



USER MANUAL

TempCTRL

1.Contents

1.	Contents	1
2.	Installation procedure for TempCTRL	2
2.1	General.....	2
2.2	TempCTRL software for Windows	3
2.3	TEMP-4 instrument.....	10
3.	Using TempCTRL	11

2. Installation procedure for TempCTRL

2.1 General

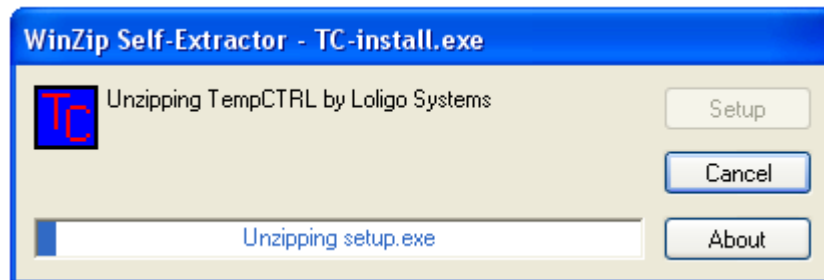
- TempCTRL is a piece of PC software for the TEMP-4 instrument
- TempCTRL require Windows XP or Vista running on a PC with an Intel Pentium IV processor of 1 GHz and 1 GB RAM or better. We recommend monitors with a minimum resolution of 1024x768 pixels.
- One free USB ports is required on your PC.
- TempCTRL will read the four temperature channels and display them in a graph
- TempCTRL activates and deactivates digital relays, to control water temperature
- TempCTRL saves all inputs and calculated values to an Excel data file.

2.2 TempCTRL software for Windows

The following steps will explain how to install TempCTRL on your computer.

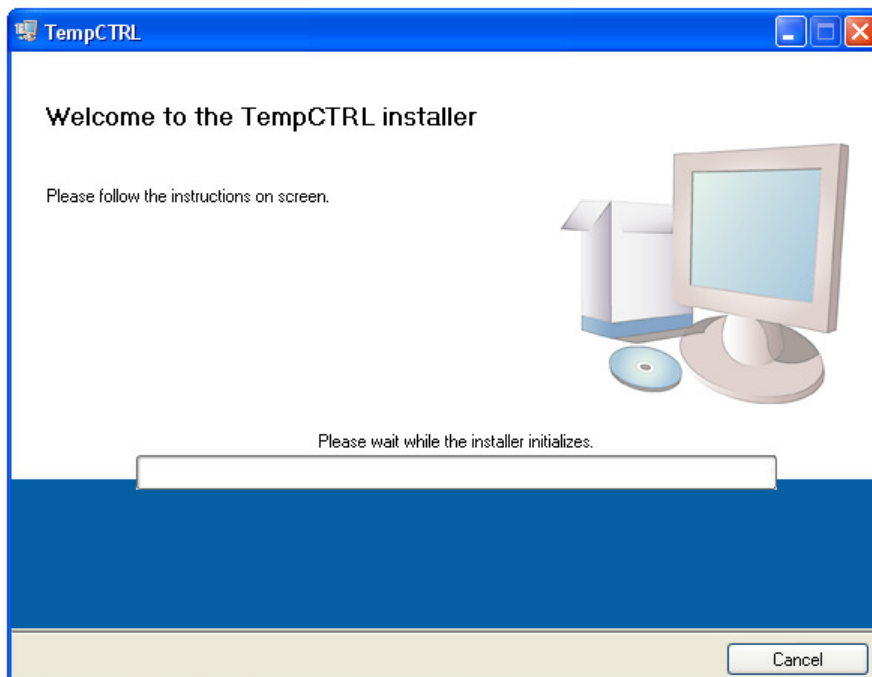
1. Insert the CD labelled TempCTRL and wait until you see Screen 1. If you do NOT see the screen, browse to the root of your CD and double click on the icon labelled TC-install.exe.

