PRTemp1000D

Description	PRTemp1000D		
Temperature Sensor	Semiconductor		
Temperature Range	-20 °C to +80 °C (-4 °F to +176 °F)		
Temperature Resolution	0.1 °C (0.18 °F)		
Calibrated Accuracy	+0.5 °C (over 0 °C to 50 °C)		
Pressure Sensor	Semiconductor strain gauge		
Pressure Range	0 to 30, 100, 300 and 500 PSID		
Maximum Line Pressure	1000 PSI		
Pressure Resolution	0.002, 0.005, 0.02, 0.05 PSID		
Pressure Accuracy	±0.25 %FSR, 0.1 % @ 25 °C typical		
Memory	16,383/channel		
Reading Rate	1 reading every 2 seconds up to 1 reading every 12 hours		
Units	PSIA(G), inches, feet, bar, Torr, mmHg, Pascals		
Required Interface Package	IFC200		
Baud Rate	2,400		
Typical Battery Life	1 year		
Operating Environment	-20 °C to +80 °C (-4 °F to +176 °F), 0 %RH to 100%RH		
Material	303 stainless steel		
Dimensions	Logger Body: 1.0 in OD x 6.7 in L (25 mm OD x 170 mm L)	Cable: 12 in (305 mm)	Transducers: 3.4 in x 3.0 in x 1.0 in (86 mm x 76 mm x 25 mm)
Weight	15.5 oz (440 g)		

PRTemp1000D
Differential Pressure and Temperature Data Logger

Battery Warning

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.
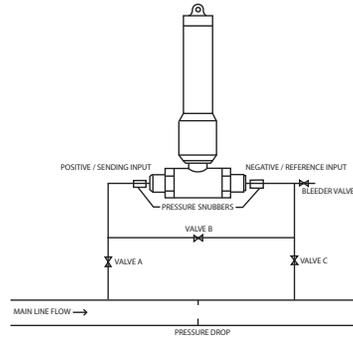
Product Notes

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

Submergibility
The PRTemp1000D is weather resistant and rated IP63.

Installation Instructions
Due to the potential for line pressure to exceed proof pressure, high line pressure must be applied simultaneously to each side of the sensor. To the right is a diagram of a recommended installation. Pressure snubbers are recommended to prevent damage from water hammers or other high intensity pressure events.

POSITIVE / SENDING INPUT   NEGATIVE / REFERENCE INPUT
PRESSURE SNUBBERS   BLEEDER VALVE
VALVE B
VALVE A   VALVE C
MAIN LINE FLOW →
PRESSURE DROP

Applying Line Pressure	Removing Line Pressure
- Install sensor with valves "A" and "C" closed - Open bypass valve "B" - Crack bleeder valve - Slowly open valve "A" to apply pressure - Close bleeder valve - Open valve "C" - Close bypass valve "B"	- Open bypass valve "B" - Close valve "C" - Close valve "A" - Crack bleeder valve - Allow pressure to equalize with ambient - Uninstall sensor

O-Rings
O-ring maintenance is a key factor when properly caring for the PRTemp1000D. 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.

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 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 PRTemp1000D standard calibration is performed at one temperature point at 25 °C, the pressure calibration is dependant upon the range.

Range (PSID)	0-30	0-100	0-300	0-500
Calibration Point (PSI)	0 and 27-30	0 and 90-100	0 and 270-300	0 and 450-500

Additional Services:
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.