



Dual Input, 3-Display Thermometer/Datalogger

Model 421509

Software Help Guide

PC Requirements

- Pentium PC
- CD-ROM drive
- Windows XP, Windows 7, Windows 8.1, and Windows 10

Installing the Windows Application Program

1. Place the supplied software CD in the PC CD-ROM drive and run autorun.exe
2. Change the path if necessary or choose the "Finish" button to install the program to its default location.
3. Remember not to run the supplied software until the meter is properly connected to the PC as described earlier.
4. Launch the program by double clicking the program file in the location where it was saved during installation.

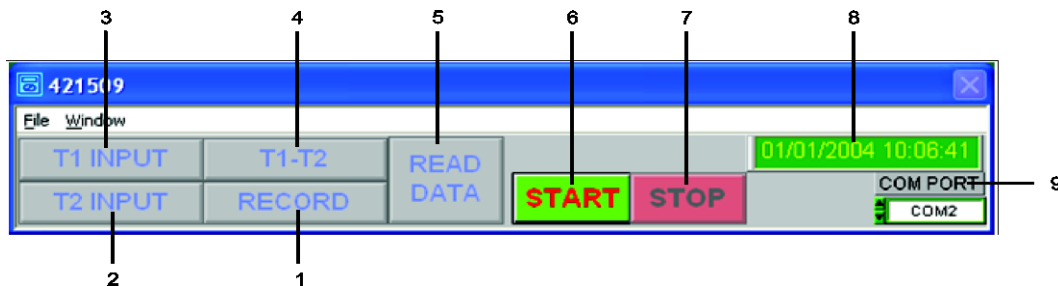
USB PC Interface

The Model 421509 Thermometer is supplied with a Windows® software package on a CD. A communications cable (USB) is also supplied. The program allows the user to operate the meter remotely and view the readings from all three LCD fields on the PC monitor. The software also permits measurement data to be stored as text files on a PC. The data files can then be exported to spreadsheet or other programs for further manipulation (graphing, sorting, filing, etc.).

Connecting the Meter to a PC

Connect the Optical Interface connector to the 421509 Thermometer. The “IR2” label should be facing up. Connect the USB connector to a USB port on the PC.

Software Control Panel Description



- | | |
|----------------------|--|
| 1. RECORD: | Open the recording control window to activate data acquisition |
| 2. T2 INPUT: | Open the T2 input control window to activate function |
| 3. T1 INPUT: | Open the T1 input control window to activate function |
| 4. T1-T2: | Open the T1-T2 control window to activate function |
| 5. READ DATA: | Downloads the logged data from the meter |
| 6. START: | After setting the COM port, Press the “START” button to connect the meter to the PC. The meter’s auto-power-off function will be disabled. |
| 7. STOP: | Press the “STOP” button to stop the meter’s serial port output and then the auto-power-off function will be enabled on the meter. |
| 8. WORKING: | The “WORKING” sign will blink when the meter is communicating with the PC, otherwise “RS-232ERR” will be displayed. |
| 9. COM PORT: | Select COM port (COM1 to 16) |

