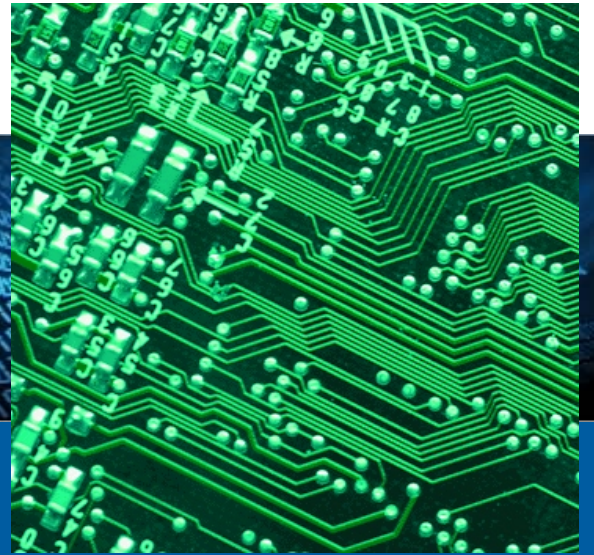


DALI 08

DATA ACQUISITION AND
LOGGING INTERFACE

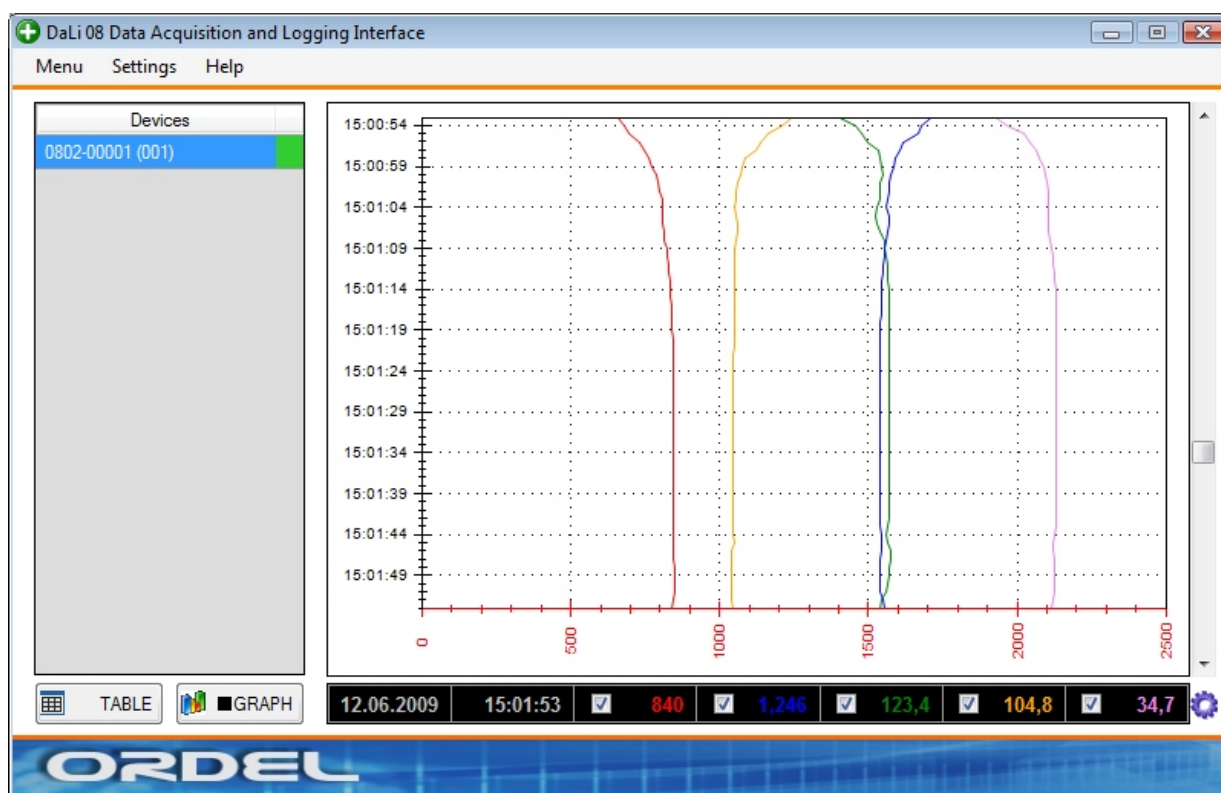


USER'S GUIDE

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1. INTRODUCTION



DaLi08 is a user friendly, reliable and powerful Windows-based software for configuring, downloading, displaying, analyzing and reporting information from UDL100 data logger.

PROGRAM SPECIFICATIONS

- Auto device detection
- Multi device support over USB
- With 1 sec log frequency, minimum data loss
- Auto data recovery on communication errors
- Reliable with daily logging
- Customizable dynamic graphics and spreadsheet
- Customizable preferences
- Common panel for all channels
- Process log ability

- Report templates for easy reporting
- Changeable date/time ranges
- Sensor errors can be viewed
- Exporting Microsoft Excel, XML, Text, HTML, PDF
- Reporting ability during logging

- Graph templates for easy reporting
- Changeable date/time ranges
- Exporting to emf, png, gif, tiff and bmp
- Customizable graph channel settings
- E-mail notification
- Multi language support

2. SYSTEM REQUIREMENTS

Type	Minimum	Recommended
Processor	1.0 Ghz	2.0 Ghz or better
Memory	512 Mb	1Gb or better
Hard Disc	40 Gb	100 Gb
Resolution	1024x768 16bit color	1024x768 16bit color

Program uses .NET Framework 2.0 library. You can find the library in DaLi08 Installation CD. Also, in order to connect the UDL100 to PC, it must have at least one available USB port.

Supported Operating Systems
Microsoft Windows 2000 (SP 4)
Microsoft Windows XP (SP2)
Microsoft Windows Server 2003
Microsoft Windows Vista

3. INSTALLATION

3.1. PROGRAM INSTALLATION

DaLi08 is used with UDL100 Usb Data Logger device. Device is automatically detected by the program. All drivers that are required to install the device can be found in DaLi08 installation CD.

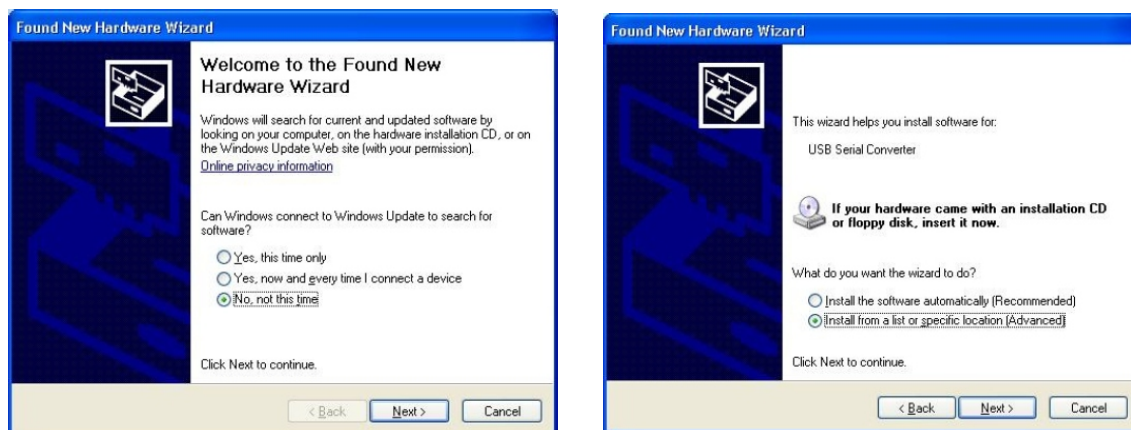
Before installing the program, it is recommended to install the device drivers. Driver installation instructions can be found in the next sections.