Screen 1



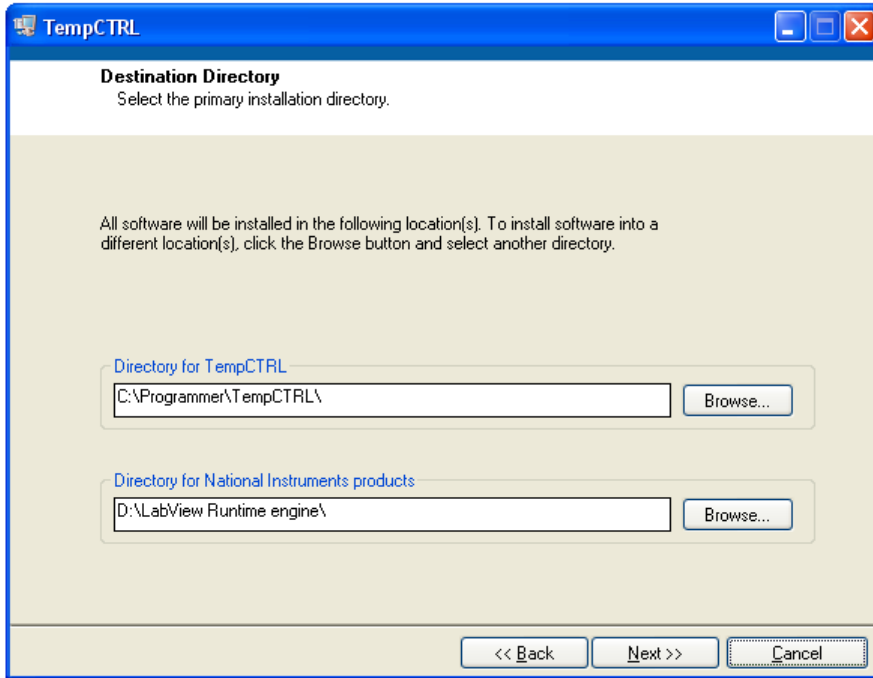
2. Click Next to start installation of TempCTRL.

Screen 2



3. Select destination directory for TempCTRL and for the National Instruments driver and then press Next.

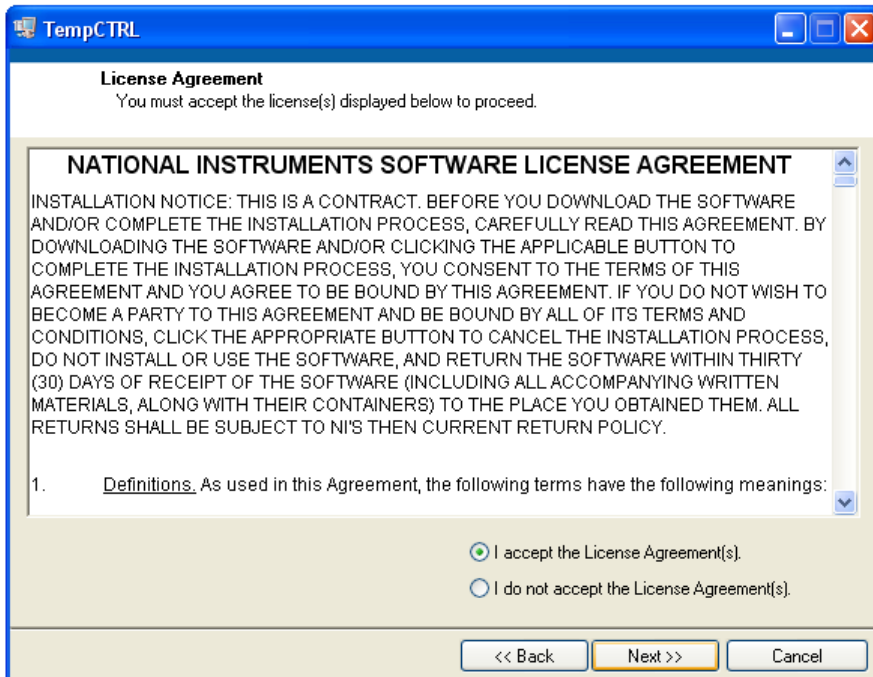
Screen 3



The screenshot shows the 'TempCTRL' window with the 'Destination Directory' tab selected. The window title is 'TempCTRL'. The main heading is 'Destination Directory' with the instruction 'Select the primary installation directory.' Below this, a paragraph states: 'All software will be installed in the following location(s). To install software into a different location(s), click the Browse button and select another directory.' There are two input fields: 'Directory for TempCTRL' with the text 'C:\Programmer\TempCTRL\' and a 'Browse...' button to its right; and 'Directory for National Instruments products' with the text 'D:\LabView Runtime engine\' and a 'Browse...' button to its right. At the bottom, there are three buttons: '<< Back', 'Next >>', and 'Cancel'.

