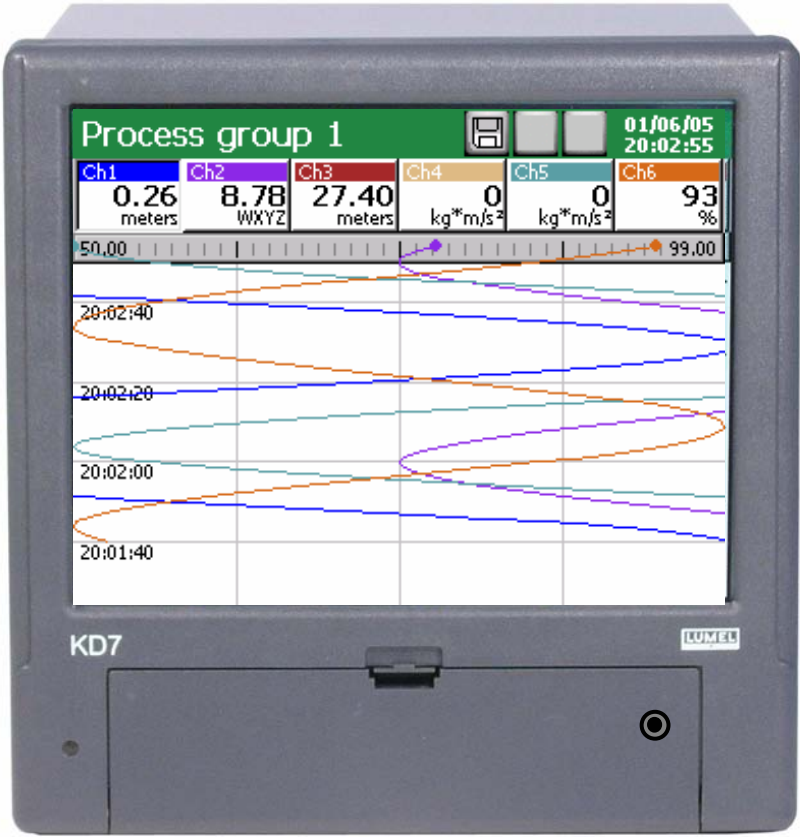


SCREEN RECORDER KD-Series TYPE



USER'S MANUAL FOR "KD ARCHIVE v.2.1" PROGRAM

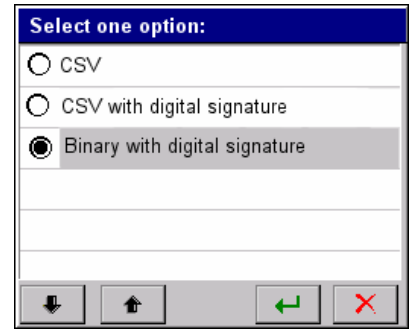
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1. INTRODUCTION



The **KD Archive** program is dedicated to review and evaluate archived data stored in the binary format with digital signature from the KD-Series recorders on a PC. Archive data stored in the **CSV** text format should be analysed in spreadsheet applications (e.g. MS Excel or OpenOffice.org).



The **KD Archive** program has the following functionality:

- automatic verification of stored data correctness (digital signature),
- review of archived data in the graphical and grid shape,
- text data and charts printing,
- reports creation
- exporting charts to image files: bmp, jpg and png.
- files conversion from KD Archive version 1.0 to 1.1

Notice: the KD Archive program does not guarantee the correct work with modified or corrupted data. Particularly, when the structure or the integrity of a file has been modified or damaged.

2. PROGRAM INSTALLATION

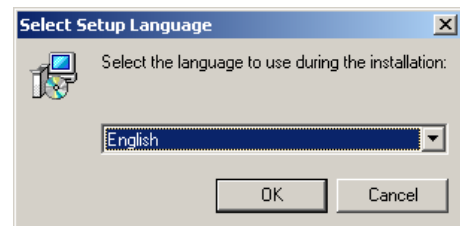
Program requirements:

- Operating system: MS Windows 2000 or newer,
- 25MB free disk space and 512MB of RAM memory,
- Minimal screen resolution: 1024x768, recommended 1280x 800 or 1280x1024
- Remaining requirements as required by the operating system.

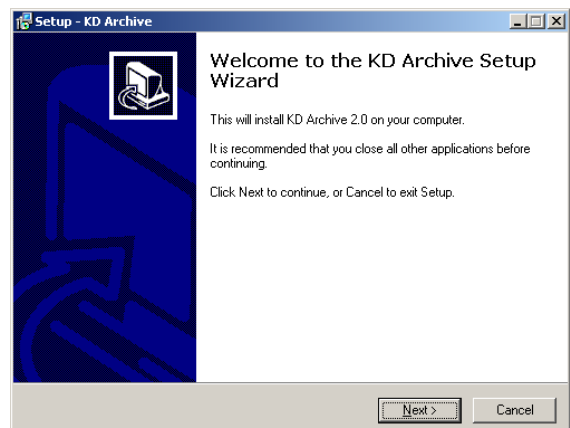
The program installation is typical for other MS Windows applications. The setup application is on the accompanied CD to a KD-recorder, in the directory "**KD Archive**". In order to start the installation process, please run the **KDArchive_install.exe** in the indicated folder. Next, proceed according to messages appearing on the screen.