After inserting the installation CD, by clicking the Install DaLi08 link on incoming window, you can start the installation. First of all, setup program checks the necessary components. If .Net 2.0 library is not installed, click to install.

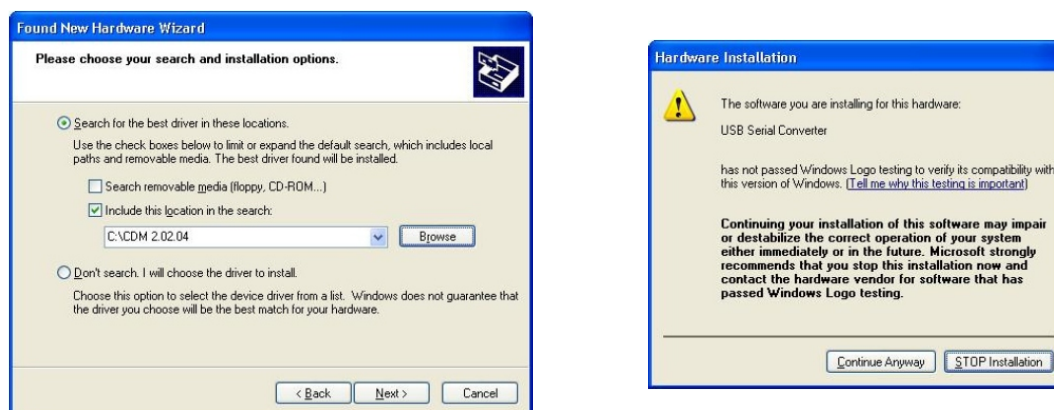
You can select the language of DaLi08 later. Then by following the instructions you can finish the program installation. Default installation directory is C:\Program Files\Ordel\DaLi08.

3.2. DRIVER INSTALLATION - WINDOWS XP

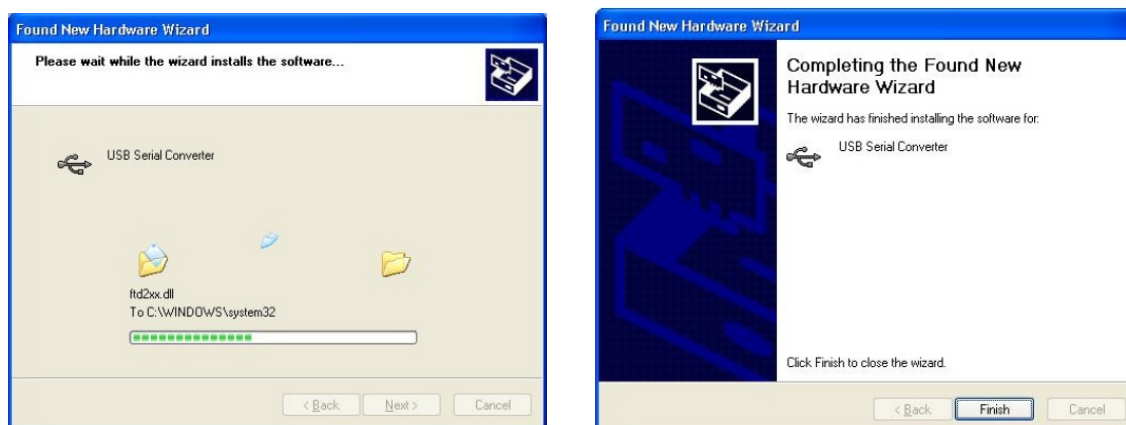
1. After plugging the device into one of the USB port, a message about new device is viewed. Select “No, not this time offtion” and press next. Then select the “Install from a list or specific location” and press next.



2- Select the Sbdriivers folder in setup CD and the continue with the “Next” button

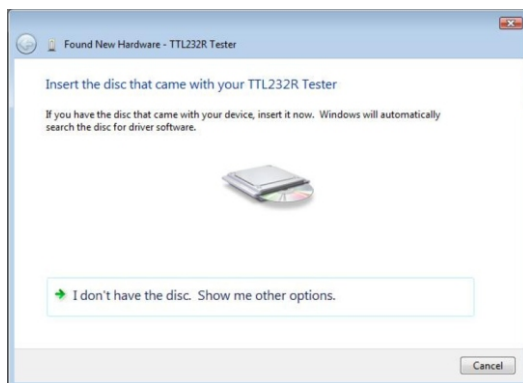


3- Wait for driver loading. Then by pressing the “Finish” button, finish the driver setup.

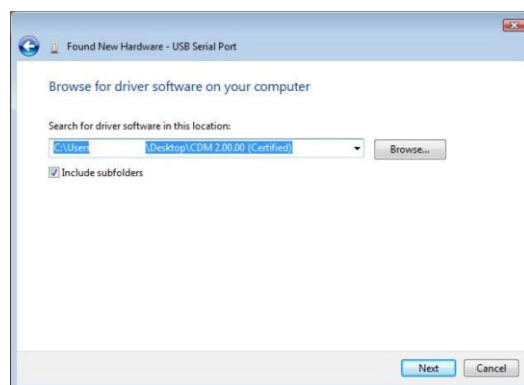
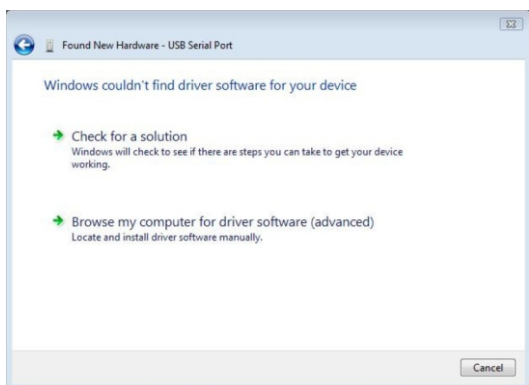


3.3. DRIVER INSTALLATION - WINDOWS VISTA

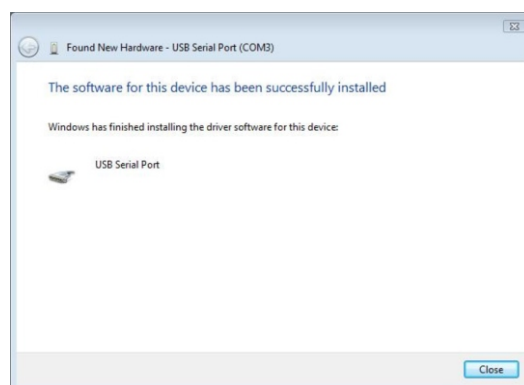
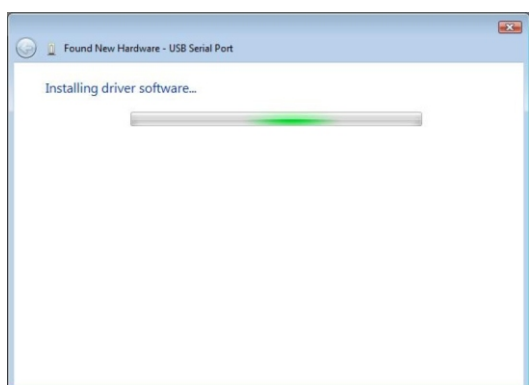
1. Driver the Setup CD. If PC cannot find drivers automatically, Press “I dont have the disc. Show me other options” link.



2. Press “Browse my computer for driver software (advanced)”. Then select the “SBDrivers” folder from CD. If a warning is shown, press “Continue anyway”.