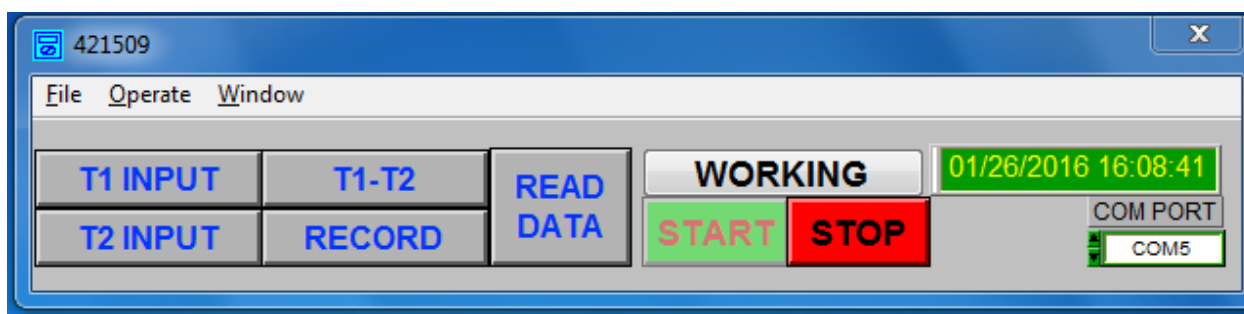
Operation

To connect the meter to the PC, Select the correct COM port.
It may be necessary to view PORTS in the Windows Device manager.

Press the “START” button

WORKING will appear above the Start button if the meter is connected to the PC.

RS232 ERROR indicates that the meter is not connected or not connected on the correct COM PORT.



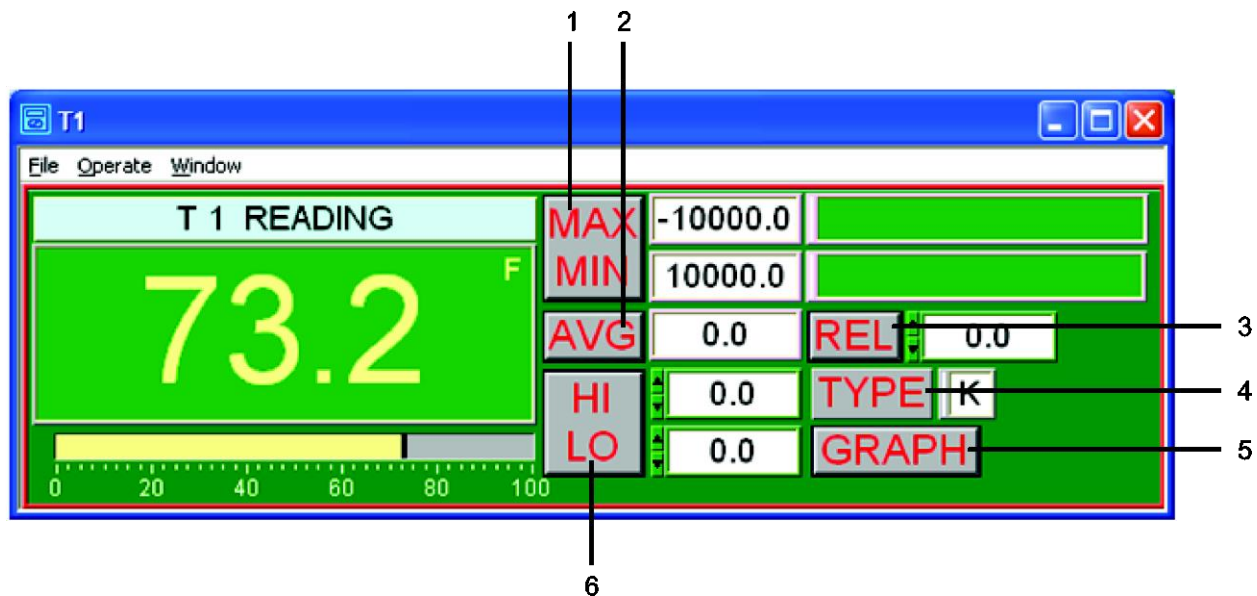
Meter Operations

Monitor either of these inputs:

T1 input, T2 input, T1-T2, RECORD in Real Time, or READ DATA - Download recorded data.

