MADGETECH
WE BUILD DATA LOGGERS

PRTemp1000

Description	PRTemp1000
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	
Pressure Resolution	*See Table for Details
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	IFC110 or 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

*PRTemp1000 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

PRTemp1000
Rugged Pressure and Temperature Data Logger

Battery Warning

WARNING: FIRE, EXPLOSION, AND SEVERE BURN HAZARD. DO NOT SHORT CIRCUIT, CHARGE, FORCE OVER DISCHARGE, DISASSEMBLE, CRUSH, PENETRATE OR INCINERATE. BATTERY MAY LEAK OR EXPLODE IF HEATED ABOVE 80 °C (176 °F).

Specifications subject to change.
See MadgeTech's terms and conditions at www.madgetech.com

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visit our website at www.madgetech.com.

Product Notes

Getting Started

To access the COM Port for the interface cable, unscrew the key-ring end cap.

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 in those cases it's preferable to use the submersible fitting.

With NPT fitting

With submersible fitting

Submergibility

The PRTemp1000 is fully submergible and is rated IP68. It can be placed in environments with up to 230 feet (70 m) of water.

O-Rings

O-ring maintenance is a key factor when properly caring for the PRTemp1000. 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 on the MadgeTech website, for information on how to prevent O-ring failure.

Installation Guide

Installing the Interface cable

- IFC200

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

- IFC110

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

Installing the software

The Software can be downloaded from the MadgeTech website at the following link: www.madgetech.com/software-download. Follow the instructions provided in the Installation Wizard.

Device Operation

Connecting and Starting the data logger

- Once the software is installed and running, plug the interface cable into the data logger.
- Connect the USB end of the interface cable into an open USB port on the computer.
- The device will appear in the Connected Devices list, highlight the desired data logger.
- 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 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

- 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.

Device Maintenance

Battery Replacement

Materials: Small Needle Nose Pliers and a Replacement Battery (TLH-5902)
- Carefully unscrew the sensor end cap and pull the electronics out.
- The battery is the purple cylinder on the circuit board.
- Gently pull out the old battery.
- Insert the new battery one lead at a time, using pliers to fully push the leads into the sockets. The battery should be flat against the circuit board, and the positive lead should be closest to the communications jack.
- Ensure the circuit board is inserted into the white plastic bushing. The sensor cable should not be twisted, or kinked. From the connection to the circuit board, it should run up towards the battery, then down to the sensor.
- Insert the electronics back into the tube and carefully screw the cap on.

Recalibration

The PRTemp1000 standard temperature calibration is one point at 25 °C. The pressure calibration is depend 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

Additional:
Custom calibration and verification point options available, please call for pricing.

Call for custom calibration options to accommodate specific application needs.
Prices and specifications subject to change. See MadgeTech's terms and conditions at www.madgetech.com
To send devices to MadgeTech for calibration, service or repair, please use the MadgeTech RMA Process by visiting www.madgetech.com, then under the services tab, select RMA Process.