DATASHEET

# PR1000IS-30G-KR

MadgeTech

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MADGETECH
WE BUILD DATA LOGGERS

# PR1000IS

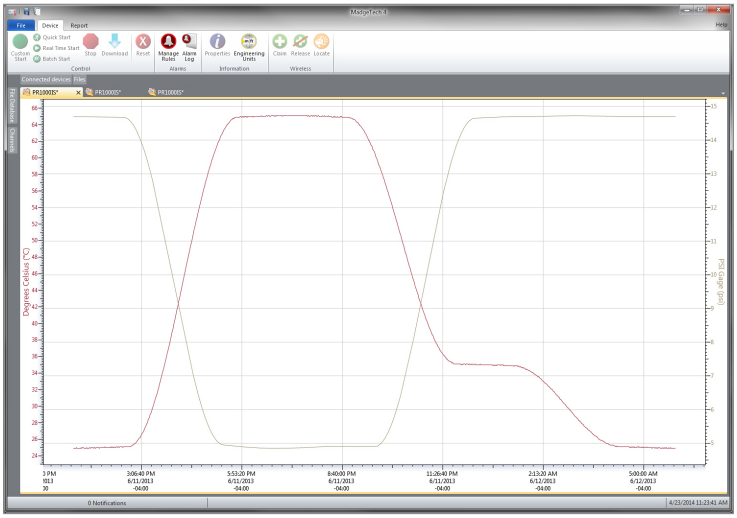
## Intrinsically Safe Pressure and Temperature Data Logger

The PR1000IS is an intrinsically safe pressure and temperature data logger used to accurately monitor and record at user programmable reading intervals. It carries hazardous location, intrinsically safe certification in accordance with the latest issue of FM3600, FM3610. 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.

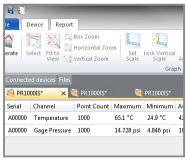
The PR1000IS can also monitor and record transient pressure through software configuration of user defined trigger thresholds and time periods. The logger can be configured to record measurements at rates as fast as 128Hz or as slow as once every 5 minutes. The non-volatile memory has a capacity of over 2 million readings.

The PR1000IS uses a stainless steel pressure strain gauge to accurately measure the pressure. The ¼ 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 PR1000IS is also fully submersible. There are many different pressure ranges available to fit most any application.

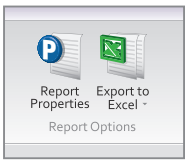
## MadgeTech 4 Software Features



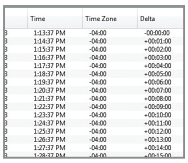
Graph View



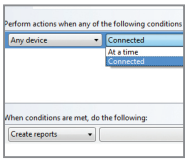
Statistics




Export to Excel



Tabular Data View



Automation

- 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

## Features

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

## Certified Intrinsically Safe

- Class I, II, III, Division 1, Groups A-G, -40 °C < $T_{amb}$ < +80 °C, T4A
- Class I, II, III, Division 2, Groups A-D, F, G, -40 °C < $T_{amb}$ < +80 °C, T4A
- Temperature Class: T4A
- CAN/CSA-C22.2 No. 60079-0:15
- CAN/CSA-C22.2 No. 60079-11:14

## 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

# SPECIFICATIONS

Specifications are subject to change without notice. Specific warranty remedy limitations apply. Call (603) 456-2011 or go to **madgetech.com** for details.

| 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 +80 °C (+124 °F to +176 °F) |

| PRESSURE | |
|---|---|
| **Pressure Sensor** | Semiconductor strain gauge |
| **Pressure Range** | *See table below |
| **Pressure Resolution** | |
| **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** | 2,794,837 readings |
| **Wrap Around** | Yes |
| **Trigger Mode Readings** | 762,228 |

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).

