

# PR1000

## Pressure and Temperature Data Logger



The PR1000 is a pressure and temperature data logger used to accurately monitor and record 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 can also monitor and record transient pressure through software configuration of user defined trigger thresholds and time periods. The logger can be configured to record measurements at rates as fast as 128Hz or as slow as once every 24 hours. The non-volatile memory has a capacity of over 1 million readings.

The PR1000 uses a stainless steel pressure strain gauge to accurately measure the pressure. The 1/4 inch NPT pressure port featured on the device allows for compatibility with a variety of fittings and adapters. The internal temperature sensor provides ambient temperature measurements. The PR1000 is also fully submersible. There are many different pressure ranges available to fit most any application.

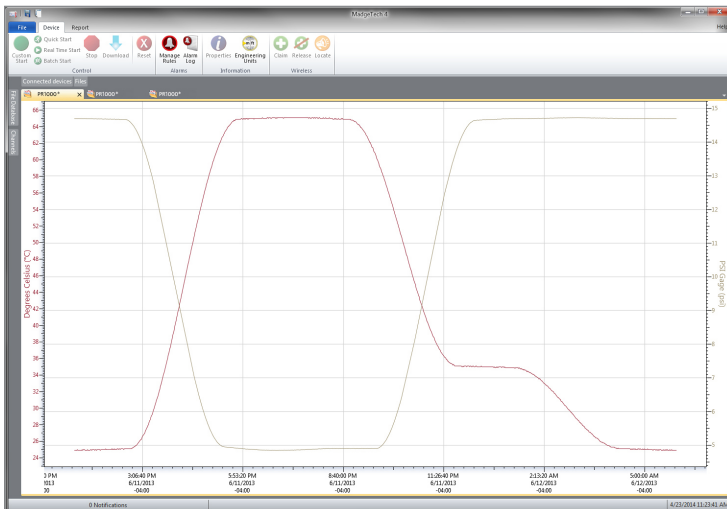
### Features

- Rugged
- Reusable
- Submersible
- Programmable start time
- Real-time operation
- User-friendly
- Low cost
- CE compliant

### Applications

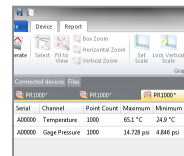
- Pneumatics
- Process control systems
- Gas compressors
- Natural gas production
- Lubrication systems
- Chemical processing
- Pulp and paper processing
- Medical instrumentation
- Environmental studies
- Waste water treatment
- HVAC
- Oil & gas industries

### MadgeTech 4 Software Features

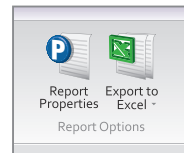


Graph View

- Multiple graph overlay
- Statistics
- Digital calibration
- Zoom in/ zoom out
- Lethality equations
- Mean Kinetic Temperature
- Full time zone support
- Data annotation
- Min./Max./Average lines
- Summary view



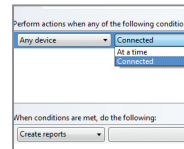
Statistics



Export to Excel

| Time       | Time Zone | Data     |
|------------|-----------|----------|
| 1:13:37 PM | -04:00    | -00.0000 |
| 1:14:37 PM | -04:00    | -00.0100 |
| 1:15:37 PM | -04:00    | -00.0200 |
| 1:16:37 PM | -04:00    | -00.0300 |
| 1:17:37 PM | -04:00    | -00.0400 |
| 1:18:37 PM | -04:00    | -00.0500 |
| 1:19:37 PM | -04:00    | -00.0600 |
| 1:20:37 PM | -04:00    | -00.0700 |
| 1:21:37 PM | -04:00    | -00.0800 |
| 1:22:37 PM | -04:00    | -00.0900 |
| 1:23:37 PM | -04:00    | -00.1000 |
| 1:24:37 PM | -04:00    | -00.1100 |
| 1:25:37 PM | -04:00    | -00.1200 |
| 1:26:37 PM | -04:00    | -00.1300 |
| 1:27:37 PM | -04:00    | -00.1400 |
| 1:28:37 PM | -04:00    | -00.1500 |

Tabular Data View



Automation

## SPECIFICATIONS

| TEMPERATURE            |                                                                                                                                                                               |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Temperature Sensor     | Semiconductor                                                                                                                                                                 |
| Temperature Range      | -40 °C to +80 °C (-40 °F to +176 °F)                                                                                                                                          |
| Temperature Resolution | 1.0 °C (1.8 °F)                                                                                                                                                               |
| Calibrated Accuracy    | ±2.0 °C (3.6 °F) at 0 °C to +50 °C (+32 °F to +122 °F)<br>±4.0 °C (7.2 °F) at -40 °C to -1 °C (-40 °F to +30 °F)<br>±4.0 °C (7.2 °F) at +51 °C to +85 °C (+124 °F to +185 °F) |

| PRESSURE               |                            |
|------------------------|----------------------------|
| Pressure Sensor        | Semiconductor strain gauge |
| Pressure Range         |                            |
| Pressure Resolution    | *See table below           |
| Calibrated Accuracy    |                            |
| Pressure Response Time | 0.1 ms (10 to 90 %FSR)     |
| Repeatability          | ±0.5 %FSR; ±0.2 % typical  |