4. If you accept the License Agreement, please select "I accept the License Agreement(s)" and then press Next.

Screen 4

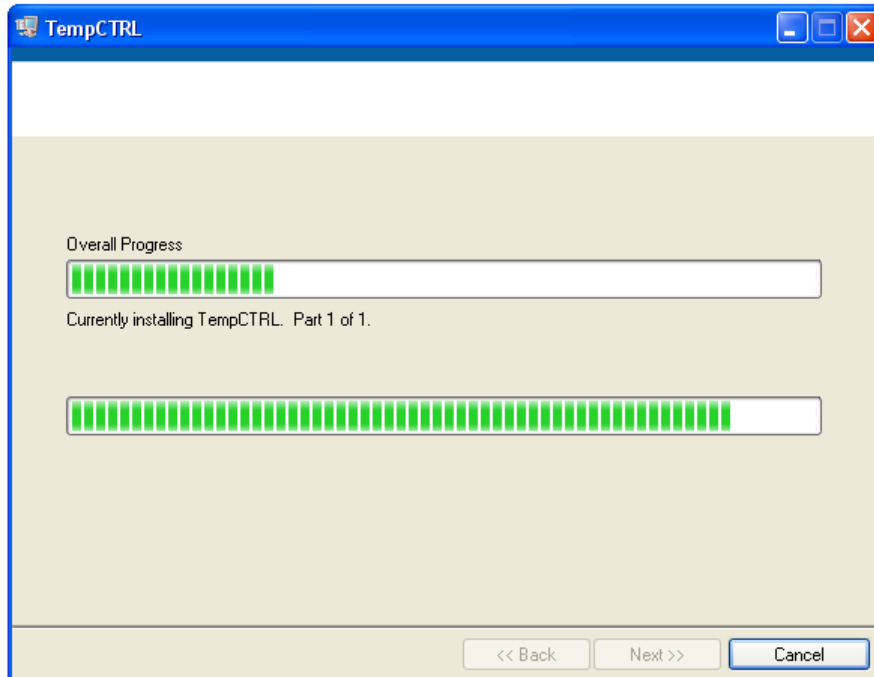


The screenshot shows the 'TempCTRL' window with the 'License Agreement' tab selected. The window title is 'TempCTRL'. The main heading is 'License Agreement' with the instruction 'You must accept the license(s) displayed below to proceed.' Below this, a scrollable text area contains the 'NATIONAL INSTRUMENTS SOFTWARE LICENSE AGREEMENT'. The text reads: 'INSTALLATION NOTICE: THIS IS A CONTRACT. BEFORE YOU DOWNLOAD THE SOFTWARE AND/OR COMPLETE THE INSTALLATION PROCESS, CAREFULLY READ THIS AGREEMENT. BY DOWNLOADING THE SOFTWARE AND/OR CLICKING THE APPLICABLE BUTTON TO COMPLETE THE INSTALLATION PROCESS, YOU CONSENT TO THE TERMS OF THIS AGREEMENT AND YOU AGREE TO BE BOUND BY THIS AGREEMENT. IF YOU DO NOT WISH TO BECOME A PARTY TO THIS AGREEMENT AND BE BOUND BY ALL OF ITS TERMS AND CONDITIONS, CLICK THE APPROPRIATE BUTTON TO CANCEL THE INSTALLATION PROCESS, DO NOT INSTALL OR USE THE SOFTWARE, AND RETURN THE SOFTWARE WITHIN THIRTY (30) DAYS OF RECEIPT OF THE SOFTWARE (INCLUDING ALL ACCOMPANYING WRITTEN MATERIALS, ALONG WITH THEIR CONTAINERS) TO THE PLACE YOU OBTAINED THEM. ALL RETURNS SHALL BE SUBJECT TO NI'S THEN CURRENT RETURN POLICY.' Below the text, there is a list item '1. Definitions. As used in this Agreement, the following terms have the following meanings:'. At the bottom, there are two radio buttons: 'I accept the License Agreement(s)' (which is selected) and 'I do not accept the License Agreement(s)'. At the bottom of the window, there are three buttons: '<< Back', 'Next >>', and 'Cancel'.