Monitor T1, T2, and/or T1-T2

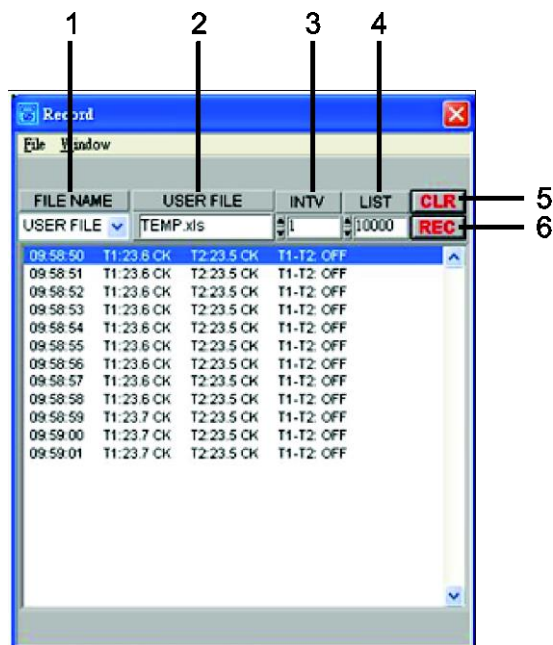
While WORKING is visible, Press the T1 INPUT, T2 INPUT and/or T1-T2 button(s) to open the control window for these items.



- 1. MAX/MIN** Activate Max/Min reading with time
- 2. AVG** Activate Average reading measurement
- 3. REL** Activate Relative mode
- 4. TYPE** Select the K/J/T/E/R/S/N type thermocouple
- 5. GRAPH** Open the graph sub-window
- 6. HI/LO** Activate Hi/Lo limit comparative mode.
The limit will also be visible on the graphical display as red (HI) and blue (LO) horizontal lines. The display value will blink between red and blue when the input temperature value exceeds the LO value.

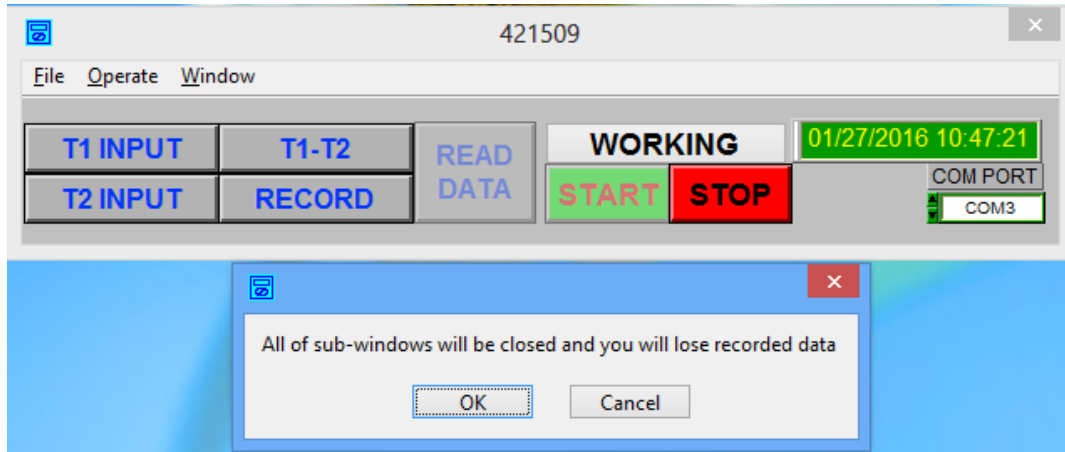
Record - Real time Data (Data Acquisition)

- 1. FILE NAME** Select Default or User Name for Data Acquisition
- 2. USER FILE** Saved in .xls format
- 3. INTV** Sample rate from 1 to 65535
- 4. LIST** Enter the number of the lines from 50 to 15000
- 5. CLR** Clears the screen
- 6. REC / OFF** Starts data acquisition
Press OFF to stop recording