| GENERAL             |                                                                                  |
|---------------------|----------------------------------------------------------------------------------|
| Start Modes         | Software programmable immediate start or delay start up to six months in advance |
| Real Time Recording | May be used with PC to monitor and record data in real time                      |
| Memory              | 1,396,736 readings                                                               |
| Wrap Around         | Yes                                                                              |

|                                |                                                                                         |
|--------------------------------|-----------------------------------------------------------------------------------------|
| Reading Rate                   | 1 reading every second up to 1 reading every 24 hours<br>Up to 128 Hz in transient mode |
| Calibration                    | Digital calibration through software                                                    |
| Calibration Date               | Automatically recorded within device                                                    |
| Battery Type                   | 3.6 V lithium battery included, user replaceable                                        |
| Battery Life                   | 1 year typical (1 minute reading rate at 25 °C)<br>10 days at 128 Hz in transient mode  |
| Data Format                    | Date and time stamped °C, °F, K, °R ; mbar, PSI, inHg, mmHg, atm, Torr, Pa, kPa, MPa, m |
| Time Accuracy                  | ±1 minute/month at 25 °C                                                                |
| Computer Interface             | IFC400 or IFC406 USB docking station required                                           |
| Operating System Compatibility | Windows XP SP3 or later                                                                 |
| Software Compatibility         | Standard Software version 4.2.21.1 or later                                             |
| Operating Environment          | -40 °C to +80 °C (-40 °F to +176 °F)<br>0 %RH to 100 %RH                                |
| Dimensions                     | 3.6 in x 0.97 in dia. (91.3 mm x 24.6 mm dia.)                                          |
| Weight                         | 5.5 oz (156 g)                                                                          |
| IP Rating                      | IP68                                                                                    |
| Material                       | 316 Stainless Steel/Radel                                                               |
| Approvals                      | CE                                                                                      |

**BATTERY 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).

|                  |                                |                 |                 |                 |             |             |
|------------------|--------------------------------|-----------------|-----------------|-----------------|-------------|-------------|
| *Range (PSI)     | 0-30 PSIA/PSIG                 | 0-100 PSIA/PSIG | 0-300 PSIA/PSIG | 0-500 PSIA/PSIG | 0-1000 PSIA | 0-5000 PSIA |
| Accuracy         | 2 %FSR, 0.25 % @ 25 °C typical |                 |                 |                 |             |             |
| Resolution (PSI) | 0.0005 PSIA/PSIG               | 0.002 PSIA/PSIG | 0.005 PSIA/PSIG | 0.01 PSIA/PSIG  | 0.02 PSIA   | 0.1 PSIA    |

## Ordering Information

|                 |              |                                                                        |
|-----------------|--------------|------------------------------------------------------------------------|
| PR1000-1000A    | PN 902244-00 | 0-1000 PSIA Pressure and Temperature Data Logger                       |
| PR1000-100A     | PN 902241-00 | 0-100 PSIA Pressure and Temperature Data Logger                        |
| PR1000-100G     | PN 902247-00 | 0-100 PSIG Pressure and Temperature Data Logger                        |
| PR1000-300A     | PN 902242-00 | 0-300 PSIA Pressure and Temperature Data Logger                        |
| PR1000-300G     | PN 902248-00 | 0-300 PSIG Pressure and Temperature Data Logger                        |
| PR1000-30A      | PN 902240-00 | 0-30 PSIA Pressure and Temperature Data Logger                         |
| PR1000-30G      | PN 902246-00 | 0-30 PSIG Pressure and Temperature Data Logger                         |
| PR1000-5000A    | PN 902245-00 | 0-5000 PSIA Pressure and Temperature Data Logger                       |
| PR1000-500A     | PN 902243-00 | 0-500 PSIA Pressure and Temperature Data Logger                        |
| PR1000-500G     | PN 902249-00 | 0-500 PSIG Pressure and Temperature Data Logger                        |
| PR1000-1000A-KR | PN 902274-00 | 0-1000 PSIA Pressure and Temperature Data Logger with key ring end cap |
| PR1000-100A-KR  | PN 902271-00 | 0-100 PSIA Pressure and Temperature Data Logger with key ring end cap  |
| PR1000-100G-KR  | PN 902277-00 | 0-100 PSIG Pressure and Temperature Data Logger with key ring end cap  |
| PR1000-300A-KR  | PN 902272-00 | 0-300 PSIA Pressure and Temperature Data Logger with key ring end cap  |
| PR1000-300G-KR  | PN 902278-00 | 0-300 PSIG Pressure and Temperature Data Logger with key ring end cap  |
| PR1000-30A-KR   | PN 902270-00 | 0-30 PSIA Pressure and Temperature Data Logger with key ring end cap   |
| PR1000-30G-KR   | PN 902276-00 | 0-30 PSIG Pressure and Temperature Data Logger with key ring end cap   |
| PR1000-5000A-KR | PN 902275-00 | 0-5000 PSIA Pressure and Temperature Data Logger with key ring end cap |
| PR1000-500A-KR  | PN 902273-00 | 0-500 PSIA Pressure and Temperature Data Logger with key ring end cap  |
| PR1000-500G-KR  | PN 902279-00 | 0-500 PSIG Pressure and Temperature Data Logger with key ring end cap  |
| IFC400          | PN 900319-00 | Docking station with USB cable                                         |
| IFC406          | PN 900325-00 | 6-Port multiplexer docking station with USB cable                      |
| TL2150/S        | PN 901745-00 | Replacement battery for the PR1000                                     |