5. Click Next.

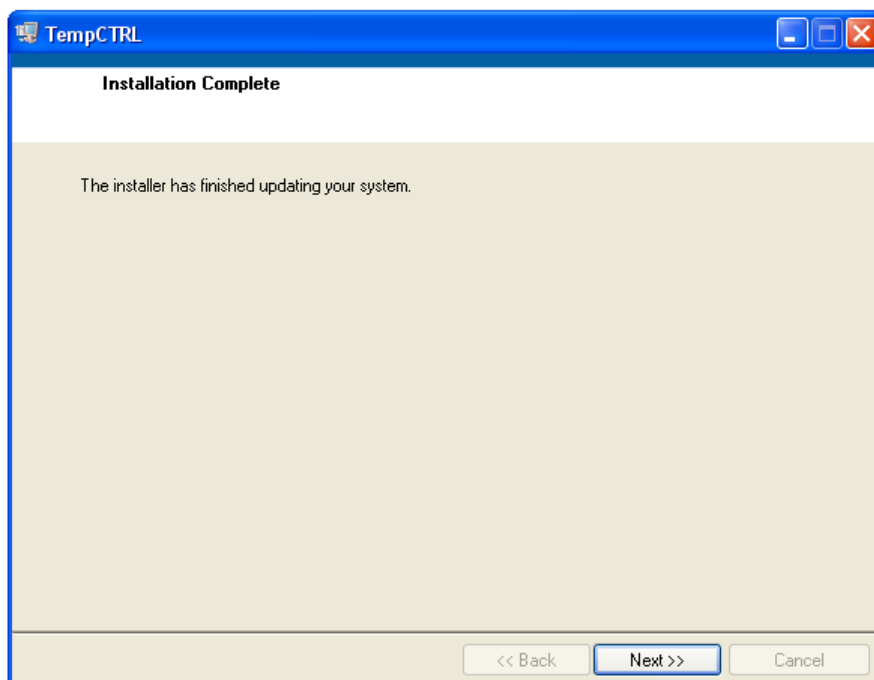
On
Screen 5 the status of the installation is shown.

Screen 5



The installation may take a while. When installation is complete Screen 6 becomes present.