The installation process proceeds as follow:

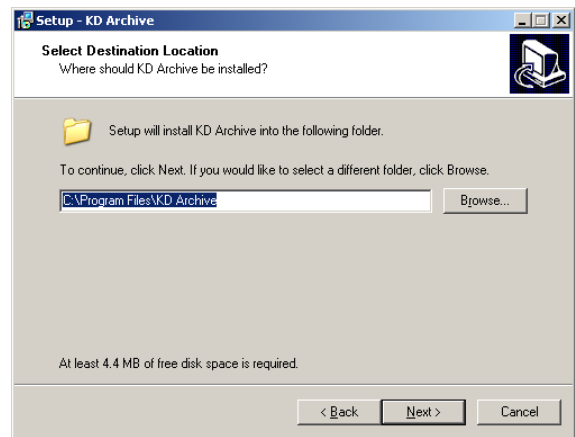
1. Selection of the language used during the process installation



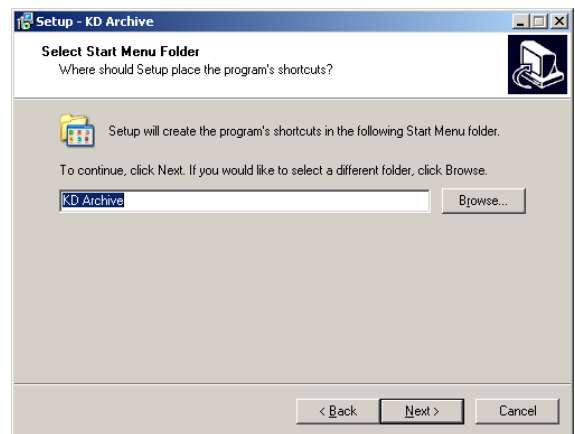
2. Welcome screen of the application installer



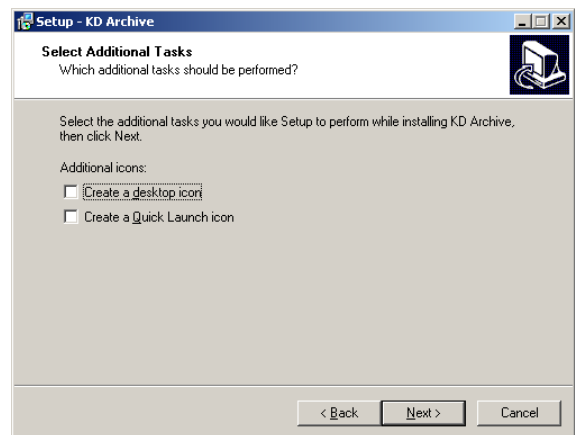
3. Selection of the destination directory for the application



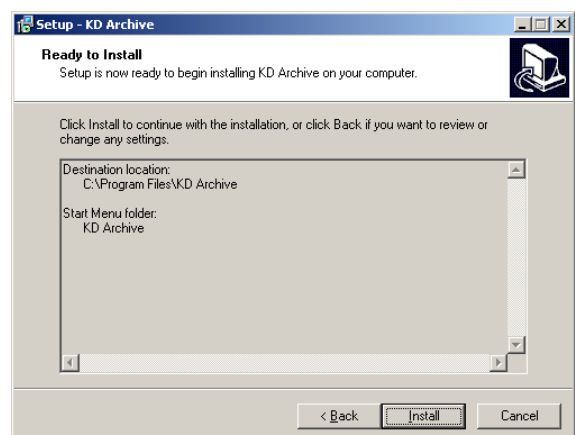
4. Selection of the group name for Start Menu



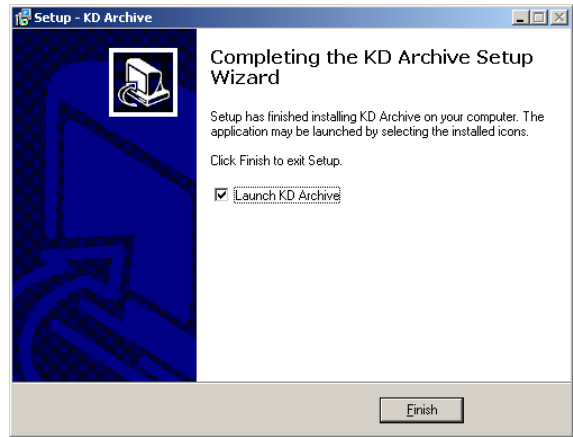
5. Possibility to place program icons in different places of a desktop



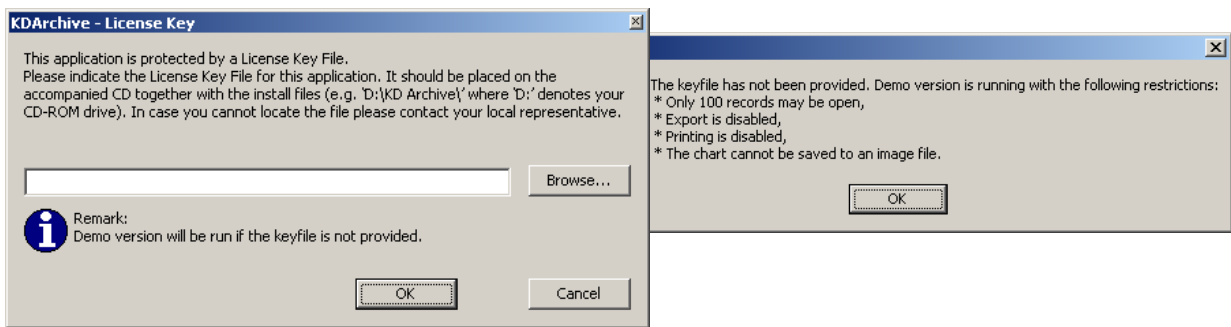
6. Settings summary before installing the software



