#### 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 if 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.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

- 1. Purchase Order number under which the product was PURCHASED,
- Model and serial number of the product under warranty, and
- 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:

- . Purchase Order number to cover the COST of the repair or calibration,
- Model and serial number of the product, and
- Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

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# **Charting Options**

You can access all of the charting options that are available by opening the chart option menu found under the "View" Tab.

File Vi	ew Tools Help	
Channe	Channels >	
	Chart 🕨	Go To Chart
Y Ax	Data Log 🕨	Zoom In Ctrl+Up Zoom Out Ctrl+Down
	Start Cle-	Default Chart Size Ctrl+R Reset Axes Ctrl+A
	100	Chart (Mouse) Zoom Data (Box) Zoom Pan
	80	Floating Data Cursor Tracking Data Cursor
	40	Line Options
i.		

#### **Charting Options Screen**

#### Data Log Tab

The "Data Log" tab allows you view received data in a table format of any data as it is being recorded, or data retrieved from a file. The Start and Clear button perform the same function as the Start and Clear buttons on the Chart Tab. The adjust button resizes the columns to the smallest size necessary to fit the data in the columns. Before clicking Start, select the checkbox next to the channel(s) number you want to include in your plot.

	View Tools ets Chart Data Auto Scroll Row		perature Units: C	F Legend
Ľ	Stop		idjust	
	DataPoint	LogDate	LogTime	1-P PSI
•	0	5/7/2010	12:26:10 PM	14.7
	1	5/7/2010	12:26:11 PM	14.7
	2	5/7/2010	12:26:12 PM	14.7
	3	5/7/2010	12:26:13 PM	14.7
	4	5/7/2010	12:26:14 PM	14.7
	5	5/7/2010	12:26:15 PM	14.7
	6	5/7/2010	12:26:16 PM	14.7
	7	5/7/2010	12:26:17 PM	14.7
	8	5/7/2010	12:26:18 PM	14.7
	9	5/7/2010	12:26:19 PM	14.7
	10	5/7/2010	12:26:20 PM	14.7
	11	5/7/2010	12:26:21 PM	14.7
-	12	5/7/2010	12:26:22 PM	14.7

Data Log Screen



The "Open" menu item displays a dialog box which allows you to choose a data file to open and display on the graph and in the data log. This field must be a file that was saved by the "Save" menu item in TRH Central. If the file has been modified externally, you may not be able to open it.

The "Save" menu item displays a dialog box which allows you to save the data currently displayed on the graph and in the data log. The file format is (\*.csv) (comma separated values), which can be opened by Microsoft Excel for further analysis and charting. It is strongly recommended that you do not modify this file, or you may not be able to open it again in USB-Temp. Use Excel's "Save As" option to save it as a Microsoft Excel Workbook (\*.xls), which you can then modify.

The "Export Graph" menu item displays a dialog box that allows you to either save an image of the current graph on the Graph Tab, or copy it to the clipboard.

The "Print Preview" menu item displays a standard Windows Print Preview dialog, allowing you to view the item(s) as they would be printed on a printer.





For complete product manual: www.omega.com/manuals/manualpdf/M4707.pdf



# UTC-USB Universal Thermocouple Connector/Converter



U.S.A.:

**Servicing North America:** OMEGA Engineering, Inc., One Omega Dr.

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For Other Locations Visit omega.com/worldwide

It is the policy of OMEGA Engineering, Inc. to comply with all worldwide safety and EMC/EMI regulations that apply. OMEGA is constantly pursuing certification of its products to the European New Approach Directives. OMEGA will add the CE mark to every appropriate device upon certification.

The information contained in this document is believed to be correct, but OMEGA accepts no liability for any errors it contains, and reserves the right to alter specifications without notice.

**WARNING:** These products are not designed for use in, and should not be used for, human applications.



# **Using This Quick Start Manual**

Use this Quick Start Manual with your UTC-USB Universal Thermocouple Connector/Converter with USB output for quick installation and basic operation. For detailed information, refer to the User's Guide (Manual # M4707).

# **General Information**

The UTC-USB is a universal thermocouple connector/converter with a USB output.