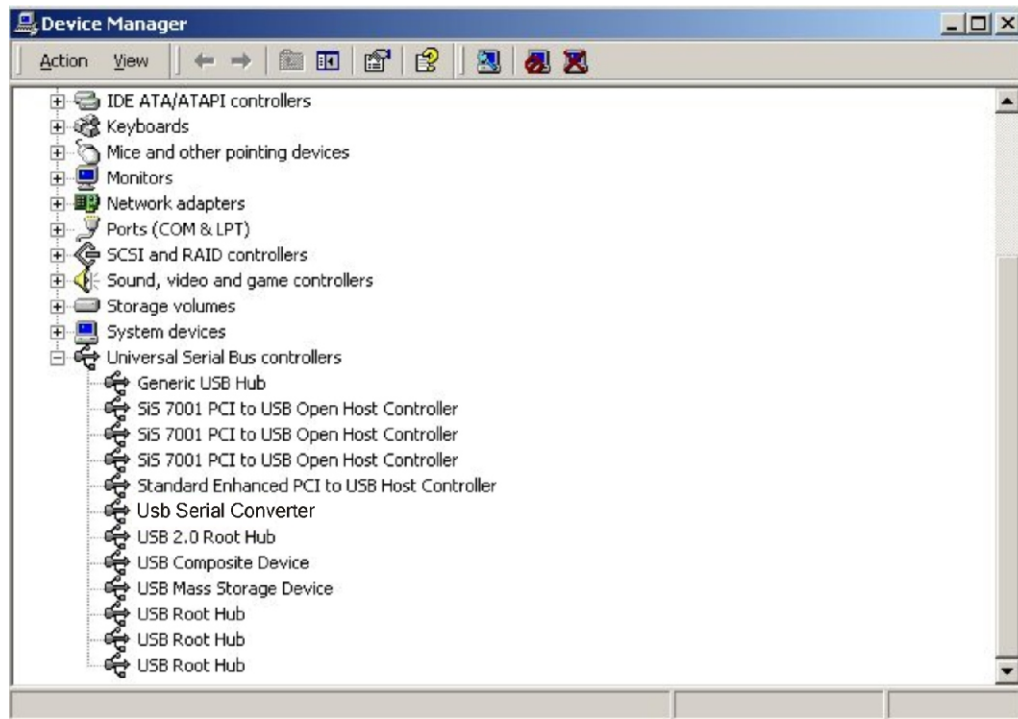


3- Wait for the drivers to load. Then finish the driver setup by pressing “Close” button.



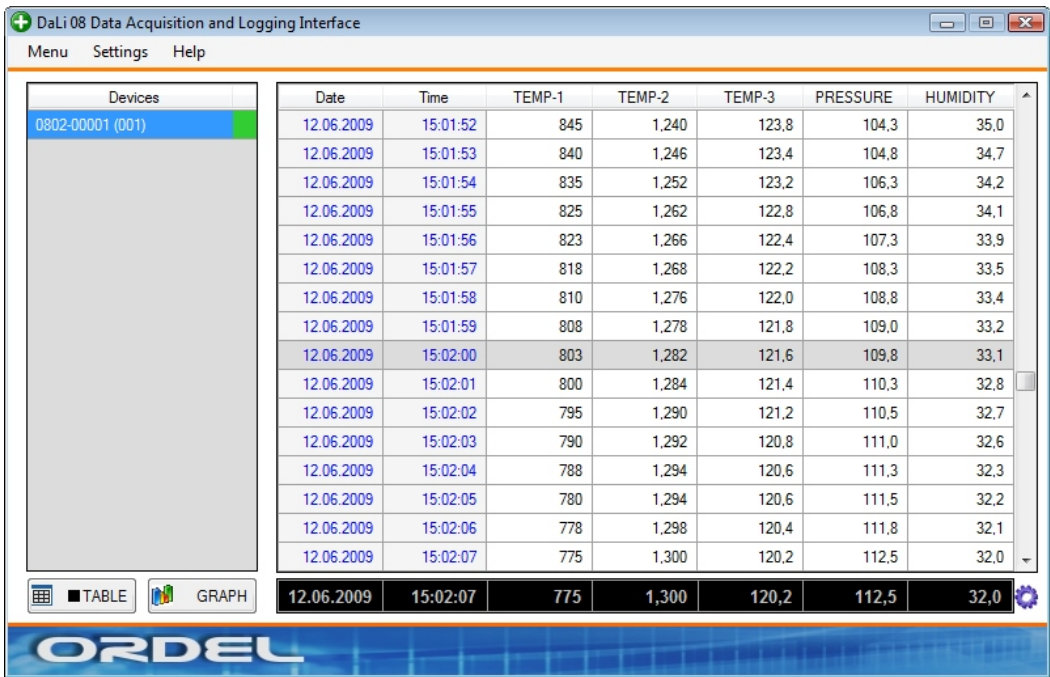
3.4. DRIVER VERIFICATION

After installing the drivers to the PC, you can see the devices on Device Manager. In device manager, expand “**Universal Serial Bus controllers**”. **USB Serial Converter** devices are the UDL100 devices connected to PC.



4. PROGRAM USAGE

After the first run you can see a form like the one below:



You can find the menu information below:

Menu Reporting F2 Graphics F3 Processes F4 Settings F5 Exit		Opens report management form.
		Opens graph management form.
		Opens process management form.
		Opens program settings form.
		Exits program.
Help Contents F1 Web Page About Program		Opens help.
		Opens Ordel web page.
		Shows program and version information.

4.1. ADDING NEW DEVICE

After installing the program and connecting the UDL100 devices to PC, program automatically recognizes the devices and opens the form below. Information about this form can be found below:

New Device Definition

A new device is found, please enter definitions

Device Type: Usb Data Logger

Device Serial Number: 0802-00001

Device Definition: 0802-00001

Device File No: 1

OK Cancel

Type of the device, it can be one of the type below:

- ♦UDL100-2 mV input (-75 .. +75 mV)
- ♦UDL100-3 V input (-15 .. +15 V)
- ♦UDL100-4 mA input (-30 .. +30 mA)
- ♦UDL100-5 thermocouple input (B, E, J, K, L, N, R, S, T, U)

Factory generated serial number of device. It can be seen on device label.

Definition of device determined by user. It can be changed from configuration page.

Device information is saved and logging starts.

Unique number of device.

Device information is not saved and during the program session, it will not be visible. But on the other run of the program, the cancelled device is found and this form is viewed again.

4.2. INSTANTANEOUS DATA VIEW (TABLE VIEW)

After running program and defining the devices connected, you can see a spreadsheet view like the one below. On the left side of the window, all devices connected to PC can be found. On the right side, device channel values exist and they are updated for a frequency of 1 second. First two columns are used to display date and time value and the other channels are used for incoming data. If sensor is broken, an error message can be seen.

User may copy data with Ctrl + C key combination and paste into the Excel, Word or text files.

Small squares on the device list shows the communication status. Green background means device is online and red background means device connection is broken.

Status change button is used to stop auto scrolling or have the table started scrolling.

You can find the details on the window below:

Device List; devices connected to PC can be found in this list. Devices are listed with their definitions and unique numbers.

