OM-CP-QUADTEMP-A
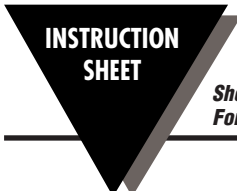## 4-Channel Thermocouple Based Temperature Data Logger
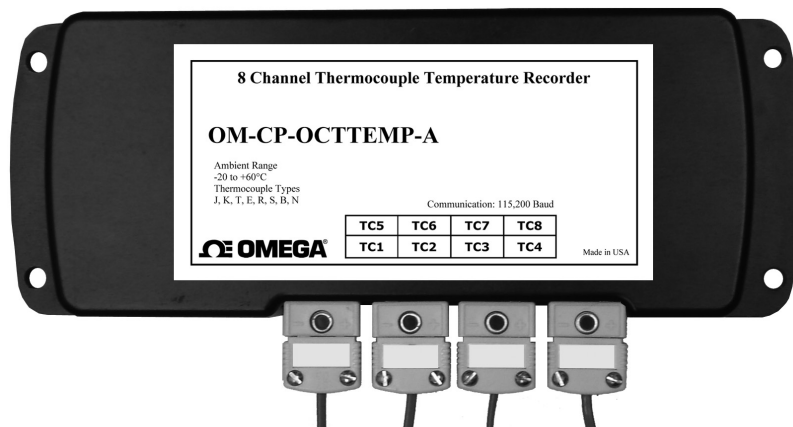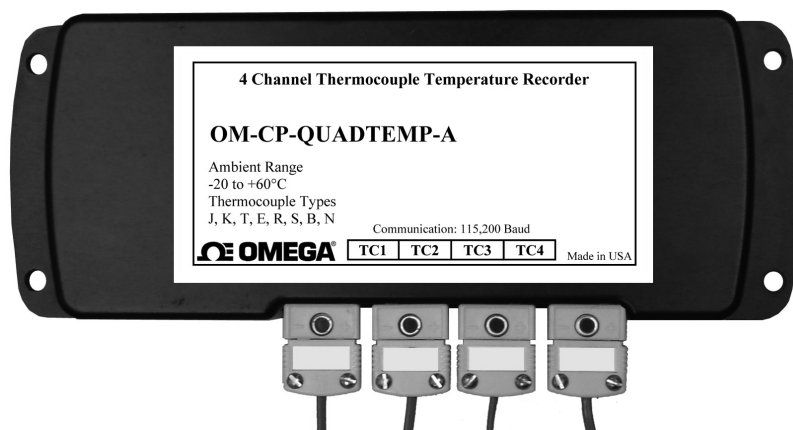# OM-CP-OCTTEMP-A
8-Channel Thermocouple Based Temperature Data Logger

4 Channel Thermocouple Temperature Recorder

OM-CP-QUADTEMP-A

Ambient Range
-20 to +60°C
Thermocouple Types
J, K, T, E, R, S, B, N

Communication: 115,200 Baud

OMEGA®

TC1	TC2	TC3	TC4

Made in USA

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OM-CP-OCTTEMP-A

Ambient Range
-20 to +60°C
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J, K, T, E, R, S, B, N

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OMEGA®

TC5	TC6	TC7	TC8
TC1	TC2	TC3	TC4

Made in USA

# Product Overview

The OM-CP-QUADTEMP-A is a four channel thermocouple temperature data logger with a reading rate of up to 4Hz. It can measure and record data for up to 500,000 readings per channel. To maximize memory capacity, users can disable unused channels to add additional memory onto enabled channels. For easy identification, each channel can be named with up to a ten digit title. In addition, the OM-CP-QUADTEMP-A features individual cold junction compensation for each channel providing increased accuracy and response time, and if a probe is removed or severed during logging, the software automatically annotates the data.
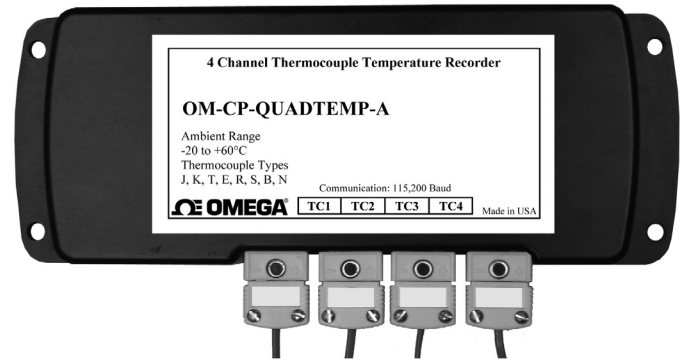
The OM-CP-QUADTEMP-A is ideal for a variety of applications, whether it is remote temperature monitoring, or multiple points in a central location. Data from all channels is simultaneously logged. After the monitoring cycle is complete, data can be downloaded for analysis. The OM-CP-QUADTEMP-A comes with a wall mounted 120/230VAC/9VDC 50/60HZ power adapter.