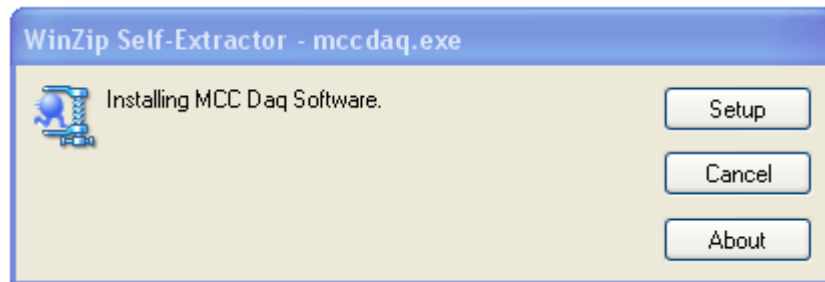
Screen 6



6. Click Next to end installation of TempCTRL.

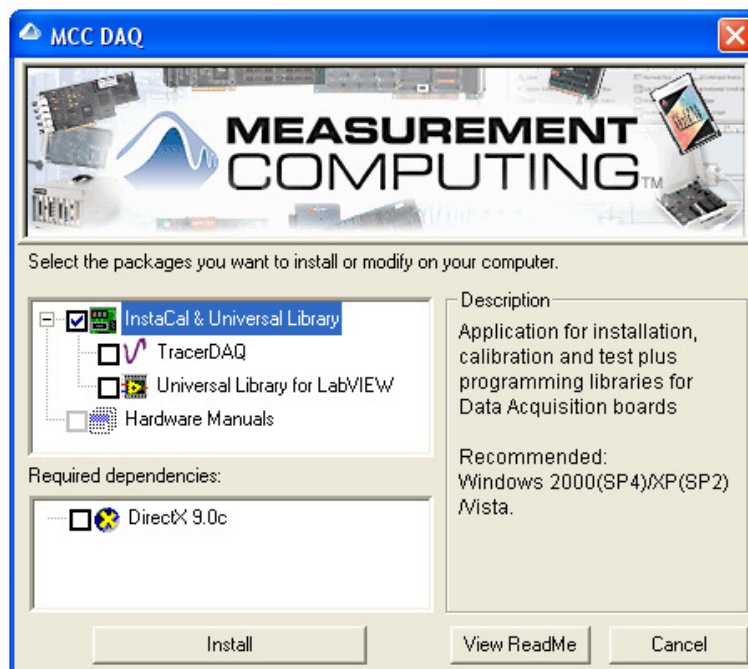
- Click Setup to start installation of the driver software.

Screen 7



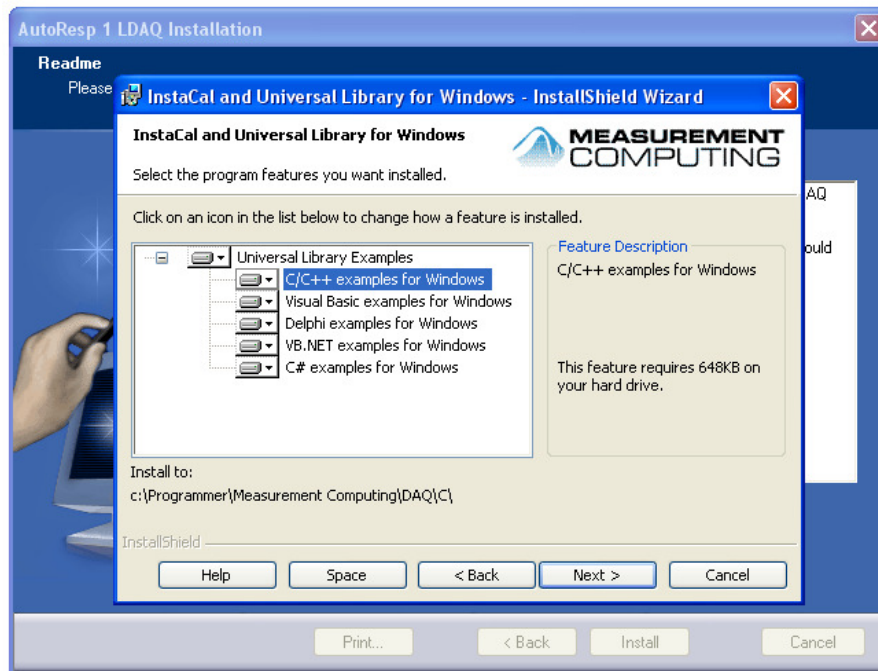
- Make the selection as seen on Screen 8 and press Install.

Screen 8



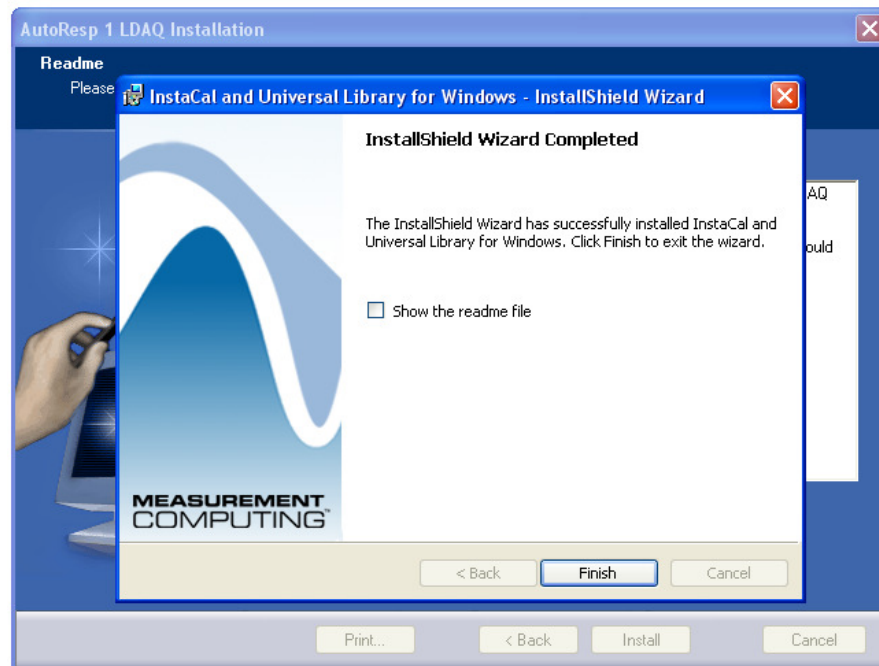
- Click Next to start installation of InstaCal.
- Change the destination directory if you want, when done, press Next.
- On Screen 9 you will see a summary of the installed components, please click Next.

