MADGETECH
WE BUILD DATA LOGGERS

PRTC110

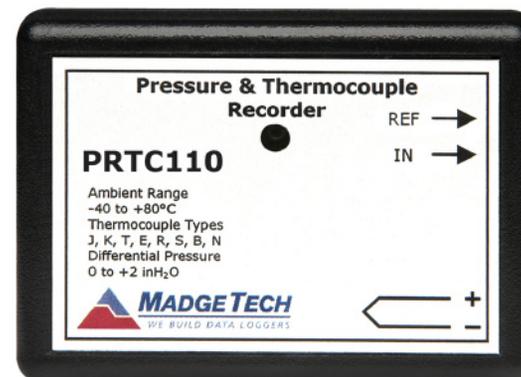| Part Number	PRTC110
Internal Channel Temperature Sensor	Semiconductor
Internal Channel Temperature Range	-20 to +80°C
Internal Channel Temperature Resolution	0.1°C
Internal Channel Temperature Accuracy	±0.5°C
Remote Channel Temperature Sensor	Thermocouple Types J, K, T, E, R, S, B, N
Remote Channel Temperature Range, Resolution and Accuracy	*See Table Below for Details
Pressure Range (Nominal)	0 to 2 inH2O (differential) 0 to 5 inH2O (differential)
Pressure Range (Max)	-2 to +4 inH2O (differential) -2 to +8 inH2O (differential)
Pressure Resolution	0.002 inH2O 0.005 inH2O
Pressure Accuracy	0.5%FSR, 0.25% @ 25°C Typical
Cold Jct. Compensation	Automatic
Channels	2 Internal & 1 Remote
Memory	21,844/channel
Sample Rate	2 seconds up to 12 hours
LED Indicator	Red
Required Interface Package	IFC110 or IFC200
Baud Rate	57,600
Typical Battery Life	2 years
Operating Environment	−20 to +80°C, 0 to 95%RH (non-condensing)
Dimensions	2.7" x 1.6" x 0.8" (68mm x 41mm x 20mm)
Material	ABS plastic
Approvals	CE

* Remote Channel

Thermocouple	Range (°C)	Resolution	Accuracy
J	-210 to +760	0.1°C	±0.5°C
K	-260 to +1370	0.1°C	±0.5°C
T	-260 to +400	0.1°C	±0.5°C
E	-260 to +980	0.1°C	±0.5°C
R	-50 to +1760	0.5°C	±2.0°C
S	-50 to +1760	0.5°C	±2.0°C
B	+60 to +1820	0.5°C	±2.0°C
N	-260 to +1300	0.1°C	±0.5°C

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.
See MadgeTech's terms and conditions at www.madgetech.com

Pressure & Thermocouple Recorder

PRTC110

REF →
IN →

Ambient Range
−40 to +80°C
Thermocouple Types
J, K, T, E, R, S, B, N
Differential Pressure
0 to +2 inH$_2$O

+
−

PRTC110
Differential Pressure and Thermocouple
Temperature Data Logger

MADGETECH
WE BUILD DATA LOGGERS

To view the full MadgeTech product line,
visit our website at www.madgetech.com.

Product Notes

Pressure Sensor

The PRTC110 measures differential pressure in the range of 0 to 2inH2O or 0 to 5inH20, depending upon the range purchased. The device is also equipped with one thermocouple input. Two 0.080" diameter pressure ports are located on the side of the device. The pressure ports will accept 1/16"ID flexible rubber tubing with up to 5/32"OD. The tubing can be connected to two different pressure locations in which the device will measure the difference between the two pressure's.

LEDs

Once started, the LED will flash at the selected reading rate to indicate that the device is running.

Thermocouple Type

To change the thermocouple type in the MadgeTech software:

- Select the Device Menu, then Identify Device and Read Status.
- Select the Device Detail tab, then Thermocouple Type.
- Click on the Change button in the Thermocouple Type window.
- Select the correct thermocouple type from the drop down list.
- Click on the Save button to store the thermocouple type in the device.
- Click OK.

Please note that the same thermocouple type must be used on all of the channels.

Device Maintenance

Battery Replacement

Materials:

Small Phillips Head Screwdriver

Replacement Battery (LTC-7PN)

- Puncture the center of the back label with the screw driver and unscrew the enclosure.
- Remove the battery by pulling it perpendicular to the circuit board.
- Insert the new battery into the terminals and verify it is secure.
- Screw the enclosure back together securely.

Note: Be sure not to over tighten the screws or strip the threads.

Recalibration

The PRTC110 standard calibration is two pressure points at 14.7 PSI and 30 PSI and one point at 0mVs for the thermocouple channel.

Pricing:

Recalibration traceable to NIST	$90.00
Recalibration	$70.00

Additional Services:

As Found Data	$15.00 per parameter/channel
Verification Point	$15.00 per point

Prices and specifications subject to change. See MadgeTech's terms and conditions at www.madgetech.com
To send the devices back, visit www.madgetech.com, select Services then RMA Process.

Installation Guide

Installing the Interface cable

- IFC200

  Refer to the "Quick Start Guide" included in the package.
- IFC110

  Plug the serial cable into the port and verify it is secure.

Installing the software

Insert the Software CD in the CD-ROM Drive. If the autorun does not appear, locate the drive on the computer and double click on **Autorun.exe**. Follow the instructions provided in the Wizard.

Connecting the data logger

- Once the software is installed and running, plug the interface cable into the data logger.
- Click the **Communication Menu**, then **Auto Configure Port**.
- After a moment, a box will appear stating a device has been found.
- Click **OK**. The **Device Status** box will appear. Click **OK**.
- At this point, communications have been configured for your logger. These settings can be found under the **Communication Menu**.

Note: For additional installation instructions refer to your "Data Logger & Software Operating Manual".

Device Operation

Starting the data logger

- Click **Device Menu** then **Start Device**.
- Choose the desired start method.
- Choose the start parameters by selecting a **Reading Rate** suitable for your application.
- Enter in any other desired parameters and click **Start**.
- A box will appear stating the data logger has been started. Click **OK**.
- 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 data logger to the interface cable.
- Click the **Device Menu** then **Read Device Data**. This will offload all recorded data onto the PC.