7. Information about the successful installation

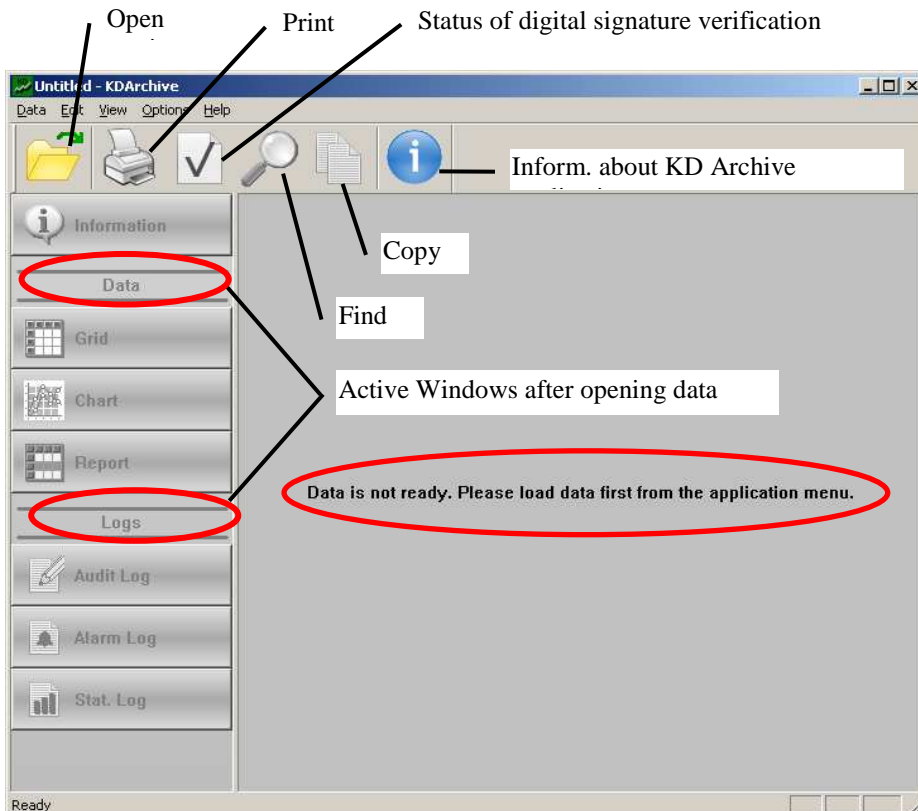


During the first run of the application you will be asked for the License Key File. Without the key, the program starts in the demo version.



3. USING THE APPLICATION

3.1 Main application window – view without data loaded



3.2 Opening measuring data. Digital signature verification.

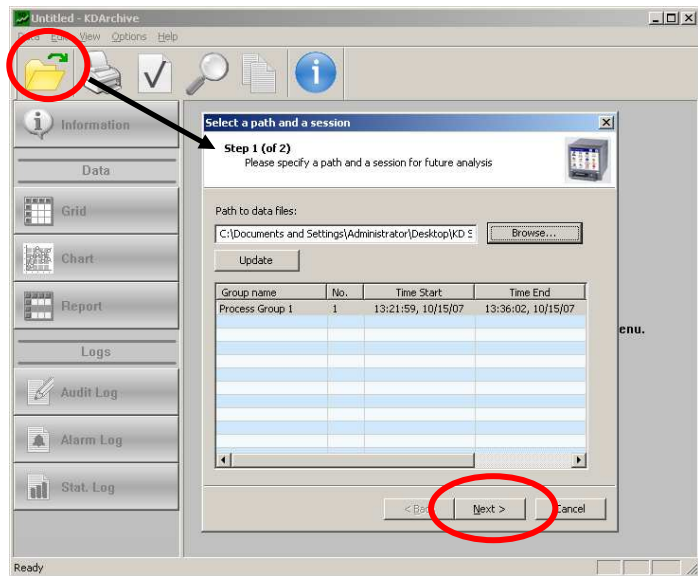
1. When the **Open session** option has been chosen



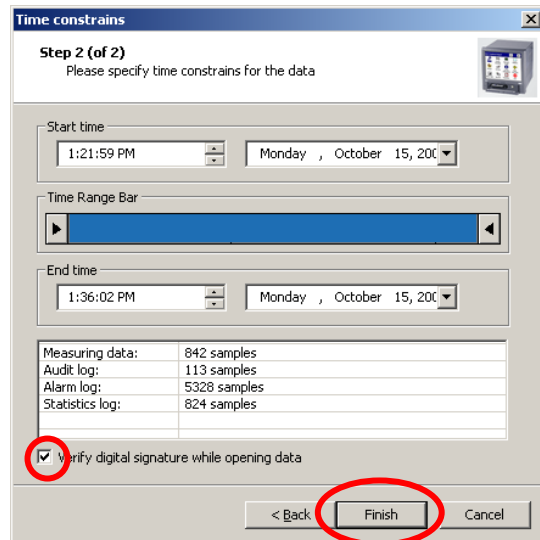
The default mode of the KD Archive application is to work with data sessions. A session is a set of archived data for a given measuring group – including (if exist): measuring data and event logs (regardless of the number of files composing the given session).

Audit log is common for all measuring groups and is always opened as a whole. It is highly recommended to evaluate data as sessions, and not as separated files.

The window **Select a path and a session** is opening. After choosing one of the stored measuring group in it for analyzing and accepting the choice, the **Time constrains** window will be opened.

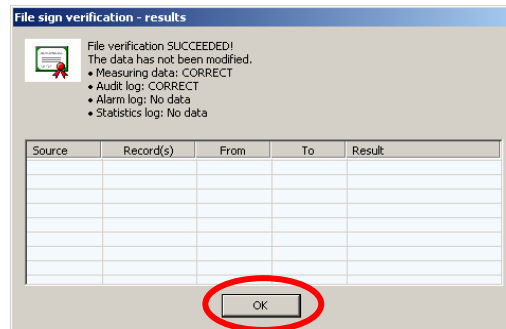


Set the **Time constrains**: the beginning and the end of the time interval from which data will be presented and analysed in the program.