Screen 9



12. Click Install to start installation. When installation is complete, click Finish.

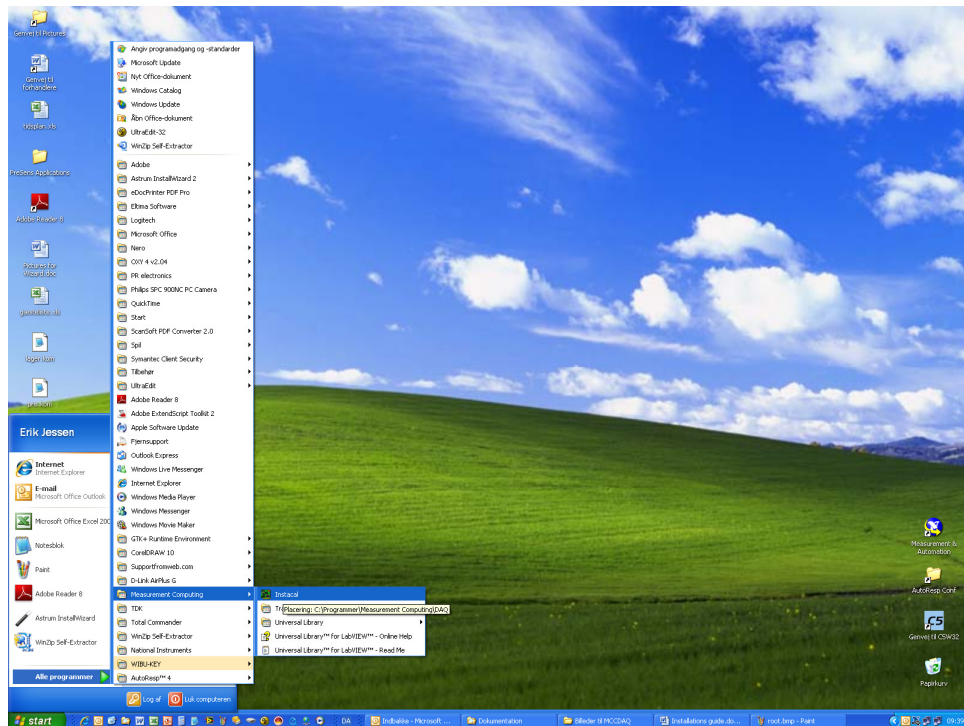
Screen 10



The following steps will explain how to finish the installation of the drivers together with your instruments.

