Differential Pressure and Thermocouple Temperature Data Logger

OM-CP-PRTC110

- Accepts Thermocouple Types J, K, T, E, R, S, B, and N
- High Speed Download
- Real-Time Operation
- Programmable Start Time
- Three Channels: Internal Ambient Temperature, Remote Temperature (Thermocouple), and Remote Pressure
- 2 Year Battery Life

The OM-CP-PRTC110 is a differential pressure and temperature data logger, ideal for use in factory and laboratory applications.

The OM-CP-PRTC110 features a real-time clock module that extends the battery life to >2 years and allows for high speed downloads.

This device will measure and record up to 10,922 measurements per channel. The storage medium is non-volatile solid state memory, providing maximum data security and stopped directly from your computer and its small size allows it to fit almost anywhere.

The OM-CP-PRTC110 makes data retrieval quick and easy. Simply plug it into an available com port and our user-friendly software does the rest. The software converts a PC into a real-time strip chart recorder. Data can be printed in graphical and tabular format or exported to a text or Microsoft Excel® file.

Specifications

**INTERNAL CHANNEL**

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

**REMOTE CHANNELS**

Thermocouple Types:
J, K, T, E, R, S, B, and N
Thermocouple Connection:
Female subminiature thermocouple connector
Cold Junction Compensation:
Automatic, based on internal channel

Maximum Thermocouple Resistance:
1000 Ω, <1000 Ω recommended

Pressure Connections:
REF and IN ports via ¼" ID, ½" Max OD, polyurethane tubing
Accuracy:
±5% FSR max at 25°C over 1 year

Start Modes:
Software programmable immediate start or delay start up 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; software configurable memory wrap

Reading Rate:
2 sec to 24 hrs, software selectable

Calibration:
Digital calibration through software

Calibration Date:
Automatically recorded within device

Battery Type:
3.6V lithium battery (included), user replaceable

Battery Life:
5 years (5 minute reading rate at 25°C)

Data Format:
Date and time stamped °C, °F, K, R, inH2O, PSIG, inHg, mmHg bar, atm, Torr, Pa, kPa, and MPa

<table>
<thead>
<tr>
<th>THERMOCOUPLE TYPE</th>
<th>RANGE</th>
<th>RESOLUTION</th>
<th>ACCURACY*</th>
</tr>
</thead>
<tbody>
<tr>
<td>J</td>
<td>-210 to 760°C</td>
<td>0.1°C</td>
<td>±0.5°C</td>
</tr>
<tr>
<td>K</td>
<td>-260 to 1370°C</td>
<td>0.1°C</td>
<td>±0.5°C</td>
</tr>
<tr>
<td>T</td>
<td>-260 to 400°C</td>
<td>0.1°C</td>
<td>±0.5°C</td>
</tr>
<tr>
<td>E</td>
<td>-260 to 980°C</td>
<td>0.1°C</td>
<td>±0.5°C</td>
</tr>
<tr>
<td>R</td>
<td>-50 to 1760°C</td>
<td>0.5°C</td>
<td>±2.0°C</td>
</tr>
<tr>
<td>S</td>
<td>-50 to 1760°C</td>
<td>0.5°C</td>
<td>±2.0°C</td>
</tr>
<tr>
<td>B</td>
<td>50 to 1820°C</td>
<td>0.5°C</td>
<td>±2.0°C</td>
</tr>
<tr>
<td>N</td>
<td>-270 to 1300°C</td>
<td>0.1°C</td>
<td>±0.5°C</td>
</tr>
<tr>
<td>mV</td>
<td>-75 mV to 75 mV</td>
<td>5µV</td>
<td>±20µV</td>
</tr>
</tbody>
</table>

*Accuracy specifications based on 3 m (9.8') 24 AWG thermocouple.
To Order, Call 1-800-327-4333™ or Shop Online at omega.com™

**Data Loggers**

**To Order, Call or Shop Online at omega.com™**

**Snap-on strain relief**

**Miniature size connector shown actual size.**

**Kapton® Insulation Available**

5SRTC, 5 pack, shown smaller than actual size.

- **Bead type thermocouple**
- ** ANSI color code shown**
- ** To order IEC color code visit us online**

**Time Accuracy:** ±1 min/month  
(at 20 to 30°C)

**Computer Interface:** PC serial or USB (interface cable required); 57,600 baud

**Software:**  
XP SP3/Vista/7 and 8  
(32-bit and 64-bit)

**Operating Environment:**  
-20 to 80°C (-4 to 176°F),  
0 to 95% RH, non-condensing

**Dimensions:**  
41 H x 68 W x 20 mm D  
(1.6 x 2.7 x 0.8") plus  
connective tube

**Enclosure:** ABS plastic

**Weight:** 250 g (8.8 oz)

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**Comes complete with 3.6V lithium battery. Operator’s manual and USB interface cable are included with the OM-CP-IFC200 Windows software (required to operate the data logger, sold separately).**

**Ordering Example:** OM-CP-PRTC110-2H2O-CERT, differential pressure and temperature data logger with NIST calibration certificate, and OM-CP-IFC200, Windows software with USB interface cable.

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**To Order**

<table>
<thead>
<tr>
<th>MODEL NO.</th>
<th>PRESSURE RANGE</th>
<th>MAX PRESSURE</th>
<th>PRESSURE RESOLUTION</th>
<th>NIST CERTIFICATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>OM-CP-PRTC110-2H2O</td>
<td>0 to 2 inH₂O</td>
<td>-2 to 4 inH₂O</td>
<td>0.002 inH₂O</td>
<td>–</td>
</tr>
<tr>
<td>OM-CP-PRTC110-2H2O-CERT</td>
<td>0 to 2 inH₂O</td>
<td>-2 to 4 inH₂O</td>
<td>0.002 inH₂O</td>
<td>Y</td>
</tr>
<tr>
<td>OM-CP-PRTC110-5H2O</td>
<td>0 to 5 inH₂O</td>
<td>-2 to 8 inH₂O</td>
<td>0.005 inH₂O</td>
<td>–</td>
</tr>
<tr>
<td>OM-CP-PRTC110-5H2O-CERT</td>
<td>0 to 5 inH₂O</td>
<td>-2 to 8 inH₂O</td>
<td>0.005 inH₂O</td>
<td>Y</td>
</tr>
</tbody>
</table>

**ACCESSORIES**

<table>
<thead>
<tr>
<th>MODEL NO.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>OM-CP-IFC200</td>
<td>Windows software and 1.8 m (6’) USB interface cable</td>
</tr>
<tr>
<td>OM-CP-SVP-SYSTEM</td>
<td>FDA 21 CFR part 11 compliant IQ/OQ/PQ secure software validation workbook and software package (unlimited users, license per computer)</td>
</tr>
<tr>
<td>OM-CP-BAT105</td>
<td>Replacement 3.6V lithium battery</td>
</tr>
</tbody>
</table>

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OM-CP-IFC200, Windows software displays data in graphical or tabular format, laptop not included.