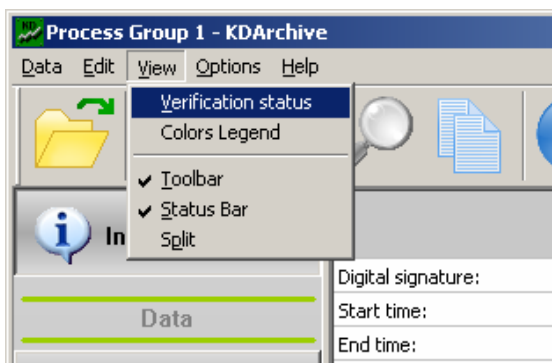
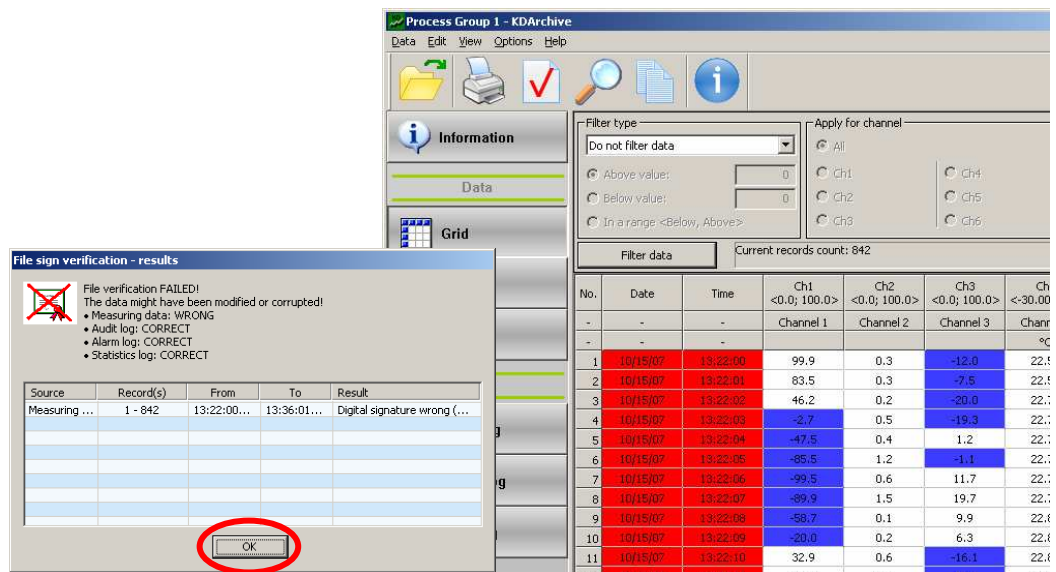


After setting the time interval, the **File sign verification window** is showed if the option **Verify digital signature while opening data** was marked:

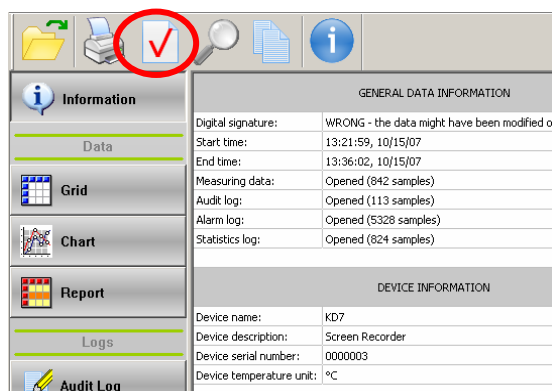
- **Succeeded**, when data files were not be modified or corrupted.



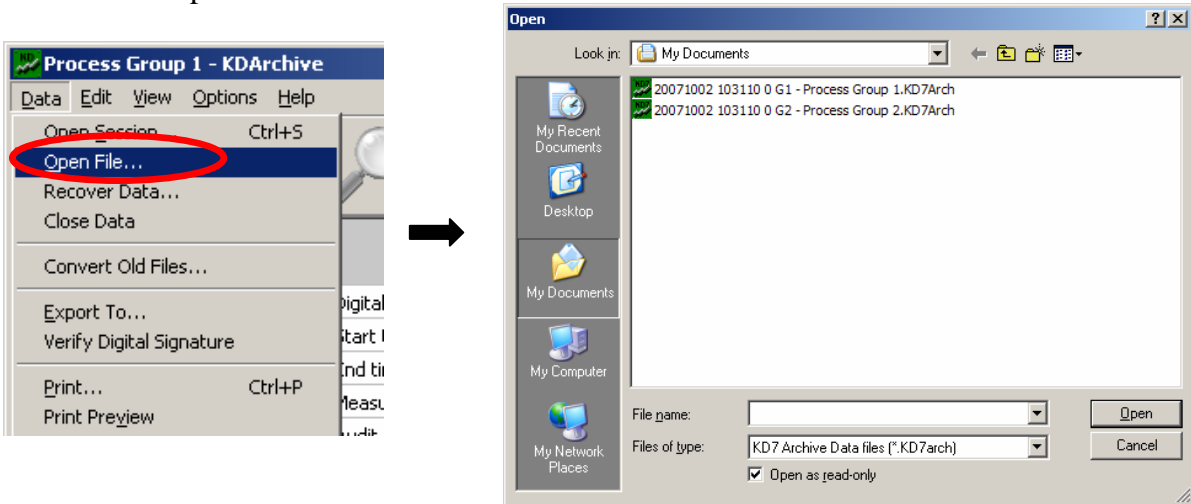
- **Failed**, when files were modified or corrupted (in the verification table, numbers of data records negatively verified are given, and in the **Data** table they will be marked with red colour in the date and time columns).