Connection status (Green means device is online, red means connection is broken)

Channel columns and date/time information

Date	Time	TEMP-1	TEMP-2	TEMP-3	PRESSURE	HUMIDITY
12.06.2009	15:01:52	845	1,240	123,8	104,3	35,0
12.06.2009	15:01:53	840	1,246	123,4	104,8	34,7
12.06.2009	15:01:54	835	1,252	123,2	106,3	34,2
12.06.2009	15:01:55	825	1,262	122,8	106,8	34,1
12.06.2009	15:01:56	823	1,266	122,4	107,3	33,9
12.06.2009	15:01:57	818	1,268	122,2	108,3	33,5
12.06.2009	15:01:58	810	1,276	122,0	108,8	33,4
12.06.2009	15:01:59	808	1,278	121,8	109,0	33,2
12.06.2009	15:02:00	803	1,282	121,6	109,8	33,1
12.06.2009	15:02:01	800	1,284	121,4	110,3	32,8
12.06.2009	15:02:02	795	1,290	121,2	110,5	32,7
12.06.2009	15:02:03	790	1,292	120,8	111,0	32,6
12.06.2009	15:02:04	788	1,294	120,6	111,3	32,3
12.06.2009	15:02:05	780	1,294	120,6	111,5	32,2
12.06.2009	15:02:06	778	1,298	120,4	111,8	32,1
12.06.2009	15:02:07	775	1,300	120,2	112,5	32,0

Spreadsheet page access button

Configuration page access button

Channel values

Status change button

Graph page access button

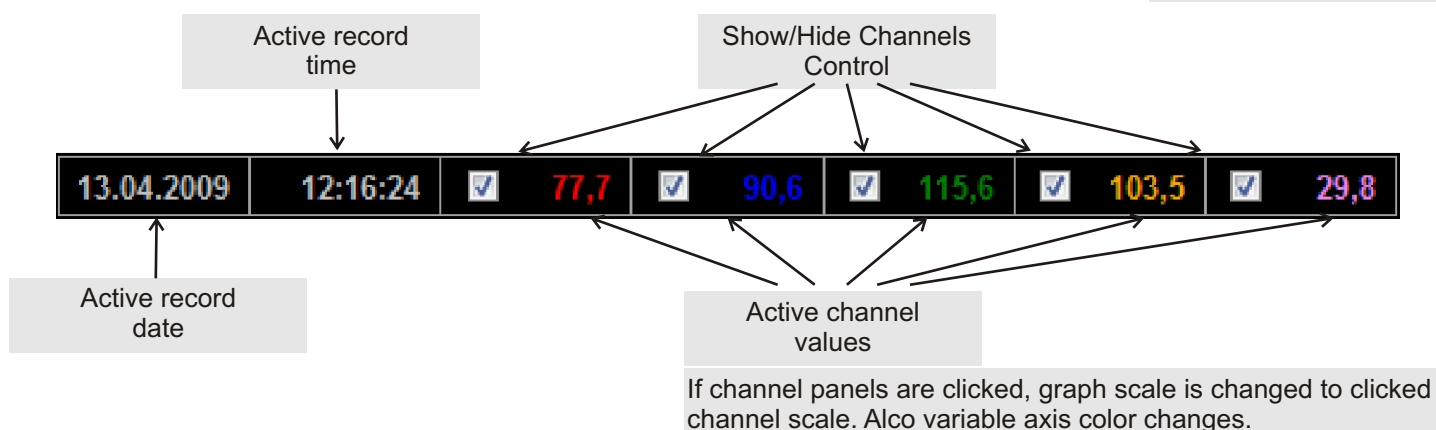
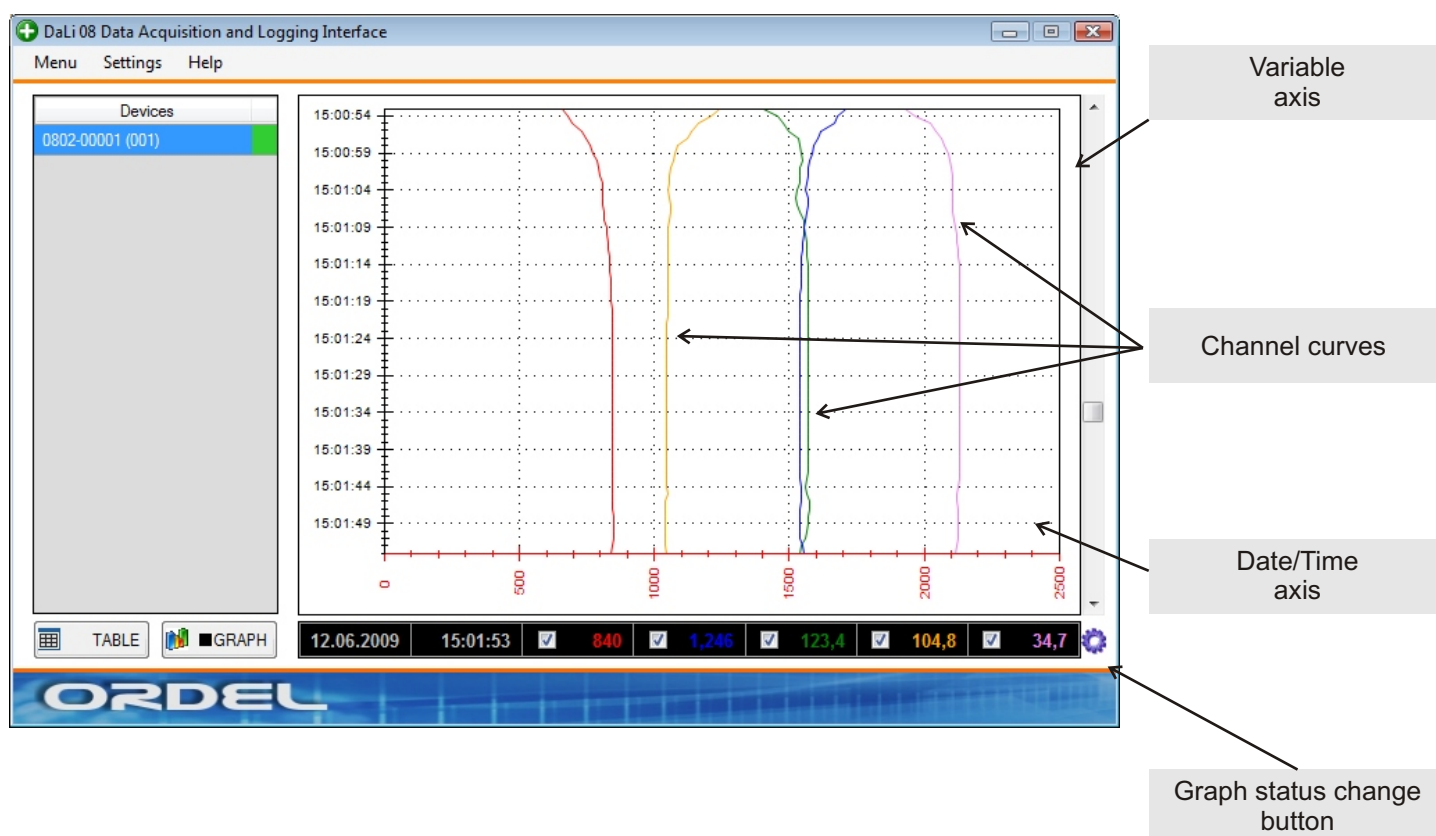
4.3. INSTANTANEOUS DATA VIEW (GRAPHIC VIEW)

Below, you can see a sample graphics page. In this screen, curves for five channels of the devices are drawn. Channel settings can be done using the General Settings (Go to page 12 for detailed information).

By clicking the graph area, users can see the values on the bar below. They change according to mouse position. By using Mouse Wheel or right mouse button, user may zoom or unzoom on an area.

In all these operations, graph becomes static. If user wants graph to be updated dynamically, Status Change button should be clicked.

If user does not make any operations on graph area, after a fixed seconds, graph can start scrolling automatically. Value of this "sleeping" time is determined in General Settings section.

