

# PR140

## High Temperature Pressure Data Logger



The PR140 is a pressure data logger designed for use in autoclave validation and mapping. This rugged device can withstand temperatures up to 140 °C and is completely submersible (IP68).

The PR140 is built with a precision stainless steel pressure gauge. The device has an accuracy of  $\pm 0.03$  bar ( $\pm 0.435$  PSI), which can be achieved over a wide temperature range, from +20 °C to +140 °C (68 °F to 284 °F). The PR140 can be programmed to take readings as often as once per second (1 Hz), and has non-volatile memory that can store up to 32,256 measurements.

The 1/8-27 NPT pressure port featured on the device allows for compatibility with a variety of fittings and adapters. This is ideal for calibration purposes, as well as connecting the data logger to measure process pressure systems.

The PR140 is easy to use. Simply place it in the IFC400 or IFC406 docking station (sold separately), connect to a computer, and the device can be started, stopped or downloaded using the MadgeTech software. Graphical, tabular and summary data is provided for analysis and can be viewed in PSIA, mmHg, bar, Torr and kPa. The data can also be automatically exported to Excel® for further calculations.

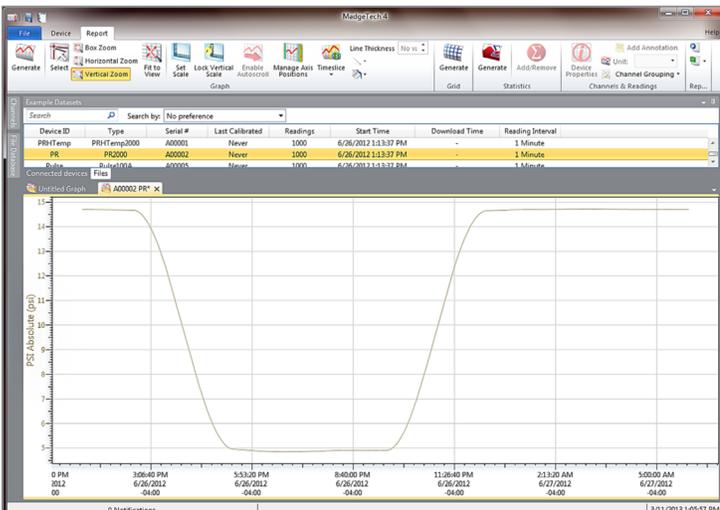
### Features

- Operates up to 140 °C
- Submersible (IP68)
- User Replaceable Battery
- Rugged Stainless Steel Body
- Programmable Start Time
- Engraved Label
- CE Compliant
- Software Battery Life Indicator
- 1/8 inch NPT Pressure Port
- Wrench Flats

### Benefits

- Simple Setup and Installation
- Minimal Long-Term Maintenance
- Compatible with 1/8-27 NPT Adapters and Fittings

## MadgeTech 4 Software Features



Graph View

- Multiple graph overlay
- Statistics
- Digital calibration
- Zoom in/ zoom out
- Lethality equations (F0, PU)
- Mean Kinetic Temperature
- Full time zone support
- Data annotation
- Min./Max./Average lines
- Summary view

| Device ID | Type        | Serial # | Last Calibrated | Readings | Start Time           | Download Time | Reading Interval |
|-----------|-------------|----------|-----------------|----------|----------------------|---------------|------------------|
| PR1Temp   | PR1Temp1000 | A00001   | Never           | 1000     | 6/26/2012 1:13:37 PM | -             | 1 Minute         |
| PR        | PR2000      | A00002   | Never           | 1000     | 6/26/2012 1:13:37 PM | -             | 1 Minute         |
| PR        | PR1000      | A00003   | Never           | 1000     | 6/26/2012 1:13:37 PM | -             | 1 Minute         |

Statistics

Export to Excel

| Time       | Time Zone | Data      |
|------------|-----------|-----------|
| 1:13:37 PM | -0400     | -00.0000  |
| 1:14:17 PM | -0400     | -00.00100 |
| 1:15:07 PM | -0400     | -00.00200 |
| 1:15:57 PM | -0400     | -00.00300 |
| 1:16:47 PM | -0400     | -00.00400 |
| 1:17:37 PM | -0400     | -00.00500 |
| 1:18:27 PM | -0400     | -00.00600 |
| 1:19:17 PM | -0400     | -00.00700 |
| 1:20:07 PM | -0400     | -00.00800 |
| 1:20:57 PM | -0400     | -00.00900 |
| 1:21:47 PM | -0400     | -00.01000 |
| 1:22:37 PM | -0400     | -00.01100 |
| 1:23:27 PM | -0400     | -00.01200 |
| 1:24:17 PM | -0400     | -00.01300 |
| 1:25:07 PM | -0400     | -00.01400 |
| 1:25:57 PM | -0400     | -00.01500 |
| 1:26:47 PM | -0400     | -00.01600 |
| 1:27:37 PM | -0400     | -00.01700 |
| 1:28:27 PM | -0400     | -00.01800 |