The digital signature can be checked in any time with the program, choosing the digital signature verification from the main menu or the toolbar.

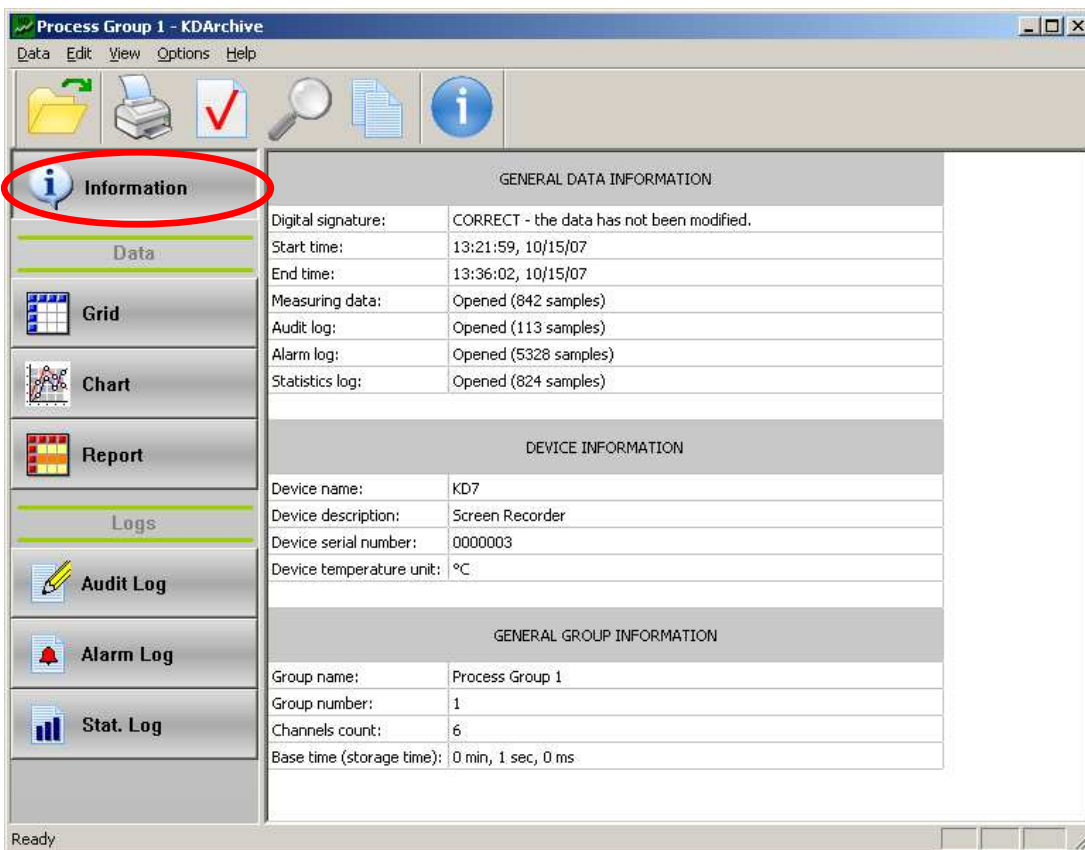


2. When choosing the **Data** → **Open File** option in the menu, the standard window of file selection will be opened.



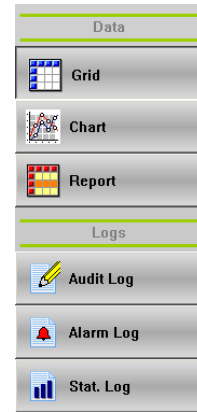
After choosing one of the stored files with data for analysis and accepting the choice, the **Time constrains** window will be opened. The further procedure, as showed above.

After choosing the **File sign verification-results** window, information about measuring data, and about the file (among others, about the data verification result – checking of the digital signature), the recorder and selected measuring groups are displayed.



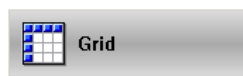
4. DATA PRESENTATION

In the left-sided menu of the KD Archive program, options of the selection presentation shape of measuring data (**Grid**, **Chart**, **Report**) and event logs (**Audit Log**, **Alarm Log**, **Stat. Log**) are accessible.

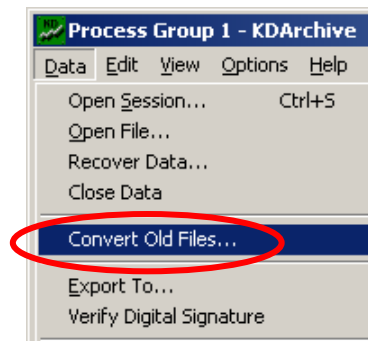
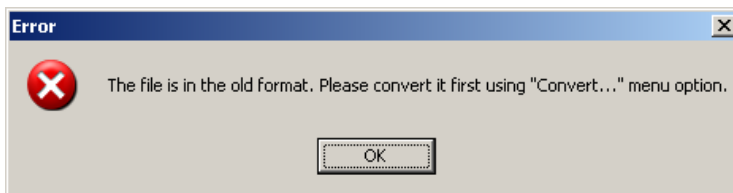


4.1 Data presentation in the shape of tables

If there is a lack of measuring data, please collect data acc. to the section 3.2. Next, choose the button in the left menu.



When the window will be displayed with information about stored data in the old format (concerns data stored in recorders with the system version older than 0.2.0.1), conversion into the new version is required.



Collected measuring data will be presented in the grid.