# **Included Items**

- 1 UTC-USB Universal Thermocouple Connector
- 1 Software Disk
- •1 USB cable

### Software Installation

The following program files are included on the TRH Central User Software CD supplied with your unit. These files can be downloaded from the omega.com website should you misplace your CD.

- TRH Central Measurement and Data Logging Program
- TRH Central Series Manual (pdf format)
- 1. Insert the TRH-Central User CD that was included with your unit into the CD-ROM drive on your PC. Your system should begin the installation process automatically.
- 2. Follow the instructions given to you from the TRH Central Setup Wizard. The installer will guide you through the steps required to install TRH Central on your computer.
- 3. After completing the steps to install TRH Central, a Device Driver Installation Wizard will appear. Follow the instructions given to you in order to install the necessary device drivers for your UTC-USB device.

Once you have completed the installation of TRH Central and the necessary device drivers, you may launch the TRH Central program via the "Programs" list in your "Start Menu". The program is located in the "Omega" folder and is named "TRH Central".

#### **Channel Configuration**

From the "Tools" pull-down menu select "Configure"..."Channel 1". This will open the program settings table where you can make selections on how you want your system to operate.





### **Configure Device... Button**

This button opens the dialog box that allows you to adjust filter settings to obtain the best balance between response time and reading stability.

Display Channel:	1			
Serial Port:	COM21			
Serial Number:	00417798			
Model Number:	PX409-USB			
Firmware Version:	090817			
Sensor Type:	x			
Range:				
evice Settings	3 🛨			

**Device Configuration Screen** 

### **TRH Central Functions**

#### **Channels Tab**

The "Channels" tab (shown above) is the default screen that is displayed when you run the program. This screen provides a real-time digital reading of temperature in either °F or °C.



**Channel Tab Screen** 

K	Channe	15	
Un	ial No: <b>09</b> t ID: <b>UT</b> cess:		5
	87	۴	
An	bient 96	.6 °F	
Un	its: F	•	Rx:

**Detailed Channel View Screen** 

### **Chart Tab**

The "Chart" tab allows you to start, stop and view realtime data from the transmitters in a screen plot that you can save and print.



**Detailed Channel View Screen** 



## **Start Button**

The "Start" button will open the dialog box shown below. This box allows you to select one or more channels to be plotted. Click the checkbox next to the channel(s) number you want to include in your plot.

	Interval -				
🗸 Untitled 1 📃 🔺	Time/Sa	mple: 1	Second	*	
Untitled 2					
Untitled 3	Total Data Points: 1000 💌				
Untitled 5					
Untitled 6	Total Logging/Plotting Time Period				
Untitled 7					
Untitled 8	Days:	Hours:	Minutes:	Seconds	
Untitled 9	0	0	16	40	
Untitled 10			1		
Options					
Untitled 1	Stop A	atter Period	Has Elapsed		
Unded 1	C Contin	C Continuous Real Time Plot			
	- Line Color				
Visible on Chart	Process:		Ambient		
_	1100030		Ampione		
Include Ambient					
Axis				Arris	
Axis Plot Process on Left Axis	(	Plot Proc	cess on Right	AXIS	
	(		ient on Right		

Start Data Logging/ Plotting Screen

You can choose to have the data logging/chart recording session end after 1000 data points, or have the session run continuously. After 1000 data points have been collected in the continuous mode, the oldest data point is shifted out on the left, and the newest data point is added to the right. Data will continue to be collected and displayed until you click on the "Stop" button above the chart. If you click the OK Button, the data logging sessions will start, and "Recording Data" will flash in the status bar. The "Start" button above the chart will change to "Stop", indicating that if you click it again, the logging session will be terminated. You can also start or stop a data recording session from the File menu. Once data has been collected, you can save it in a (\*.csv) (comma separated values) file and open it in Microsoft Excel for further analysis. It is recommended that you "Save As" in Excel as a Microsoft Excel Workbook (\*.xls). If you do not modify the (\*.csv) version of the file, you can open it from TRH Central's File Menu, and display it in the chart and data log.