Tabular Data View

Automation

### Applications

- Autoclave Validation and Mapping
- Canning and Cooking Pouches
- Pressurized Process Reactors
- Beverage Production, Including Wine and Soda

## SPECIFICATIONS

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

| PRESSURE                      |   |
|-------------------------------|---|
| <b>Pressure Sensor</b>        | Semiconductor strain gauge  |
| <b>Pressure Range</b>         | 0 to 5 bar (0 to 72.5 PSIA)   |
| <b>Pressure Resolution</b>    | 0.0001 bar (0.00145 PSIA)   |
| <b>Calibrated Accuracy</b>    | ±0.03 bar (± 0.435 PSI)<br>from +20 °C to +140 °C (+68 °F to +284 °F)<br>±0.1 bar (±1.45 PSI)<br>from -20 °C to +19.99 °C (-4 °F to +68 °F) |
| <b>Pressure Response Time</b> | 1 second (10 to 90 % FSR)   |

| GENERAL                               |  |
|---------------------------------------|--|
| <b>Start Modes</b>                    | Software programmable immediate start or delay start up to six months  |
| <b>Real Time Recording</b>            | May be used with PC to monitor and record data in real time  |
| <b>Password Protection</b>            | An optional password may be programmed into the device to restrict access to configuration options. Data may be read without the password.   |
| <b>Memory</b>                         | 32,256 readings  |
| <b>Wrap Around</b>                    | Yes  |
| <b>Reading Rate</b>                   | 1 reading every second up to 1 reading every 24 hours  |
| <b>Calibration</b>                    | Digital calibration through software   |
| <b>Calibration Date</b>               | Automatically recorded within device   |
| <b>Battery Type</b>                   | 3.6V high-temperature lithium battery included, user replaceable   |
| <b>Battery Life</b>                   | 2 years  |
| <b>Data Format</b>                    | PSIA, inHg, mmHg, bar, atm, Torr, Pa, kPa, MPa   |
| <b>Time Accuracy</b>                  | ±1 minute/month at 20 °C to 30 °C  |
| <b>Computer Interface</b>             | IFC400 or IFC406 USB docking station required  |
| <b>Operating System Compatibility</b> | Windows XP SP3 or later  |
| <b>Software Compatibility</b>         | Standard Software version 2.06.02 or later<br>Secure Software version 4.1.3.0 or later   |
| <b>Operating Environment</b>          | -20 °C to +140 °C (-4 °F to +284 °F)<br>0 %RH to 100 %RH, 0.002 PSIA to 100 PSIA   |
| <b>Dimensions</b>                     | <b>Flush Top:</b> 2.0 in x 1.0 in dia. (50.8 mm x 25.4 mm dia.)<br><b>NPT Pressure Port Top:</b> 2.3 in x 1.0 in dia. (58.2 mm x 25.4 mm dia.)<br><b>NPT Specification:</b> 1/8-27 |
| <b>Weight</b>                         | <b>Flush Top:</b> 3.1 oz (90 g)<br><b>NPT Pressure Port Top:</b> 3.5 oz (100 g)  |
| <b>IP Rating</b>                      | IP68   |
| <b>Material</b>                       | 316 Stainless Steel, Radel   |
| <b>Approvals</b>                      | CE   |



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**BATTERY WARNING:** FIRE, EXPLOSION, AND SEVERE BURN HAZARD. DO NOT SHORT CIRCUIT, CHARGE, FORCE OVER DISCHARGE, CRUSH, PENETRATE, OR INCINERATE. BATTERY MAY LEAK OR EXPLODE IF HEATED ABOVE 150°C (302°F).

## Ordering Information

|  |              |  |
|--|--------------|--|
| <b>PR140-LVL</b>                         | PN 900998-00 | Pressure Data Logger with Flush Top                    |
| <b>PR140-NPT</b>                         | PN 900992-00 | Pressure Data Logger with 1/8-27 NPT Pressure Port Top |
| <b>IFC400</b>                            | PN 900319-00 | Docking station with USB cable                         |
| <b>IFC406</b>                            | PN 900325-00 | 6 Port, Multiplexer docking station with USB cable     |
| <b>ER14250-SM</b> Formerly ER14250MR-145 | PN 900097-00 | Replacement battery for the PR140                      |

For Quantity Discounts call (603) 456-2011 or email [sales@madgetech.com](mailto:sales@madgetech.com)