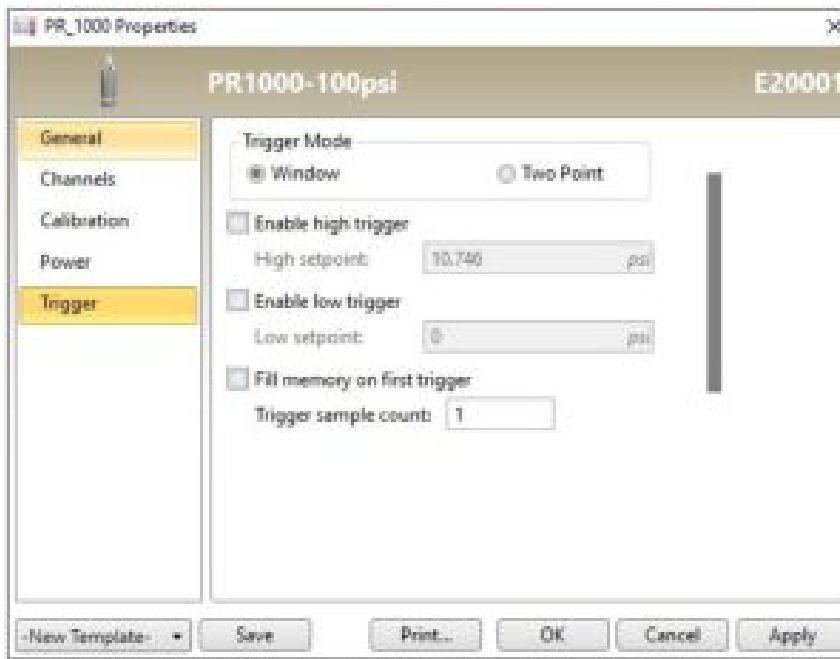
Device Operation (cont'd)

Downloading Data from a Data Logger

1. Place the logger into 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.
4. Downloading will offload and save all the recorded data to the PC.

Trigger Settings (Transient Mode)

The PR1000 samples up to 128 Hz (7.8 ms) and begins recording after exceeding user defined setpoints. After triggering, the device will record a chosen number of samples (Window Mode) or until reaching the stop setpoint (Two Point Mode). The device can take as many as 380,928 readings with both channels enabled and 419,020 pressure only readings. The data logger will record up to 50 samples of "pre-trigger" data.

1. In the Connected Devices panel, click the device desired.
2. On the Device Tab, in the Information Group, click Properties. Or, right-click the device and select Properties in the context menu.
3. Select Trigger in the Properties window.
4. Trigger formats are available in Window or Two Point Mode. Window mode allows a high and/or low trigger set point, and a trigger sample count or "window" of time recorded when set points are exceeded to be defined. Two point allows for different Start and Stop setpoints to be defined for both the high and low triggers.

Refer to the Trigger Settings – MadgeTech 4 Data Logger Software video on madgetech.com for instructions on how to configure Trigger Settings.

Device Maintenance

O-Rings

O-ring maintenance is a key factor when properly caring for the PR1000. The O-rings ensure a tight seal and prevent liquid from entering the inside of the device. Please refer to the application note O-Rings 101: Protecting Your Data, found at **madgetech.com**, for information on how to prevent O-ring failure.

Battery Replacement

Materials: TL-2150/S Battery

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. It is important to insert the battery with positive polarity pointing upward towards the pressure sensor.Failure to do so could result in product inoperability or potential explosion if exposed to high temperatures.
3. Screw the cover back onto the logger.

Recalibration

MadgeTech recommends annual recalibration. To send devices back for calibration, visit **madgetech.com**.

NEED HELP?

Product Support & Troubleshooting:

- Visit our Resources online at **madgetech.com/resources**.
- Contact our friendly Customer Support Team at (603) 456-2011 or **support@madgetech.com**.

MadgeTech 4 Software Support:

- Refer to the built-in help section of the MadgeTech 4 Software.
- Download the MadgeTech 4 Software Manual at **madgetech.com**.
- Contact our friendly Customer Support Team at (603) 456-2011 or **support@madgetech.com**.

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Documents / Resources

MADGETECH Pressure and Temperature Data Logger PR1000 [pdf] User Guide
MADGETECH, Pressure, and, Temperature, Data Logger, PR1000

References

- ▲ **MadgeTech Data Loggers | Solutions for Critical Applications**
- ▲ **Resources | MadgeTech**