13. Connect the instrument to your computer via an USB port. The instrument will be detected automatically.

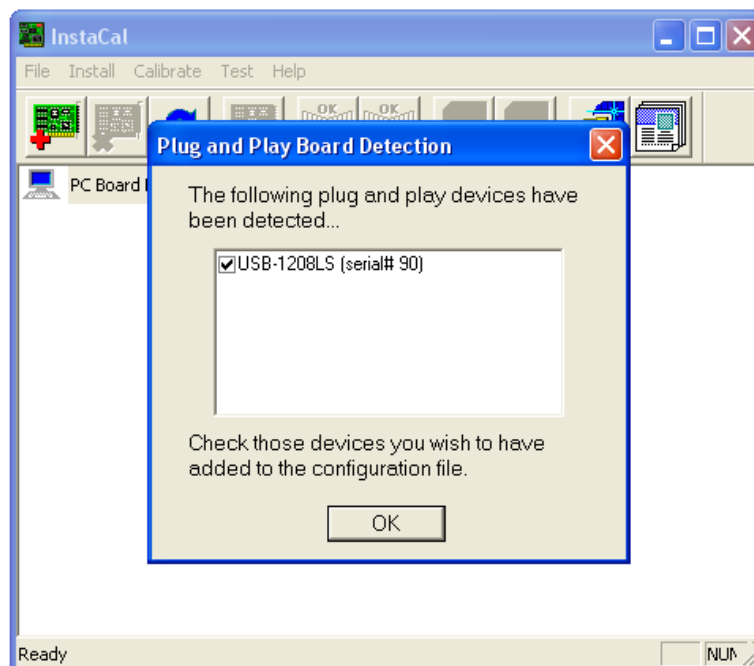
Screen 11



14. Open Instalcal by following the folder hierarchy shown on Screen 11.

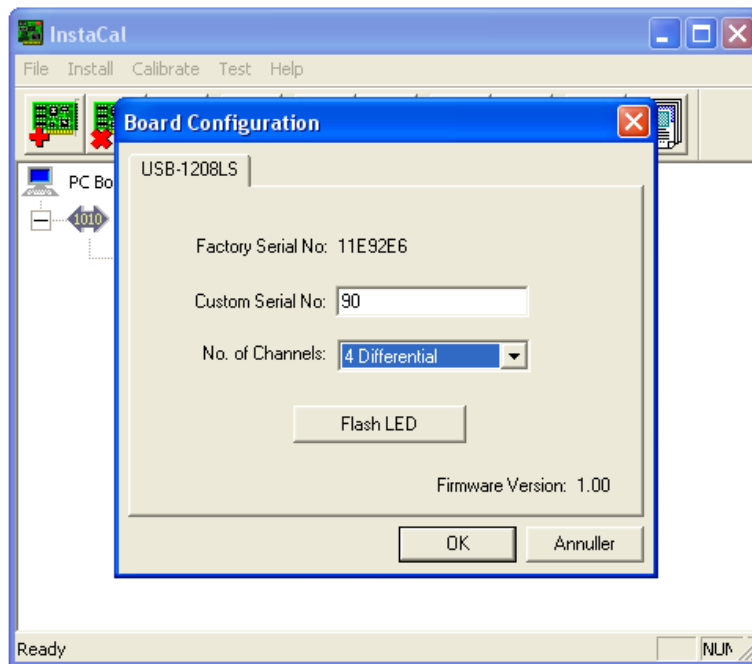
15. When opened Instalcal, your instrument will be detected automatically. Wait a few seconds, until Screen 12 appears. Now press OK.

Screen 12



16. When pressed OK, make a double click on the currently detected board. Now Screen 13 appears. Click on Flash LED and make sure the LED on the instrument is flashing.

Screen 13



You have now installed InstaCal and the instrument has been detected by the software.



2.3 TEMP-4 instrument

INSTRUMENT FRONT SIDE

- IN 1: Pt100 temperature input. Use this input to connect the Pt100 temperature probe.
- IN 2: Pt100 temperature input. Use this input to connect the Pt100 temperature probe.
- IN 3: Pt100 temperature input. Use this input to connect the Pt100 temperature probe.
- IN 4: Pt100 temperature input. Use this input to connect the Pt100 temperature probe.
- PC: USB port for PC communication. Use the USB cable.