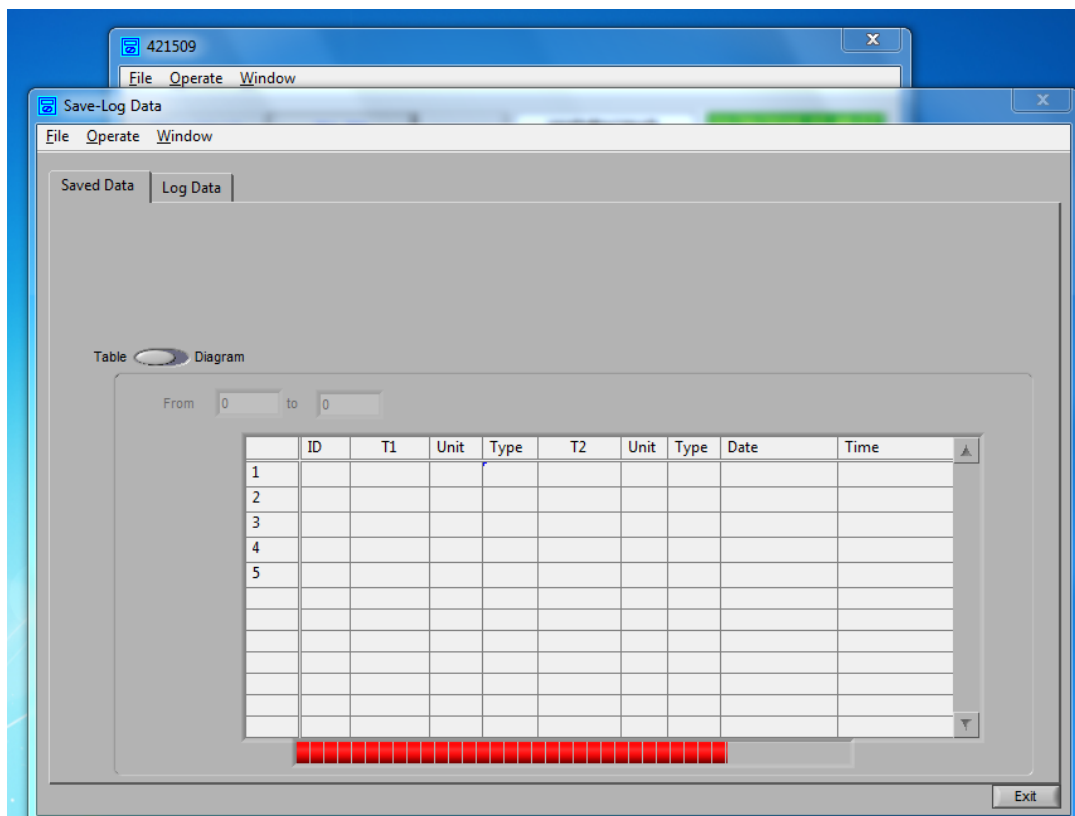


READ DATA - Importing Pre-recorded Data from the Meter

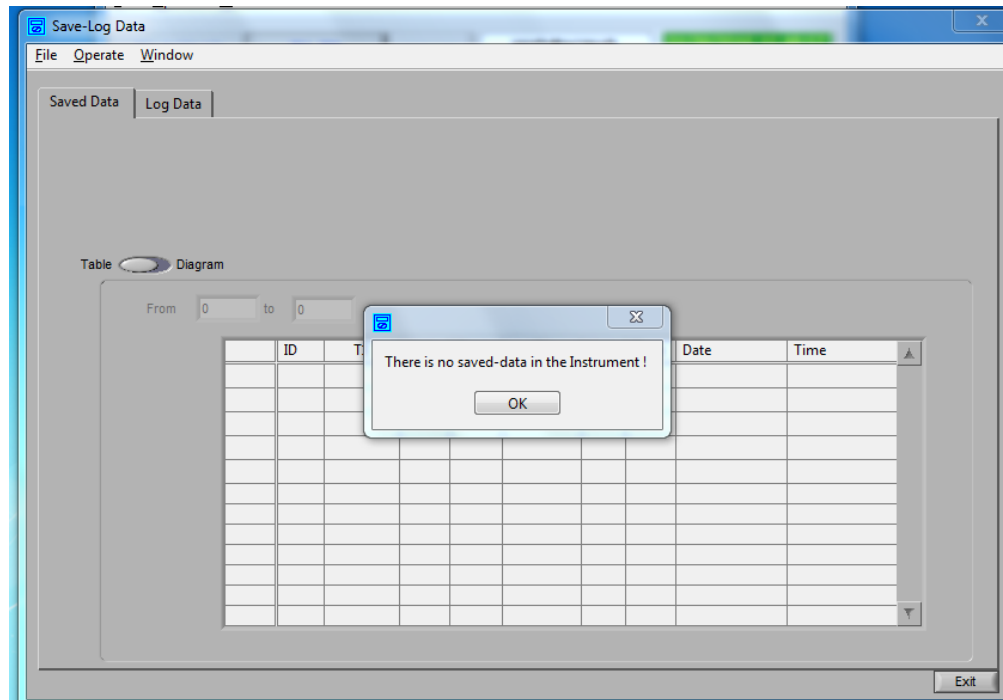
1. While WORKING is visible, Click the READ DATA button
A message will appear, Click OK.