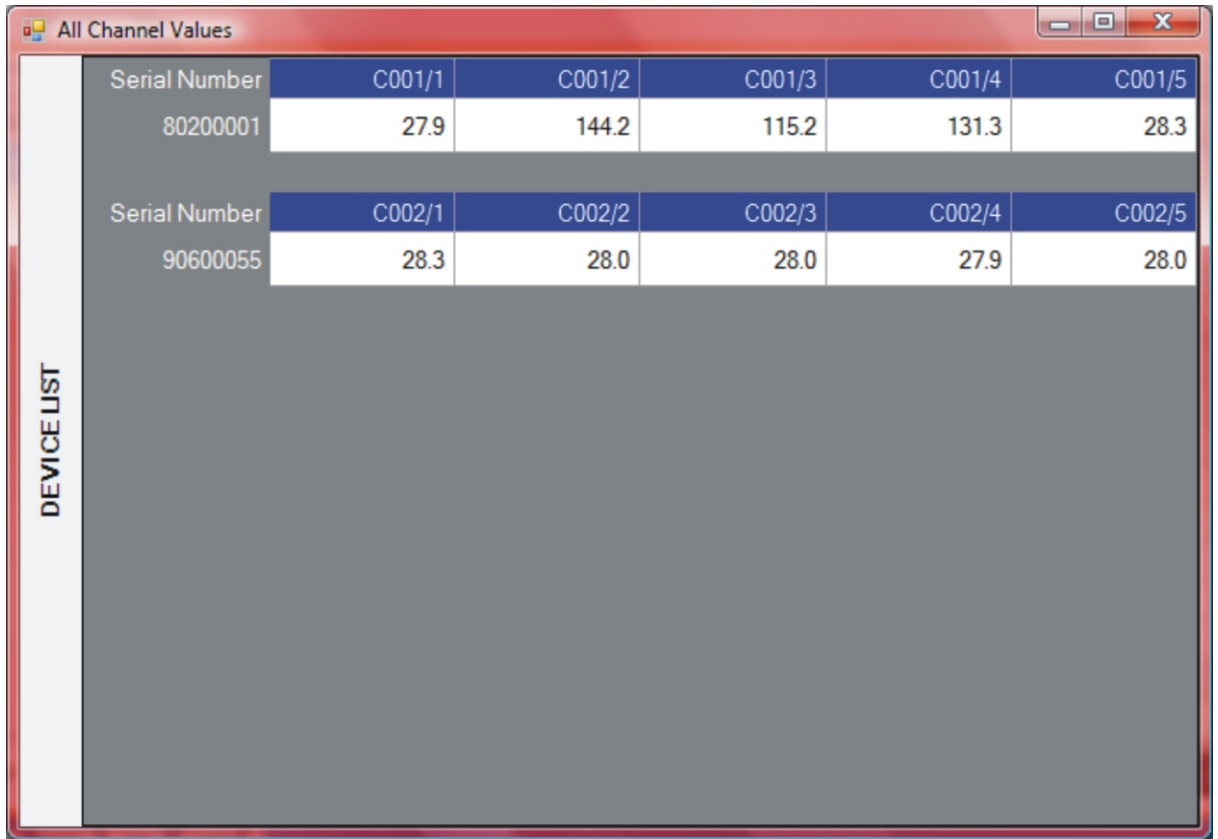


4.4. MONITORING ALL DEVICES

Press F8 key to display information that is coming from all connected devices simultaneously. Devices are sorted by serial numbers and user descriptions. The first line of the table shows channel information and the second line shows the value of the corresponding channel above.

If a sensor is not available a red colored error message will be displayed. This message specified by 'General Sensor Error Message' value in 'General Settings'.

If a device is not available all the channels belong to the device displayed empty.



Serial Number	C001/1	C001/2	C001/3	C001/4	C001/5
80200001	27.9	144.2	115.2	131.3	28.3

Serial Number	C002/1	C002/2	C002/3	C002/4	C002/5
90600055	28.3	28.0	28.0	27.9	28.0

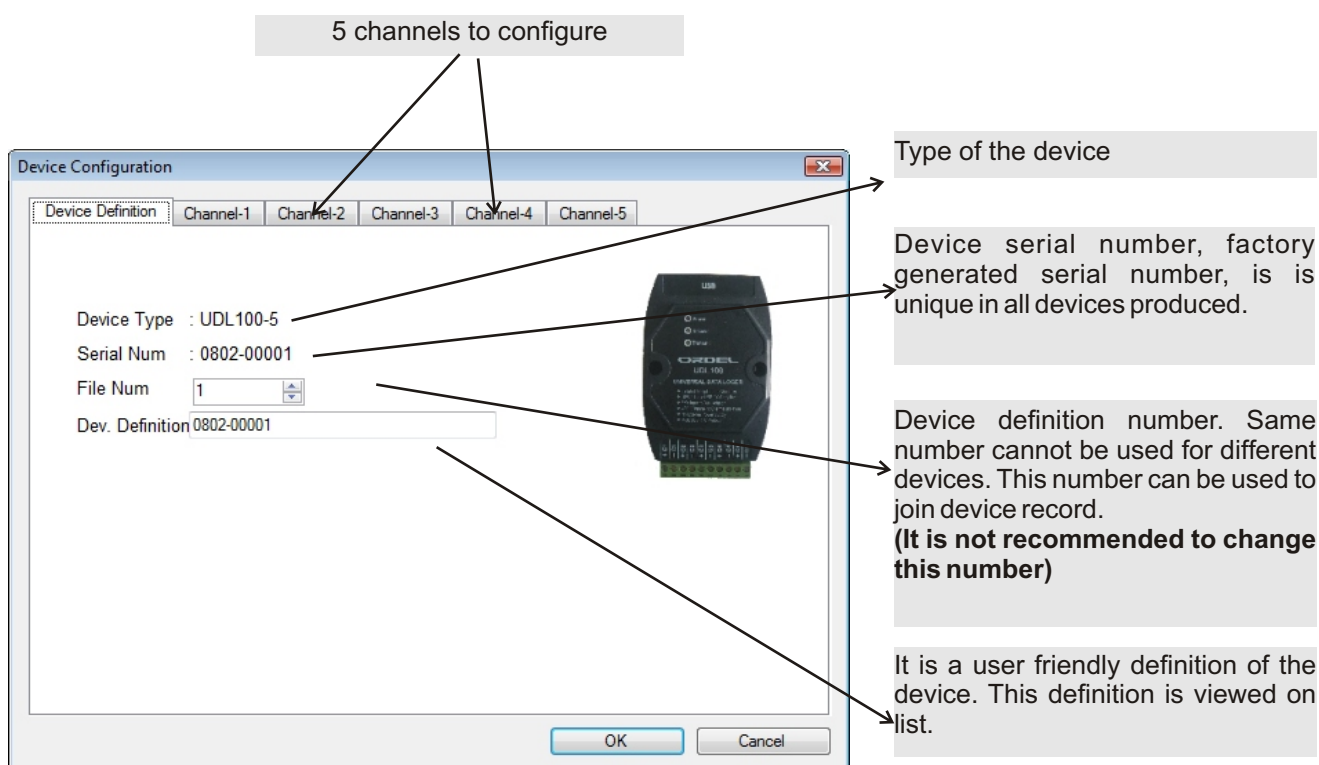
4.5. DEVICE CONFIGURATION

All UDL100 devices connected to PC can be configured via Dali08 program. Configuration page is customized according to device type. You can find a thermocouple type (UDL100-5) device configuration sample below.

As you see on image, configuration page includes “Device Definition” and “Channels” sub pages. Device definition includes general information about the device.

Channel definitions are used to configure channels. New settings are saved when the page is changed or the program is closed.