Product Overview

The OM-CP-OCTTEMP-A is an eight channel thermocouple data logger with a reading rate of up to 4Hz. It can measure and record data for up to 500,000 readings per channel. To maximize memory capacity, users can disable unused channels to add additional memory onto enabled channels. For easy identification, each channel can be named with up to a ten digit title. In addition, the OM-CP-OCTTEMP-A features individual cold junction compensation for each channel providing increased accuracy and response time, and if a probe is removed or severed during logging, the software automatically annotates the data.
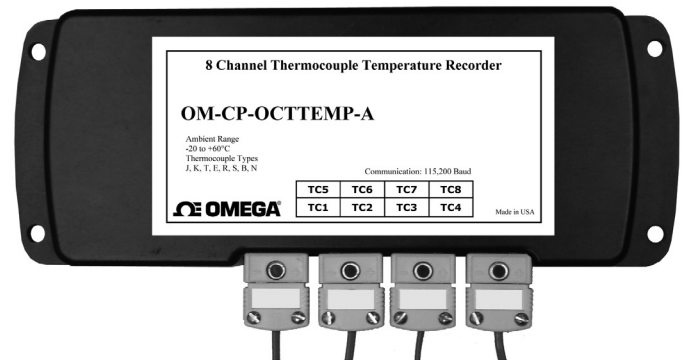
The OM-CP-OCTTEMP-A is ideal for a variety of applications, whether it is remote temperature monitoring, or multiple points in a central location. The OM-CP-OCTTEMP-A comes with a wall mounted 120/230VAC/9VDC 50/60HZ power adapter.

Installation Guide

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

Installing the software
Insert the Software USB Stick in an open USB port. 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.

Device Operation
Connecting and Starting the data logger
- Once the software is installed and running, plug the interface cable into the data logger.
- Connect the USB end of the interface cable into an open USB port on the computer.
- The device will appear in the **Connected Devices list**, highlight the desired data logger.
- 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 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 logger to the interface cable.
- 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.

Wiring the Data Logger

Wiring Options
The OM-CP-QUADTEMP-A has four SMP connections and the OM-CP-OCTTEMP-A has eight. These connections allow the user to insert subminiature thermocouple plugs into the connectors on the device. The diagram below shows how to connect the individual thermocouples for each of the devices.

Warning: Note the polarity instructions. Do not attach wires to the wrong terminals.

Connector for interface cable

+ Input
- Input
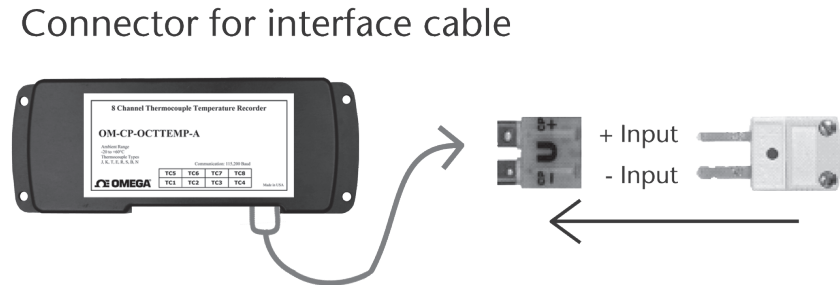
Additional Features and Operation

Manual Start
Within the software click the **Custom Start** button on the **Device panel**, or right-click on the device and hover on the start selection, then choose custom start. Apply the options desired and select Start to arm the device.

Once the device is armed, activate the **Manual Start** by holding down the white recessed push button on the top of the device for 10 seconds. The green LED will begin to blink rapidly for 10 seconds, which signifies the push-button start has been activated. The green LED will continue to blink every 5 seconds. To see the change in the status, click **Refresh Devices** within the software.

Enable/Disable Channels
By default, all channels are enabled.
1. In the **Connected Devices** panel, click the device desired.
2. On the **Device Tab**, in the **Information Group**, click **Properties**. Or, right-click the device and select **Properties** in the context menu.
3. Toggle the Enable Data Recording options for the thermocouple channels as desired.
4. Apply these changes, there will be a prompt to reset the device, select yes.
Note: When the checkmark is empty, the channel is disabled and will not record data or appear in the downloaded datasets. When the checkmark is clearly checked, it will be visible and record data.

Thermocouple Type
To change the thermocouple type:
1. In the **Connected Devices** panel, click the device desired.
2. On the **Device Tab**, in the **Information Group**, click **Properties**. Or, right-click the device and select **Properties** in the context menu.
3. On the **General Tab**, change the Thermocouple type in the drop down menu.
4. Apply these changes, there will be a prompt to reset the device, select yes.

LEDs
Once started, the green LED will flash at 5 second intervals to indicate that the device is running.

Set Password
To password protect the device so that others cannot start, stop or reset the device;
1. In the **Connected Devices** panel, click the device desired.
2. On the **Device Tab**, in the **Information Group**, click **Properties**. Or, right-click the device and select **Properties** in the context menu.
3. On the **General Tab**, click **Set Password**.
4. Enter and confirm the password in the box that appears, then select **OK**.