| | |
|---|---|
| **Reading Rate** | 1 reading every second up to 1 reading every 5 minutes<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 ; atm, bar, hPa, inHg, inH2O, kg/cm2, kPa, MPa, mH2O, mbar, mmHg, Pa, psi, Alt in ft, Alt in meters |
| **Time Accuracy** | ±1 minute/month at 25 °C |
| **Computer Interface** | IFC400 or IFC406 USB docking station required |
| **Operating System Compatibility** | Windows 7 or later |
| **Software Compatibility** | 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** | Not Rated |
| **Material** | 316 Stainless Steel/Radel |
| **Approvals** | CE<br>FM Class 3600, latest revision<br>FM Class 3610, latest revision<br>CAN/CSA-C22.2 No. 60079-0:15<br>CAN/CSA-C22.2 No. 60079-11:14 |

| ***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

| | | |
|---|---|---|
| **PR1000IS-1000A** | PN 902254-00 | 0-1000 PSIA Intrinsically Safe Pressure and Temperature Data Logger |
| **PR1000IS-100A** | PN 902251-00 | 0-100 PSIA Intrinsically Safe Pressure and Temperature Data Logger |
| **PR1000IS-100G** | PN 902257-00 | 0-100 PSIG Intrinsically Safe Pressure and Temperature Data Logger |
| **PR1000IS-300A** | PN 902252-00 | 0-300 PSIA Intrinsically Safe Pressure and Temperature Data Logger |
| **PR1000IS-300G** | PN 902258-00 | 0-300 PSIG Intrinsically Safe Pressure and Temperature Data Logger |
| **PR1000IS-30A** | PN 902250-00 | 0-30 PSIA Intrinsically Safe Pressure and Temperature Data Logger |
| **PR1000IS-30G** | PN 902256-00 | 0-30 PSIG Intrinsically Safe Pressure and Temperature Data Logger |
| **PR1000IS-5000A** | PN 902255-00 | 0-5000 PSIA Intrinsically Safe Pressure and Temperature Data Logger |
| **PR1000IS-500A** | PN 902253-00 | 0-500 PSIA Intrinsically Safe Pressure and Temperature Data Logger |
| **PR1000IS-500G** | PN 902259-00 | 0-500 PSIG Intrinsically Safe Pressure and Temperature Data Logger |
| **PR1000IS-1000A-KR** | PN 902284-00 | 0-1000 PSIA Intrinsically Safe Pressure and Temperature Data Logger with key ring end cap |
| **PR1000IS-100A-KR** | PN 902281-00 | 0-100 PSIA Intrinsically Safe Pressure and Temperature Data Logger with key ring end cap |
| **PR1000IS-100G-KR** | PN 902287-00 | 0-100 PSIG Intrinsically Safe Pressure and Temperature Data Logger with key ring end cap |
| **PR1000IS-300A-KR** | PN 902282-00 | 0-300 PSIA Intrinsically Safe Pressure and Temperature Data Logger with key ring end cap |
| **PR1000IS-300G-KR** | PN 902288-00 | 0-300 PSIG Intrinsically Safe Pressure and Temperature Data Logger with key ring end cap |
| **PR1000IS-30A-KR** | PN 902280-00 | 0-30 PSIA Intrinsically Safe Pressure and Temperature Data Logger with key ring end cap |
| **PR1000IS-30G-KR** | PN 902286-00 | 0-30 PSIG Intrinsically Safe Pressure and Temperature Data Logger with key ring end cap |
| **PR1000IS-5000A-KR** | PN 902285-00 | 0-5000 PSIA Intrinsically Safe Pressure and Temperature Data Logger with key ring end cap |
| **PR1000IS-500A-KR** | PN 902283-00 | 0-500 PSIA Intrinsically Safe Pressure and Temperature Data Logger with key ring end cap |
| **PR1000IS-500G-KR** | PN 902289-00 | 0-500 PSIG Intrinsically Safe 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 PR1000IS |

For Quantity Discounts call (603) 456-2011 or email **sales@madgetech.com**

AKRIBIS www.akribis.info contact@akribis.info