You can see the device definition page below:



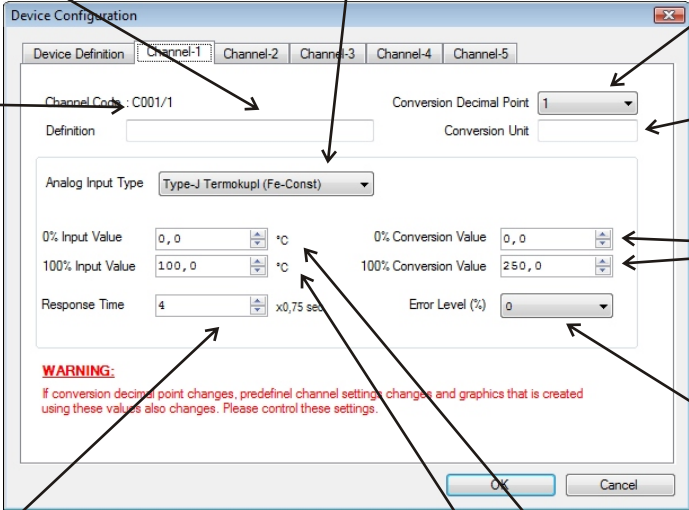
Below, you can find a sample configuration.

User friendly definition of the channel. (For example Oven-1, PressureSensor-3)

It is valid for UDL100-5 type devices (thermocouple input). It determines the thermocouple type connected.

Decimal point is used to generate reports and graphs using the raw sensor values.

Kanal Kodu



Unit is used on reports and graphs.

Lower and higher conversion values

If sensor is broken, this value determines the percentage of the output value.

It determines the time constant of digital filter. If this value is increased, reading stability increases but instantaneous changes may not be seen.

Lower and higher input values

4.6. REPORT MANAGEMENT

Dali08 is designed to make reporting easy but with powerfull abilities. Before creating a report with program, a report format is created and saved to system.

REPORT TEMPLATE LIST

Report Templates

Report Templates

- 1minAvgReport
- 1hourAvgReport
- DailyMinReport
- DailyMaxReport

NEW

CHANGE

DELETE

CREATE

CLOSE

List of previously created report formats

Creates new report format

Edits the selected report format from list

Deletes the selected report format from list.

A new report is created using the selected report format.

Exits form.

REPORT TEMPLATE CREATOR FORM

Determines the time range for a single row created. Here are the options:

- 1,2,3,5,10,15,30,45 seconds
- 1,2,3,5,10,15,30,45 minutes
- 1,2,3,6,12 hours
- 1 day

Determines if the date/time information is real time or relative to first record point.

Determines the data usage while creating the reports. Here are the options:

- ◆ Instantaneous: Uses the values at a certain time.
- ◆ Minimum: Uses the calculated minimum values.
- ◆ Maximum: Uses the calculated maximum values.
- ◆ Average: Uses the average values calculated.

If selected "None", date/time column is not created otherwise its format becomes the selected format from list.

It determines the font size.

It is used to add a details section to the report.

Channel is added to selected channels list.

Channel is removed from selected channels list.

All channels of the all devices defined in program

Used to create a order number for rows. If it is selected as "None" this column is not created.

Name of the report format (required)

If selected, an error message is written for the break sensor conditions. If not, a value is used that is selected as "Error Level" in configuration.

Used to hide the rows that belong to offline time.

Report Template

Report Name: 1hourAvgReport

Timing: 1 hour

Report Type: Average

Time Visual Format: Real Time

Date Format: 31 December 1999 Friday

Time Format: 23:59:59

Font Size: 8

Explanation Line

AVAILABLE CHANNELS

Kanal Kodu	Kanal Tanımı
C001/1	
C001/2	
C001/3	
C001/4	
C001/5	
C002/1	
C002/2	
C002/3	
C002/4	
C002/5	
C003/1	

SELECTED CHANNELS

Kanal Kodu	Kanal Tanımı
C003/1	
C003/2	
C003/3	
C003/4	
C003/5	

Error Message

Line Number

Hide Blank Lines

OK

Cancel

Saves the changes and a new report format is created.

Exits without saving report format.

REPORT DATE/TIME FORM

This form shows the report templates created on the left side and buttons to create, edit and delete templates. If a report template is selected and Generate button is pressed, "Report Date/Time" form is opened.

This form includes the date time information and some other controls to create report. User may select date/time manually or may select directly from radio buttons.

Also by pressing the "Use Process Information" radio button, user may select date time using a process' information.

After pressing OK, report is generated. Sample report view can be seen below:

SAMPLE REPORT FORM

Report Viewer

File

Row Number	Date	Time	C001/1	C001/2	C001/3	C001/4	C001/5	C002/1	C002/2	C002/3	C002/4
24	20 April 2009	16:17:35									
25	20 April 2009	16:18:35	71.9	99.8	103.6	117.1	22.5				
26	20 April 2009	16:19:35	71.9	99.8	103.6	117.3	22.4				
27	20 April 2009	16:20:35	71.8	99.8	103.6	117.5	22.3				
28	20 April 2009	16:21:35	71.8	99.8	103.6	117.5	22.4				
29	20 April 2009	16:22:35	71.8	99.9	103.6	117.5	22.4				
30	20 April 2009	16:23:35	71.8	99.9	103.6	117.5	22.4				
31	20 April 2009	16:24:35	71.8	99.9	103.6	117.5	22.4				
32	20 April 2009	16:25:35	71.8	99.9	103.5	117.4	22.5				
33	20 April 2009	16:26:35									

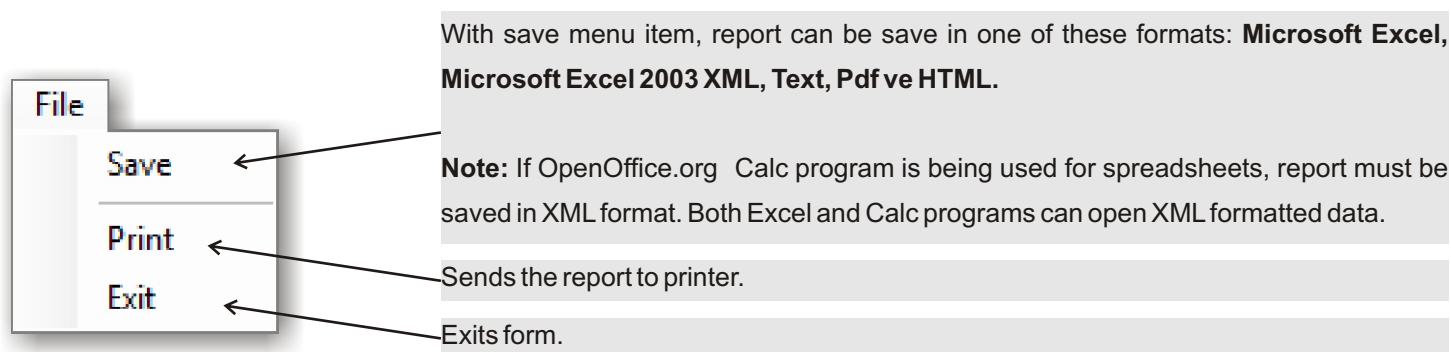
STATISTICS

Statistics	C001/1	C001/2	C001/3	C001/4	C001/5	C002/1	C002/2	C002/3	C002/4
Record Count	10	10	10	10	10	0	0	0	0
Mean	71.80	99.80	103.50	117.28	22.40	NaN	NaN	NaN	NaN
Minimum	71.7	99.6	103.0	116.8	22.3	0.0	0.0	0.0	0.0
Maximum	71.9	99.9	103.6	117.5	22.5	0.0	0.0	0.0	0.0
Median	71.80	99.80	103.60	117.46	22.41	NaN	NaN	NaN	NaN
S.Deviation	0.06	0.12	0.19	0.28	0.06	NaN	NaN	NaN	NaN
Sum	718.05	997.98	1034.97	1172.85	224.03	0.00	0.00	0.00	0.00
SqrSum	51558.90	99596.44	107115.79	137557.58	5018.91	0.00	0.00	0.00	0.00

Report Name: sdgfsdfsdf Start : 4/20/2009 3:53 PM End : 4/20/2009 4:53 PM Row Count: 60 Creation Time: 0.1 sn

As you see from the image, report is created with selected options and channel values are listed according to the channel configuration. Below you can see another table for statistics. Used statistics are **number of records, mean, minimum, maximum, standard deviation, sum and sum of squares**.

