OM-CP-TC101A
Thermocouple Temperature Data Logger

MQ5045/1216

INSTRUCTION SHEET

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Wiring the Data Logger

**MP Model Wiring**
The standard connector is the SMP connection which allows for the user to insert a subminiature thermocouple plug into the connector on the device.

**Product Notes**

**LEDs**
- Green LED blinks: 10 seconds to indicate logging and 15 seconds to indicate delay start mode.
- Red LED blinks: 10 seconds to indicate low battery and/or memory and 1 second to indicate an alarm condition.

**Thermocouple Type**
To change the thermocouple type:
- 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 then click OK.

**Password Protection**
An optional password may be programmed into the device to restrict access to configuration options. Data may be read out without the password.

**Multiple Start/Stop Mode Activation**
To start device: Press and hold the pushbutton for 5 seconds, the green LED will flash during this time. The device has started logging.
To stop the device: Press and hold the pushbutton for 5 seconds, the red LED will flash during this time. The device has stopped logging.

**Alarm and Cumulative Alarm Delay**
To set an alarm, click Device Menu: Identify Device and Read Status: Device Detail Tab or Device Menu: Start Device. Select Alarm Settings. Check the Enable Alarm Settings box to program the alarm. Enter the high and low values into the corresponding fields. Check the Cumulative Alarm Delay box to enable the time duration alarm. With this selected, the device will only alarm after it has recorded the same amount of data as the time duration of data entered. Note: Time durations between 12 hours to 23 hours, 59 minutes and 59 seconds may not be programmed. Only time durations up to 11 hours, 59 minutes and 59 seconds may be set in the hh:mm:ss field and the day field represents a 24 hour period.

**Trigger Setting**
The device can be programmed to only record based off user configured trigger settings. Choose Trigger Settings from the Device Menu: Start Device or Identify Device and Read Status. Trigger formats are available in Window and Two Point (bi-level) mode. Window allows for one range of temperature monitoring and two point mode allows for two ranges.
Device Maintenance

Battery Replacement
Materials:
Small Phillips Head Screwdriver and a Replacement Battery (OM-CP-BAT105)
- 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.

Installation Guide

Installing the Interface cable
- OM-CP-IFC200: Insert the device into a USB port. The drivers will install automatically.

Installing the software
Insert the Software CD in the CD Drive. If the autorun does not appear, locate the drive on the computer and double click Autorun.exe. Follow the instructions 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 that 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.

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.
# OM-CP-TC101A General Specifications

<table>
<thead>
<tr>
<th>Description</th>
<th>OM-CP-TC101A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Channel Temperature</td>
<td>Semiconductor</td>
</tr>
<tr>
<td>Sensor Resolution</td>
<td>0.01°C</td>
</tr>
<tr>
<td>Accuracy</td>
<td>±0.50°C</td>
</tr>
<tr>
<td>Remote Channel Temperature</td>
<td></td>
</tr>
<tr>
<td>Sensor, Range, Resolution &amp; Accuracy</td>
<td>*See Table for Details</td>
</tr>
<tr>
<td>Cold Junction Compensation</td>
<td>Automatic</td>
</tr>
<tr>
<td>Channels</td>
<td>1 internal &amp; 1 remote</td>
</tr>
<tr>
<td>Memory</td>
<td>1,000,000 readings; 500,000 readings in multiple start/stop mode or trigger settings mode</td>
</tr>
<tr>
<td>Wrap Around</td>
<td>Yes</td>
</tr>
<tr>
<td>Sample Rate</td>
<td>1 second up to 24 hours</td>
</tr>
<tr>
<td>LED Indicator</td>
<td>Red and Green</td>
</tr>
<tr>
<td>Required Interface Package</td>
<td>OM-CP-IFC200</td>
</tr>
<tr>
<td>Baud Rate</td>
<td>115,200</td>
</tr>
<tr>
<td>Typical Battery Life</td>
<td>10 years at a 15 minute reading rate</td>
</tr>
<tr>
<td>Operating Environment</td>
<td>-40°C to +80°C (-40°F to +176°F), 0 to 95%RH non-condensing</td>
</tr>
<tr>
<td>Material</td>
<td>ABS plastic</td>
</tr>
<tr>
<td>Dimensions</td>
<td>1.4” x 2.2” x 0.6” (36mm x 56mm x 16mm)</td>
</tr>
<tr>
<td>Approvals</td>
<td>CE</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Thermocouple</th>
<th>Range (°C)</th>
<th>Resolution</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>J</td>
<td>-210 to +760</td>
<td>0.1°C</td>
<td>±0.5°C</td>
</tr>
<tr>
<td>K</td>
<td>-270 to +1370</td>
<td>0.1°C</td>
<td>±0.5°C</td>
</tr>
<tr>
<td>T</td>
<td>-270 to +400</td>
<td>0.1°C</td>
<td>±0.5°C</td>
</tr>
<tr>
<td>E</td>
<td>-270 to +980</td>
<td>0.1°C</td>
<td>±0.5°C</td>
</tr>
<tr>
<td>R</td>
<td>-50 to +1760</td>
<td>0.5°C</td>
<td>±2.0°C</td>
</tr>
<tr>
<td>S</td>
<td>-50 to +1760</td>
<td>0.5°C</td>
<td>±2.0°C</td>
</tr>
<tr>
<td>B</td>
<td>+50 to +1820</td>
<td>0.5°C</td>
<td>±2.0°C</td>
</tr>
<tr>
<td>N</td>
<td>-270 to +1300</td>
<td>0.1°C</td>
<td>±0.5°C</td>
</tr>
</tbody>
</table>

**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).

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2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

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