Selection of filtration type for channel (s)

Select. no of channels in data

Closing/opening of the filtration setting window

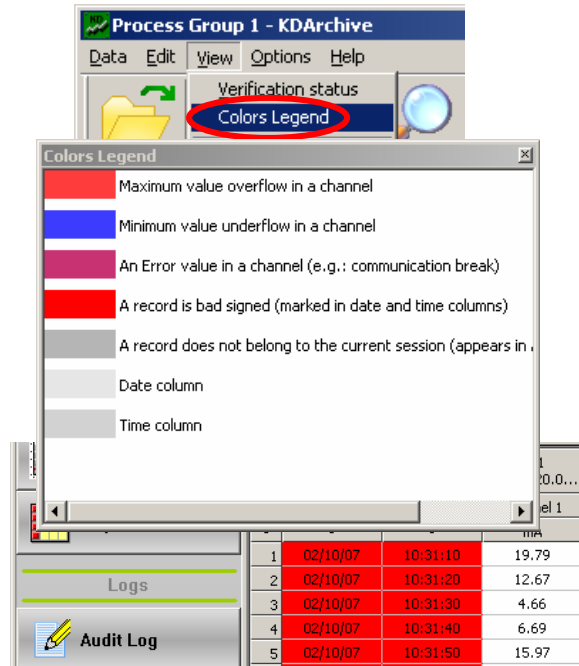
No.	Date	Time	Ch1 <0.0; 100.0> Channel 1	Ch3 <0.0; 100.0> Channel 3	Ch4 <-30.00; 70... Channel 4	Ch6 <0; 1> Channel 6
-	-	-	-	-	-	-
1	10/15/07	13:22:00	99.9	-12.0	22.56	0 (Off)
2	10/15/07	13:22:01	83.5	-7.5	22.56	0 (Off)
3	10/15/07	13:22:02	46.2	-20.0	22.71	0 (Off)
4	10/15/07	13:22:03	-2.7	-19.3	22.74	0 (Off)
5	10/15/07	13:22:04	-47.5	1.2	22.74	0 (Off)
6	10/15/07	13:22:05	-85.5	-1.1	22.75	0 (Off)

One can display data from the table, for all or only for the selected measuring channel acc. to one of the criteria:

- Without filtration,
- Highlighting type filter, (e.g. below, above or in the range of given data values),
- Hiding type filter (e.g. below, above or in the range of given data values),
- Show incorrectly signed records only,
- Show range exceeding values,
- Show incorrect values only (e.g. lack of data).

In the **View** window, there is a possibility to select measuring channels from which data will be displayed in the table. Filtration options will be applied after choosing the **Filter data** button.

In the **View** → **Colors Legend** menu, information are given about defined events, colours in which they are marked in the view of measuring data and event logs.

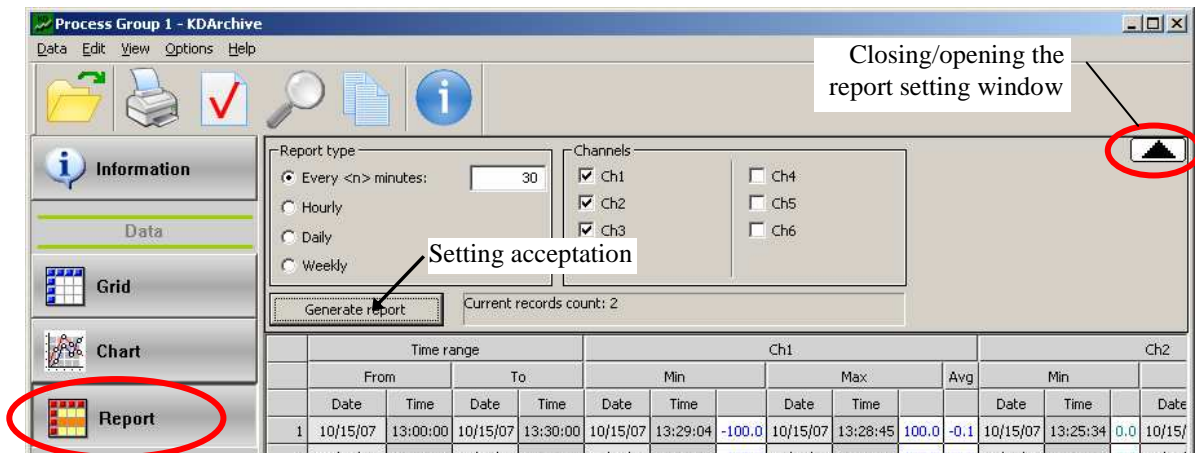


4.2 Reports

If there is a lack of measuring data, please collect them acc. the section 3.2. Next select the



button in the left menu.



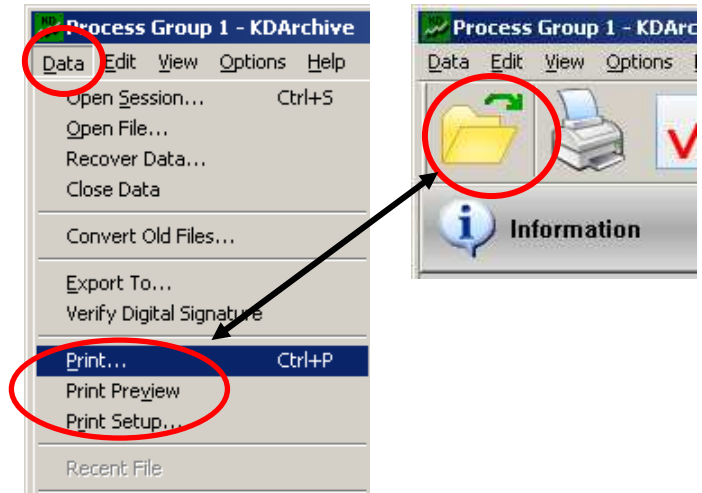
After setting the report type and measuring channels from which data will be displayed, select the **Generate report** button in the report window. The report will be displayed in the program window.