You can find the menu items and explanations below:



4.7. GRAPHIC MANAGEMENT

Before creating graphs with program, a new graph template is created and saved to system.

GRAPH TEMPLATE LIST

Graphics Templates

Graphic Templates

Daily Graphics

NEW

CHANGE

DELETE

CREATE

CLOSE

Creates new graph format

Edits the selected graph format from list

Deletes the selected graph format from list.

A new format is created using the selected graph format.

Exits form.

List of previously created graph formats

GRAPH TEMPLATE CREATOR FORM

Determines the data usage while creating the graphs. Here are the options:

- ♦Instantaneous: Uses the values at a certain time.
- ♦Minimum: Uses the calculated minimum values.
- ♦Maximum: Uses the calculated maximum values.
- ♦Average: Uses the average values calculated.

Determines the range for creating graphs.

If selected "None", date/time column is not created otherwise its format becomes the selected format from list.

It determines the font size.

It is used to add a details section to the graph.

Number of sections for vertical (variable) axis.

Number of sections for horizontal (time) axis.

Strength of graph grid lines.

Color of graph grid lines.

Color of graph background.

It determines which grid lines will be selected while creating graph.

Graph name (neccessary).

Graph Template

Graph Name

Daily Graphics

Graph Type

Average

/px

Time Slice

1 minute

Date Format

31.12.1999

Time Format

23:59:59

Font Size

11

Explanation

Variable Slice Count

10

Time Slice Count

60

Grid Width (px)

1

Grid Color

Background Color

Horizontal Grid Visible

☒

Vertical Grid Visible

☒

AVAILABLE CHANNELS

ChannelCode	Channel Definition
C001/1	
C001/2	
C001/3	
C001/4	
C001/5	
C002/1	
C002/2	
C002/3	
C002/4	

SELECTED CHANNELS

ChannelCode	Color	Channel Definition
C002/1		
C002/2		
C002/3		
C002/4		
C002/5		

Edit

OK

Cancel

All channels of the all devices defined in

Channel is added to selected channels list.

Channel is removed from selected channels list.

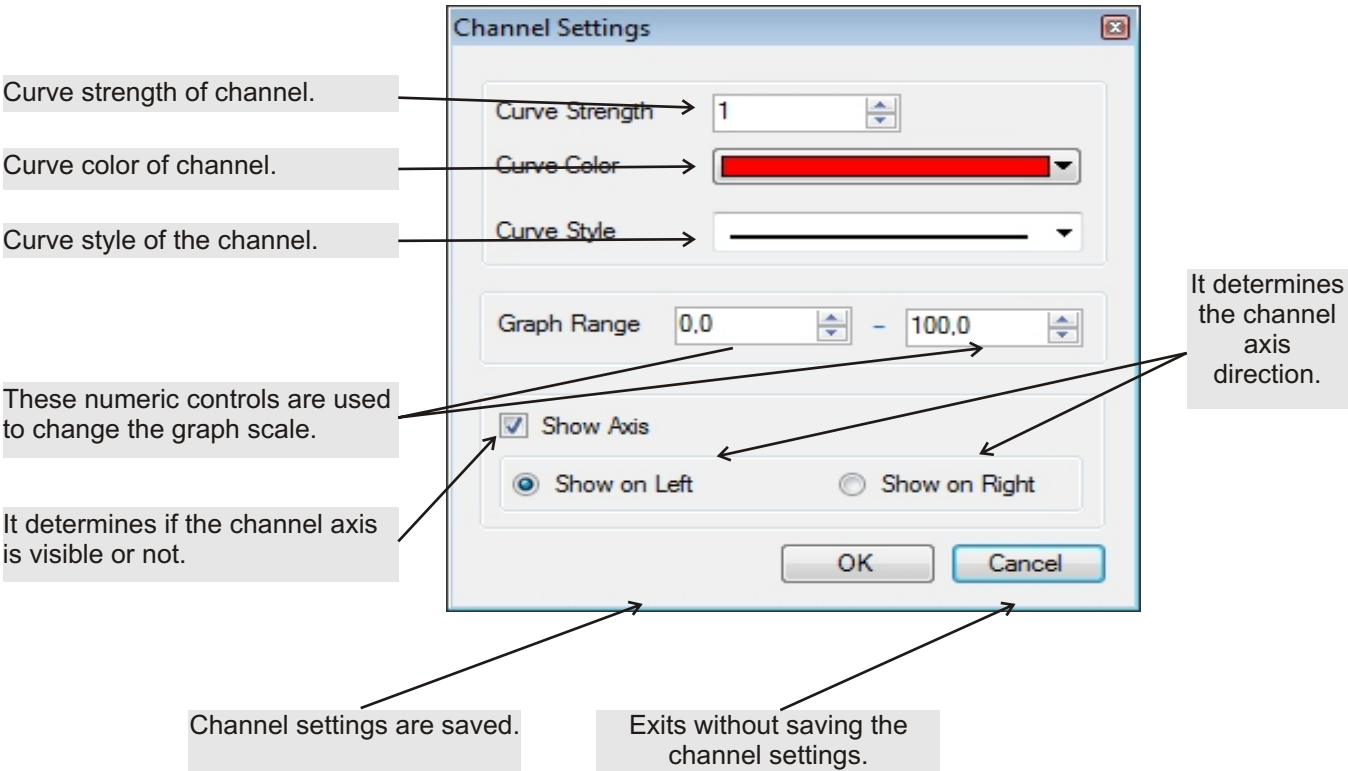
Selected channels' list.

It is used to change the channel properties.

Saves the changes and a new graph format is created.

Exits without saving report format.

CHANNEL SETTINGS FORM



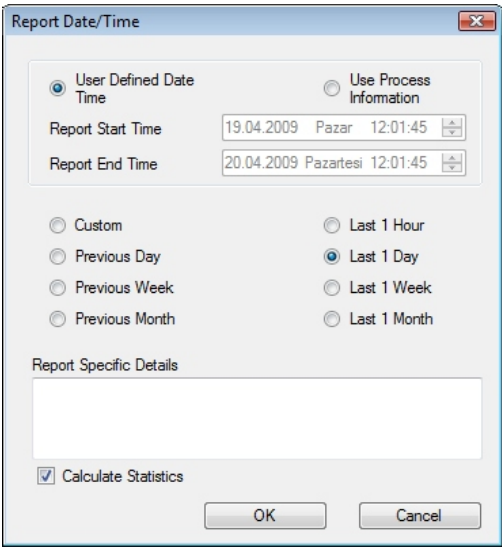
REPORT DETE/TIME FORM

This form show the graph templates created on the left side and buttons to create, edit and delete templates. If a graph template is selected and Generate button is pressed, "Report Date/Time" form is opened.

