

# PRTC210 THERMOCOUPLE TEMPERATURE AND PRESSURE DATA LOGGER



## Features

- Up to 2 year battery life
- Wide temperature range
- Accepts thermocouple types J, K, T, E, R, S, B, N
- High speed download
- Real time operation
- Low cost
- Programmable start time
- Miniature size

## Applications

- Dry Ice Shipments
- Factory systems
- Laboratory testing
- HVAC
- Environmental studies

The PRTC210 is a pressure and thermocouple temperature data logger, ideal for use in factory settings.

The device is available from 30 to 5000 PSI and features a 1/8 in NPT fitting for quick connection.

The PRTC210 has a real-time clock and a battery life of up to 2 years. This all-in-one compact, portable, easy to use device has a high-speed download and can measure and record up to 10,922 readings per channel. The storage medium is non-volatile solid state memory, providing maximum data security even if the battery becomes discharged. The PRTC210 can be started and stopped directly from your computer and its small size allows it to fit almost anywhere.

The PRTC210 makes data retrieval quick and easy. Simply plug it into an empty COM or USB port and our user-friendly software does the rest.



## MADGETECH DATA LOGGER SOFTWARE

Key

- A Graph View
- B Tabular Data View
- C Statistics
- D Digital Calibration
- E Copy to Excel®

The screenshot shows the software interface with several windows. The main window displays a graph (A) of temperature over time. A smaller window (B) shows a tabular data view with columns for Date, Time, Time Zone, and Delta. A statistics window (C) shows a summary of data points, including minimum, maximum, average, and standard deviation. A calibration window (D) allows for digital calibration of the thermocouple and pressure channels. A report options window (E) is also visible, showing options for report generation and export to Excel.

- Software Features:
- 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
  - Data table view
  - Automatic report generation
  - Summary view
  - Multilingual

## Internal Channel

Temperature Range:	-20 °C to +80 °C (-4 °F to +176 °F)
Temperature Resolution:	0.1 °C (0.18 °F)
Calibrated Accuracy:	±0.5 °C (±0.9 °F)

## Remote Channel

Thermocouple Types:	J, K, T, E, R, S, B, N		
Thermocouple Connection:	Removable Mini Plug		
Cold Junction Compensation:	Automatic, based on internal channel		
Maximum Thermocouple Resistance:	1000 Ω, <100 Ω recommended		
**Thermocouple Type:	Range (°C)	Resolution	Accuracy
J	-210 to +760	0.1 °C	±0.5 °C
K	-270 to +1370	0.1 °C	±0.5 °C
T	-270 to +400	0.1 °C	±0.5 °C
E	-270 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	+50 to +1820	0.5 °C	±2.0 °C
N	-270 to +1300	0.1 °C	±0.5 °C
Voltage	-75 mV to +75 mV	5 μV	±20 μV
Pressure Sensor:	Semi Conductor Strain Gauge		
Pressure Range:	0 to 30, 100, 300 500 PSIA/G; 1000 PSIA, 5000PSIA 0 to 1000 and 5000PSIA		
Pressure Resolution:	0.002, 0.005, 0.02, 0.05PSIA/G; 0.05, 0.2PSIA		
Calibrated Accuracy:	2 % FSR, 0.25 % @ 25 °C typical		
Pressure Response Time:	0.1 ms (10 % to 90 % FSR)		
Adapter:	1/8 in Male NPT		

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:	10,922 readings per channel readings; software configurable memory wrap
Reading Rate:	1 reading every 2 seconds up to 1 reading every 12 hours, selectable in software
Calibration:	Digital calibration through software
Calibration Date:	Automatically recorded within device
Battery Type:	3.6V lithium battery included, user replaceable
Battery Life:	Up to 2 years
Data Format:	Date and time stamped °C, °F, °K, °R; °C, °F, °K, °R, mV; inH2O, PSIG, inHg, mmHg, bar, atm, Torr, Pa, kPa, and MPa.
Time Accuracy:	±1 minute/month (at 20 °C to 30 °C)
Computer Interface:	PC serial or USB (interface cable required); 57,600 baud
Software:	XP SP3/Vista/Windows 7/Windows 8
Operating Environment:	-20 °C to +80 °C (-4 °F to +176 °F), 0 %RH to 95 %RH non-condensing
Dimensions:	2.2 in x 2.5 in x 0.9 in (55 mm x 63 mm x 22 mm) plus NPT Fitting
Enclosure:	Delrin
Weight:	4.2 oz (119 g)

**BATTERY WARNING: FIRE, EXPLOSION, AND SEVERE BURN HAZARD. DO NOT RECHARGE, DISASSEMBLE, HEAT ABOVE 212 °F, INCINERATE OR EXPOSE CONTENTS TO WATER**

\*\*Accuracy specifications based on 3-meter 24 AWG thermocouple.

## ORDERING INFORMATION

MODEL	DESCRIPTION
PRTC210	Pressure and Thermocouple Temperature Recorder
IFC200	Software, manual and USB interface cable
Calibration	Calibration Certificate
LTC-7PN	Replacement battery for PRTC210

**ASK ABOUT OUR OTHER DATA LOGGERS**

- Temperature
- Humidity
- Pressure
- pH
- Level
- Shock
- LCD Display
- Pulse/Event/State
- Current
- Voltage
- Wireless
- Intrinsically Safe
- Spectral Vibration
- Motion

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

\*To order the product with the calibration certificate add -CERT to the end of the part number and add \$90.00 to the price.