To Change the Password
To change the password on the device so others can not stop, start or reset the device;
1. In the **Connected Devices** panel, click the device desired.
2. On the **Device Tab**, in the **Information Group**, click **Properties**. Or, right-click the device and select **Properties** in the context menu.
3. On the **General Tab**, click **Change Password**.
4. Enter the old and new passwords in the box that appears, then select **OK**.

To Clear the Password of a Device
To completely clear the password on a device so others can stop, start or reset the device;
1. In the **Connected Devices** panel, click the device desired.
2. On the **Device Tab**, in the **Information Group**, click **Properties**. Or, right-click the device and select **Properties** in the context menu.
3. On the **General Tab**, click **Clear Password.**
4. Enter the password in the box that appears, then select **OK**.

Channel Naming
Up to a 10-character channel name can be programmed into the data logger for each channel. This ability helps to rename a channel in a report to distinguish it from other similarly named channels.
1. In the **Connected Devices** panel, click the device desired.
2. On the **Device Tab**, in the **Information Group**, click **Properties**. Or, right-click the device and select **Properties** in the context menu.
3. In the **Channels panel**, find the channel desired, then select "**Use custom name.**"
4. This will prompt a space to type in a name.
5. Select **OK**, then there will be a prompt to reset the device, select yes.

Product Maintenance

Battery Replacement
Materials:
3/32" HEX Driver (Allen Key)
Replacement Battery (OM-CP-BAT103)
1. Remove the cover from the device by unscrewing the two screws.
2. Remove the battery from its compartment and unsnap it from the connector.
3. Snap the new battery into the terminals and verify it is secure.
4. Replace the cover taking care not to pinch the wires. Screw the enclosure back together securely.
    Note: Be sure not to over tighten the screws or strip the threads.

Recalibration
The OM-CP-QUADTEMP-A or OM-CP-OCTTEMP-A standard calibration is one point at 25°C for the internal temperature sensor and 0mVs for the thermocouple channels. Recalibration is recommended annually for any Omega data logger; a reminder is automatically displayed in the software when the device is due.

OM-CP-QUADTEMP-A General Specifications

Description	OM-CP-QUADTEMP-A
Internal Channel Temperature Sensor	Semiconductor
Internal Channel Temperature Resolution	0.05°C
Internal Channel Accuracy	±0.5°C
Remote Channel Temperature Sensor Range, Resolution & Accuracy	*See Table for Details
Cold Jct. Compensation	Automatic
Channels	4 internal & 4 remote
Memory	500,000/channel
Sample Rate	4 Hz up to 24 hours
LED Indicator	Green, Red, Blue
Required Interface Package	IFC200
Baud Rate	115,200
Battery Type	9 Volt lithium or alkaline battery included, user replaceable
Typical Battery Life	18 months typical
Operating Environment	-20°C to +60°C, 0 to 95%RH (non–condensing)
Dimensions	7.24" x 2.7" x 1.02" (183mm x 68mm x 26mm)
Material	Anodized aluminum
Weight	15.2 oz (430 g)
Approvals	CE

* Remote Channel Range, Resolution & Accuracy

Thermocouple	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

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 60°C (140°F).

Specifications subject to change.
See Omega's terms and conditions at www.omega.com

OM-CP-OCTTEMP-A General Specifications

Description	OM-CP-OCTTEMP-A
Internal Channel Temperature Sensor	Semiconductor
Internal Channel Temperature Resolution	0.05°C
Internal Channel Accuracy	±0.5°C
Remote Channel Temperature Sensor Range, Resolution & Accuracy	*See Table for Details
Cold Jct. Compensation	Automatic
Channels	8 internal & 8 remote
Memory	500,000/channel
Sample Rate	4 Hz up to 24 hours
LED Indicator	Green, Red, Blue
Required Interface Package	IFC200
Baud Rate	115,200
Battery Type	9 Volt lithium or alkaline battery included, user replaceable
Typical Battery Life	18 months typical
Operating Environment	-20°C to +60°C, 0 to 95%RH (non–condensing)
Dimensions	7.24" x 2.7" x 1.26" (183mm x 68mm x 32mm)
Material	Anodized aluminum
Weight	17.3 oz (490 g)
Approvals	CE

* Remote Channel Range, Resolution & Accuracy

Thermocouple	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
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Compliance Information

• "This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation."

• "To satisfy FCC RF Exposure requirements for mobile and base station transmission devices, a separation distance of 20cm or more should be maintained between the antenna of this device and persons during operation. To ensure compliance, operation at closer than this distance is not recommended. The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter."

• "This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement."

• "Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante."

ΩE OMEGA®

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e-mail: info@omega.com

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WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

OMEGA is pleased to offer suggestions on the use of its various products. However, OMEGA neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use of its products in accordance with information provided by OMEGA, either verbal or written. OMEGA warrants only that the parts manufactured by the company will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive, and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.

CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a "Basic Component" under 10 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY/DISCLAIMER language, and, additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

RETURN REQUESTS / INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:
1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:
1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

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