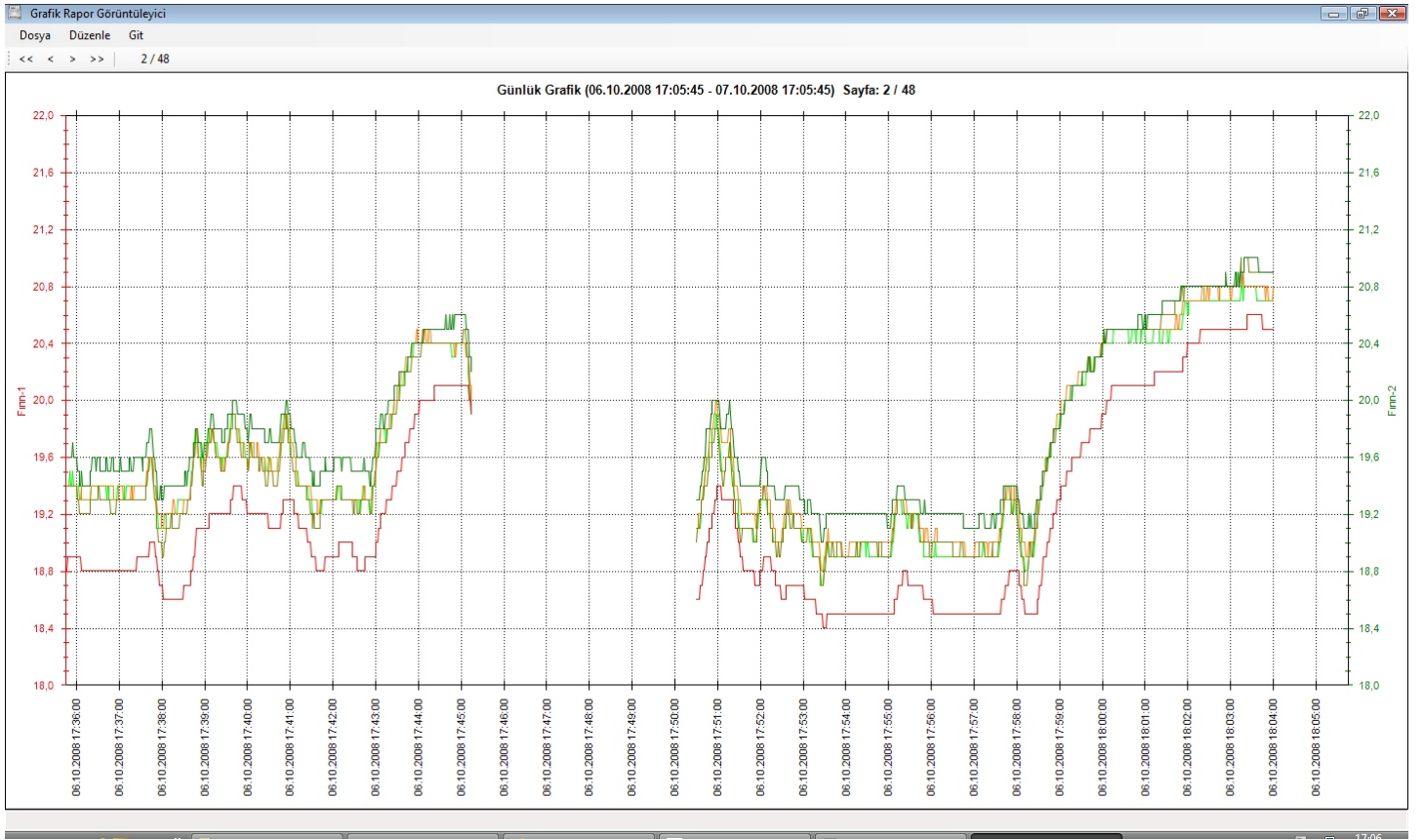
This form includes the date time information and some other controls to create graph. User may select date/time manually or may select directly from radio buttons.

Also by pression the "Use Process Information" radio button, user may select date time using a process' information.

After pression OK, graph is generated. Sample graph view can be seen in the next page:



SAMPLE GRAPH FORM



4.8. PROCESS MANAGEMENT

By collecting the process data, reporting operation is an easy task for the user. If user creates a process, date/time information with some other data are saved to the system.

While reporting user can use this processes directly by selecting “Use Process Information” check box.

PROCESS LIST

Process list. →

Process List

Process Name	Started	Stopped
Heating Phase-1	☒	☒
Heating Phase-2	☒	☐

NEW

CHANGE

DELETE

START

STOP

EXIT

Creates new process.

Edits selected process from the list.

Deletes the selected process from the list.

Starts the process.

Stop the process.

Exits form.

PROCESS CREATOR FORM

Process Information

Process Name

Heating Phase-1

Code: 34/4563

Details

Start Date/Time

21.04.2009

Sali

13:51:14

End Date/Time

21.04.2009

Sali

13:51:18

OK

Cancel

Name of the process to create.

Detailed process information.

Process start time

Process end time.

Exits form without saving process.

Changes are saved and process is created.

4.9. GENERAL SETTINGS AND SECURITY

Users can change program settings by pressing the Settings button on the main program menu. Settings form has four different pages. You can find the explanations below:

Program Settings

General Settings | Table Page Settings | Graph Page Settings | Security

☐ Run program on startup

☐ Use close button for tray

Used to register program to startup.

When user click the close button on topmost right and this option is clicked, program do not close, instead, it goes to system tray.

OK Cancel

Program Settings

General Settings | Table Page Settings | Graph Page Settings | Security

General sensor error message: ERR

Sensor error message for spreadsheet view.

OK Cancel

Program Settings

General Settings | Table Page Settings | Graph Page Settings | Security

Old Password:

New Password:

Confirm New Password:

Apply

Old configuration password

New configuration password

New password to confirm

Changes configuration password

OK Cancel

Program Settings

General Settings | Table Page Settings | Graph Page Settings | Security

Panel Background:

Graph Background:

Axis Color:

Movement Direction: Bottom to Up

Graph Width: 1 minute

Grids to show:

Grid color:

Horizontal Vertical

Wait Time: 20 seconds

Auto status change time for dynamic graph

Channel - 1

Channel - 2

Channel - 3

Channel - 4

Channel - 5

Use Anti Aliasing: ☒

Line Width: 1

Line Color:

Background color for graph panel

Background color for dynamic chart.

Color of graph axes.

Movement direction of chart. Available options are; Bottom to Up, Up to Bottom, Right to Left and Left to Right

Graph with as time value.

All channel settings.

OK Cancel

Saves changes and closes form.

Closes form without saving settings.

5. TROUBLESHOOTING

♦Can not install the application

Check your operation system. Compatible operating systems listed in 'System Requirements' section.

Check that if Microsoft .NET Framework 2.0 is installed. You can install it from the CD.

♦New device window does not show up after program execution

This indicates that UDL100 could not be recognized.

-Ensure that the device is properly connected to the PC. If so, unplug the device and plug it again. If the problem continues follow the steps and install device drivers again.

-Open device manager while UDL100 connected. Expand the Universal Serial Bus Devices node. Right click on USB Serial Adapter and select remove.

-Delete 'ftdibus.sys' and 'ftser2k.sys' files in C:\Windows\System32\Drivers folder. (If you can not see these files, activate 'Show Hidden Files' option from Tools->Folder Options->View menu.)

-Click 'Scan for hardware changes' from 'Computer Management'. After computer recognizes the device, install drivers form CD.

♦Application succesfully installed but I can not find recorded data (Windows Vista)

Open installation directory (C:\Program Files\ORDEL\Dali08 by default). Recordings stored in 'dlog' directory. If this directory is empty as the application records, data files should be in C:\Users\'UserName'\AppData\Local\VirtualStore\Program Files\ORDEL\Dali08. Disable UAC(User Account Control) and restart the application.

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