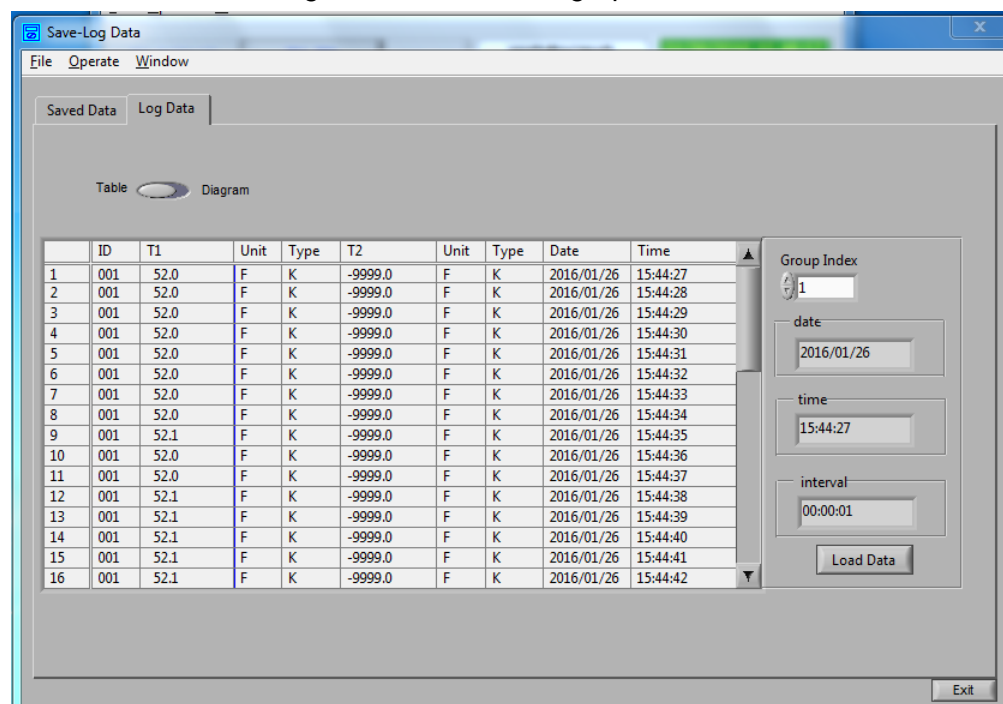
2. The window will open and the data stored in the meter's memory will automatically download to the PC. A red bar at the bottom of the screen will indicate the download progress.