4.3 Print, copy, export and data recovery

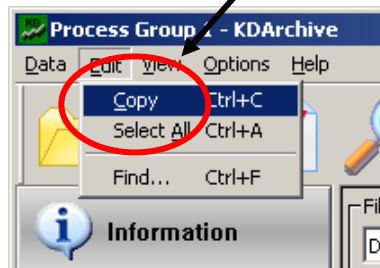
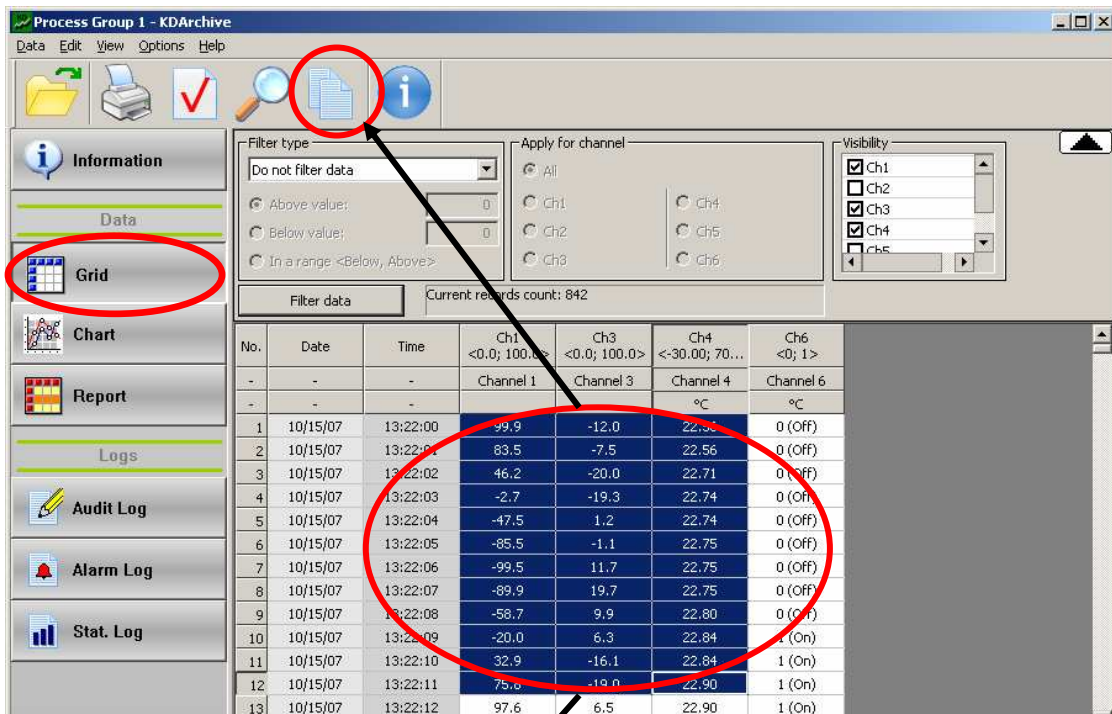
4.3.1 Printing

Data, Chart or Report presented in the program window will be printed after choosing the **Data** → **Print** option or the printer icon on the toolbar.

On the table printouts with measuring data, information about the digital signature is always given, if it has been verified.

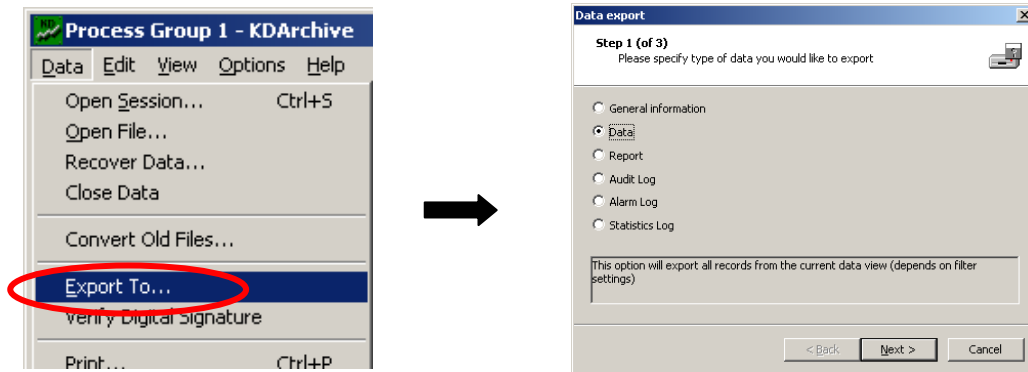


4.3.2 Copying of textual data



After marking with the mouse cursor the data cells and choosing in the toolbar or in the **Edit** → **Copy** menu, data will be copied to the system clipboard. Hence, they can be use in other applications.

