

PRTrans1000

Description	PRTrans1000
Pressure Sensor	Semiconductor (strain gauge)
Pressure Range	*See Table Below
Calibrated Accuracy	
Pressure Resolution	
Memory	262,143 samples
Reading Rate	1 reading every 10 milliseconds to 1 reading every 1 second
Units	PSIA(G), inches, altitude, Torr, mmHg, bar, Pascals
Required Interface Package	IFC200
Baud Rate	115,200
Typical Battery Life	3 days @ 10 milliseconds/sample
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

*PRTrans1000 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)	0.02	0.1	0.2	0.5	1.0	5.0

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.

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PRTrans1000
Rugged Pressure Data Logger

Product Notes

1000 Series: Getting Started

To access the COM Port for the interface cable, unscrew the key-ring end cap. Ensure the end cap is screwed on tightly before deploying the data logger.

Pressure Sensor

To use the pressure sensor for gauge measurements, screw the ¼ in male

NPT fitting into the pipe to be measured with a 9/16 in wrench. The NPT fitting can be used for absolute and submersible applications, but in those cases it is preferable to use the submersible fitting.



Submergibility

The PRTrans1000 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 PRTrans1000. 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.

Trigger Settings

The PRTrans1000 records based off user configured trigger settings. Select Trigger Settings from the Device Menu: Start Device or Identify Device and Read Status. Trigger formats are available in Window or Two Point mode. Window allows for one range of pressure monitoring and two Point Mode allows for a high trigger and a low trigger. Refer to the PRTrans1000 and PRTrans1000IS Trigger Settings Video for instructions on how to configure Trigger Settings.

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

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

- Connect the logger to the interface cable.
- 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.

Note: 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 PRTrans1000 standard pressure calibration is dependent upon 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 450-500	~14.7 and 450-500	~14.7 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.