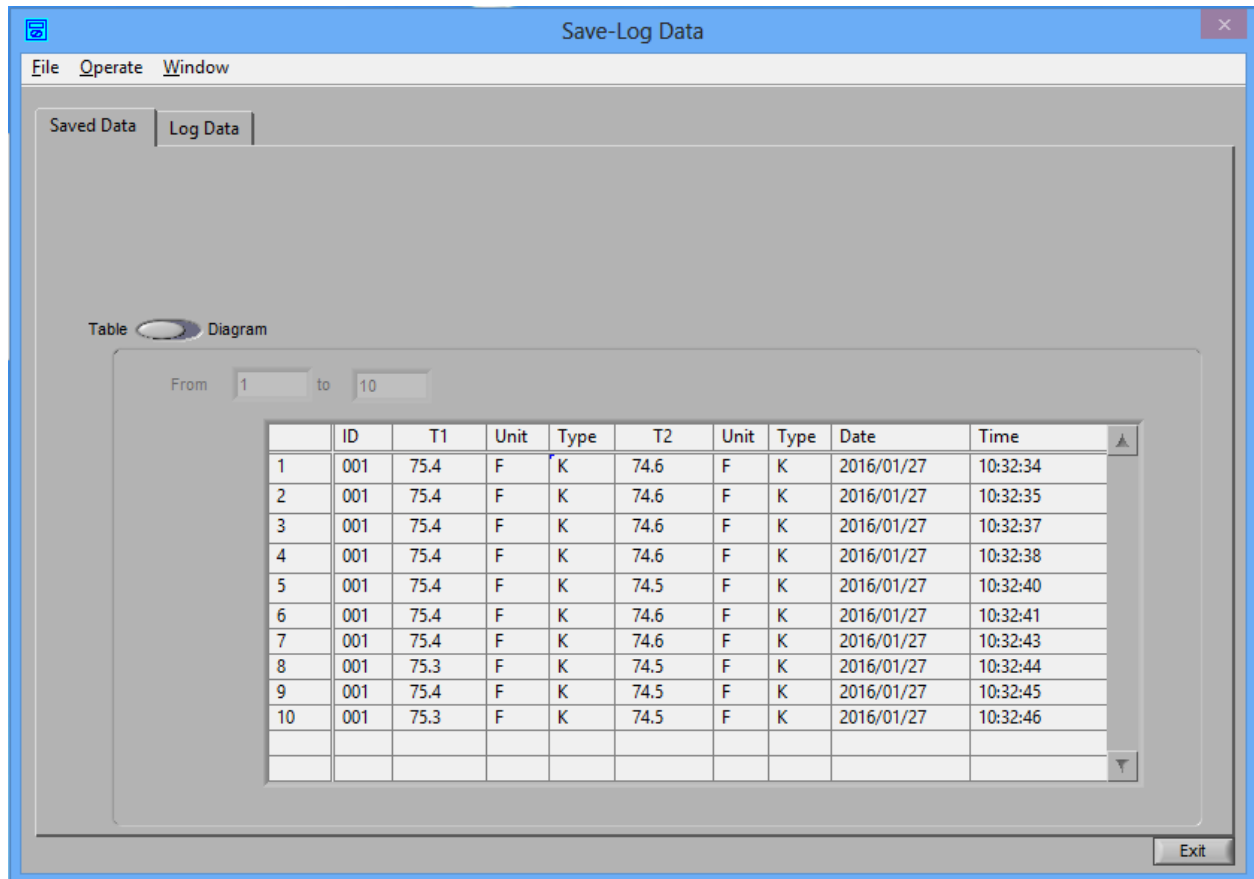
- After the download is complete, a message will appear saying there is no saved data.



- Select the Log Data tab to open the log window that will display the automatically logged data.
- Click the LOAD DATA button to open the data
- Switch from Table to Diagram view to view a graph of the data, if desired



7. Click on the File menu to save the data as text or xls (Excel) format or Print the Data table or graph.
8. The SAVED DATA window will display a Table of Manually saved data.
Click on Diagram to display data in a graph format.
Click FILE and Print data, to print a copy of the data or graph.



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