INSTRUMENT BACK SIDE

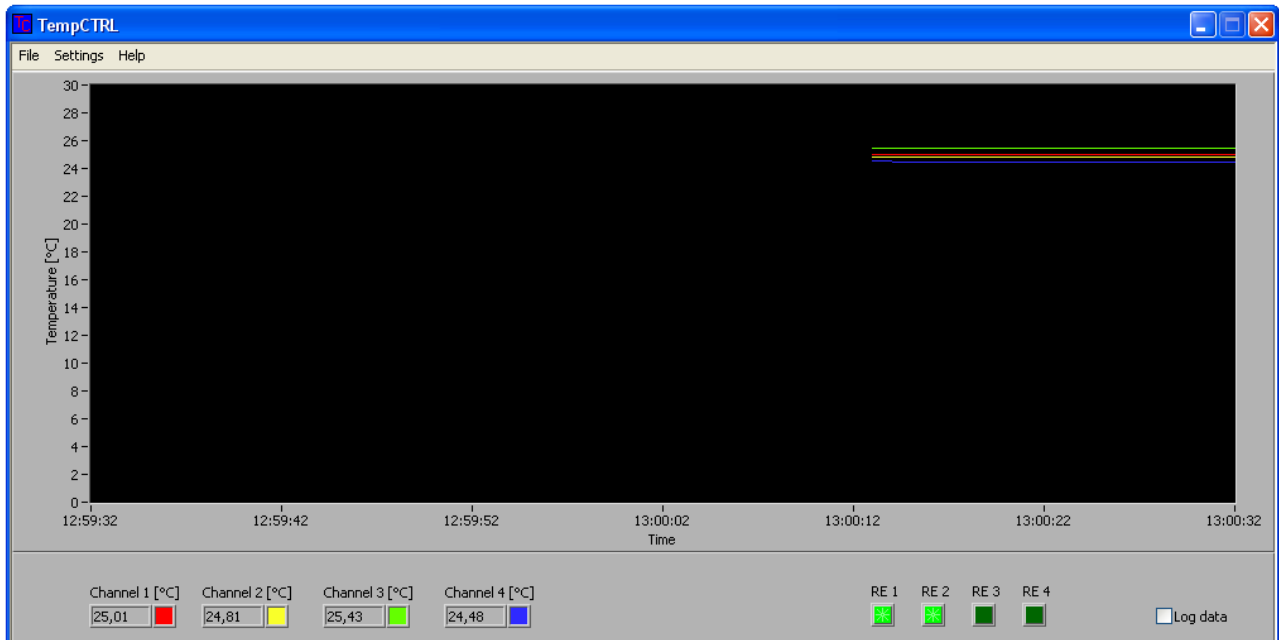
- RE1: Relay socket for 110/230VAC (max 3A) solenoid valve.
- RE2: Relay socket for 110/230VAC (max 3A) solenoid valve.
- RE3: Relay socket for 110/230VAC (max 3A) solenoid valve.
- RE4: Relay socket for 110/230VAC (max 3A) solenoid valve.
- Power: Power input for the DAQ-S instrument. Connect the instrument to a grounded 110/230VAC power supply using a standard pc-type cable with a grounded wall plug.

The TEMP-4 instrument is now ready for use with TempCTRL.

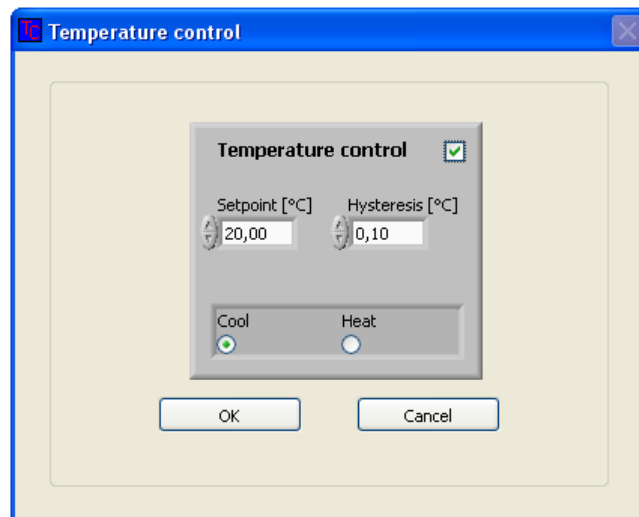
3. Using TempCTRL

Start TempCTRL by clicking Start→All Programs→ TempCTRL → TempCTRL.

Screen 14



The user can now activate/deactivate the relays settings. Click Settings→ Channel 1 to change the settings for relay 1 etc.



Finally the user can start logging experiment data to an Excel file, by clicking Log data.