

Description	PR140
Pressure Sensor	Semiconductor (strain gauge)
Pressure Range (Nominal)	0 to 5 Bar (0 to 72.5 PSIA)
Pressure Resolution	0.0001 Bar
Pressure Response Time	0.1 ms (10 %FSR to 90 %FSR)
Repeatability	±0.5 %FSR; ±0.2 % typical
Calibrated Accuracy	±0.03 Bar (±0.435 PSI), +20 °C to +140 °C (+68 °F to +284 °F)
Memory	32,700 readings; software configurable memory wrap
Reading Rate	1 reading every second up to 1 reading every 24 hours
Required Interface Package	IFC400 or IFC406
Baud Rate	125,000 baud
Typical Battery Life	2 years
Operating Environment	-20 °C to +140 °C (-4 °F to +284 °F), 0 %RH to 100 %RH, 0.002 PSIA to 100 PSIA
Dimensions	Flush Top: 2.0 in x 1.0 in dia. (50.8 mm x 25.4 mm dia.) NPT Pressure Port Top: 2.3 in x 1.0 in dia. (58.2 mm x 25.4 mm dia.)
Submersible	Yes (IP68)
Material	Stainless Steel
Weight	3 oz (85 g)
Approvals	CE

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 150 °C (302 °F).

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Product User Guide

PR140



PR140

High Temperature Pressure Data Logger

Product Notes

The PR140 can be used in both wet and dry applications up to 140 °C indefinitely. Available with Flush or NPT Pressure Port Top

Submergibility

The PR140 is fully submersible and is rated IP68. It can be placed in environments with up to 230 ft (70 m) of water.

O-Rings

O-ring maintenance is a key factor when properly caring for the PR140. 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.

Note: This product is rated for use up to 140 °C. Please heed the battery warning. The product will explode if exposed to temperatures above 140 °C.

Installation Guide

Installing the Interface cable

- IFC400 or IFC406

Connect the device into a USB port with the interface cable. The drivers will install automatically.

Installing the software

The Software can be downloaded from the MadgeTech website. 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 docking station.
- Connect the USB end of the interface cable into an open USB port on the computer.
- Place the data logger into the docking station.
- The data logger will automatically appear under Connected Devices within the software.
- 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 docking station 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

- Place the logger to the docking station.
- 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:

ER1425S-HT Battery

- Unscrew the bottom of the data logger and remove the battery.
- Place the new battery into the data logger. Note the polarity of the battery.
- Screw the cover back onto the data logger.

Recalibration

The PR140 standard calibration is 3 points at 1 bar, 2.5 bar and 5 bar.