4.3.3 Data export



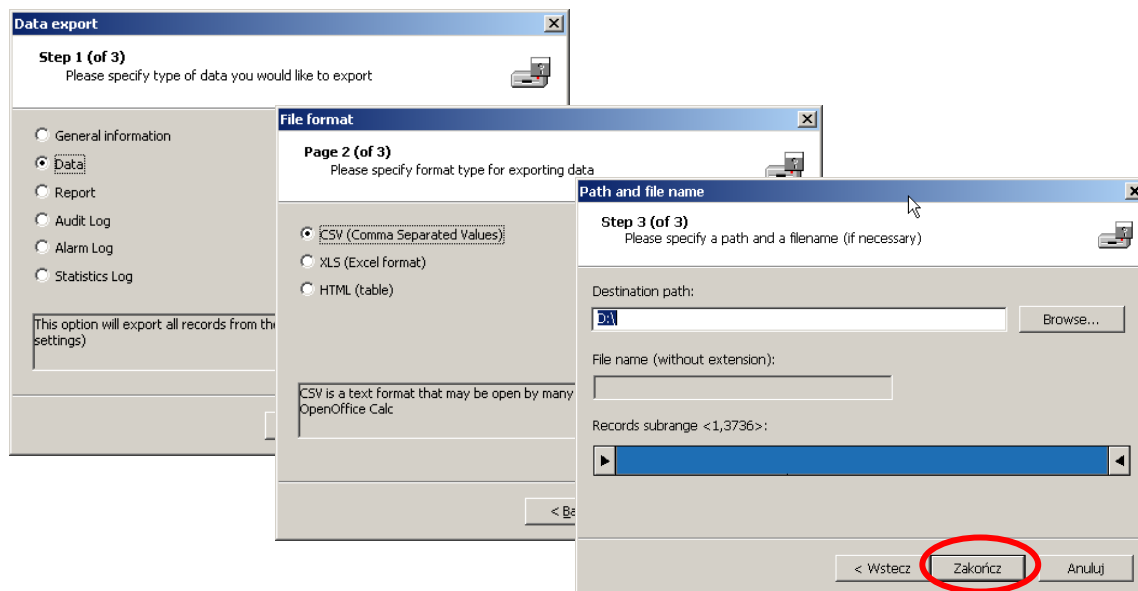
After choosing the **Export to** option in the toolbar of the **Data** menu, please select the type of data (General information, Data, Report, Audit log, Alarm log or Statistics log) which have to be exported.

Next, depending on the data type:

1. Select the kind and format of exported data:

- measuring data: **CSV** (text format) or **XLS** (format of MS Excel application, the export is only possible for the first 65 thousand records) or **HTML** (data in the shape of tables)
- reports: only **HTML**
- information: only **HTML**

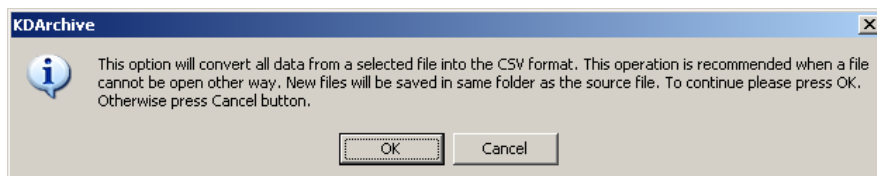
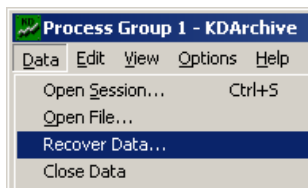
2. Define the output path, the filename and subrange for exported data.



Data
export

4.3.4 Data recovery

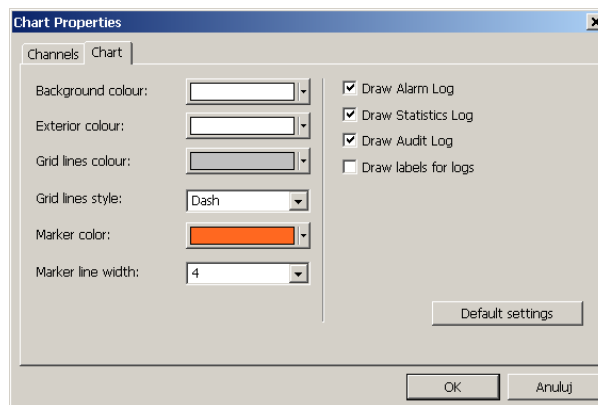
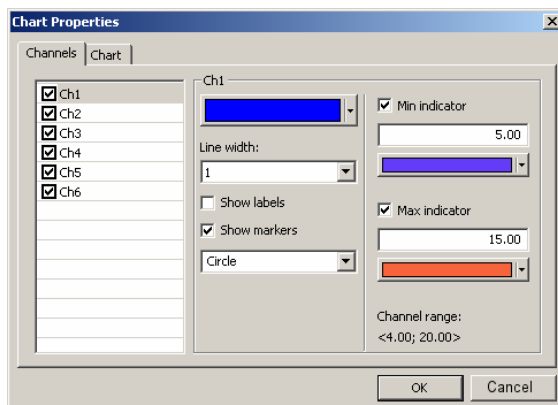
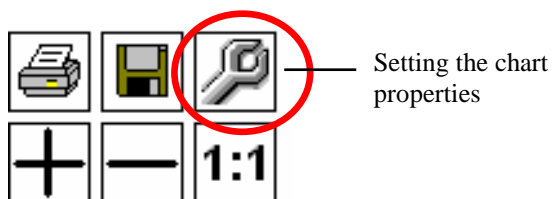
After choosing the **Data** → **Recover data** option in the toolbar, the program converts data in the defined file in the CSV text format, stored in the same directory.



4.4 DATA PRESENTATION IN THE SHAPE OF CHART

4.4.1 Using the chart

- **Setting chart properties**



In the chart properties window, the following settings are available:

- Disable/enable channels which will be displayed in the program window,
- The colour and the marker line width for a given channel,
- The visibility settings of additional minimum and maximum markers for a given channel,
- The visibility of labels, the visibility and shape of markers on the chart for a given channel
- Colours of chart window elements,
- Display of logs icons with descriptions.
- *Or, one can choose:*
- Default settings

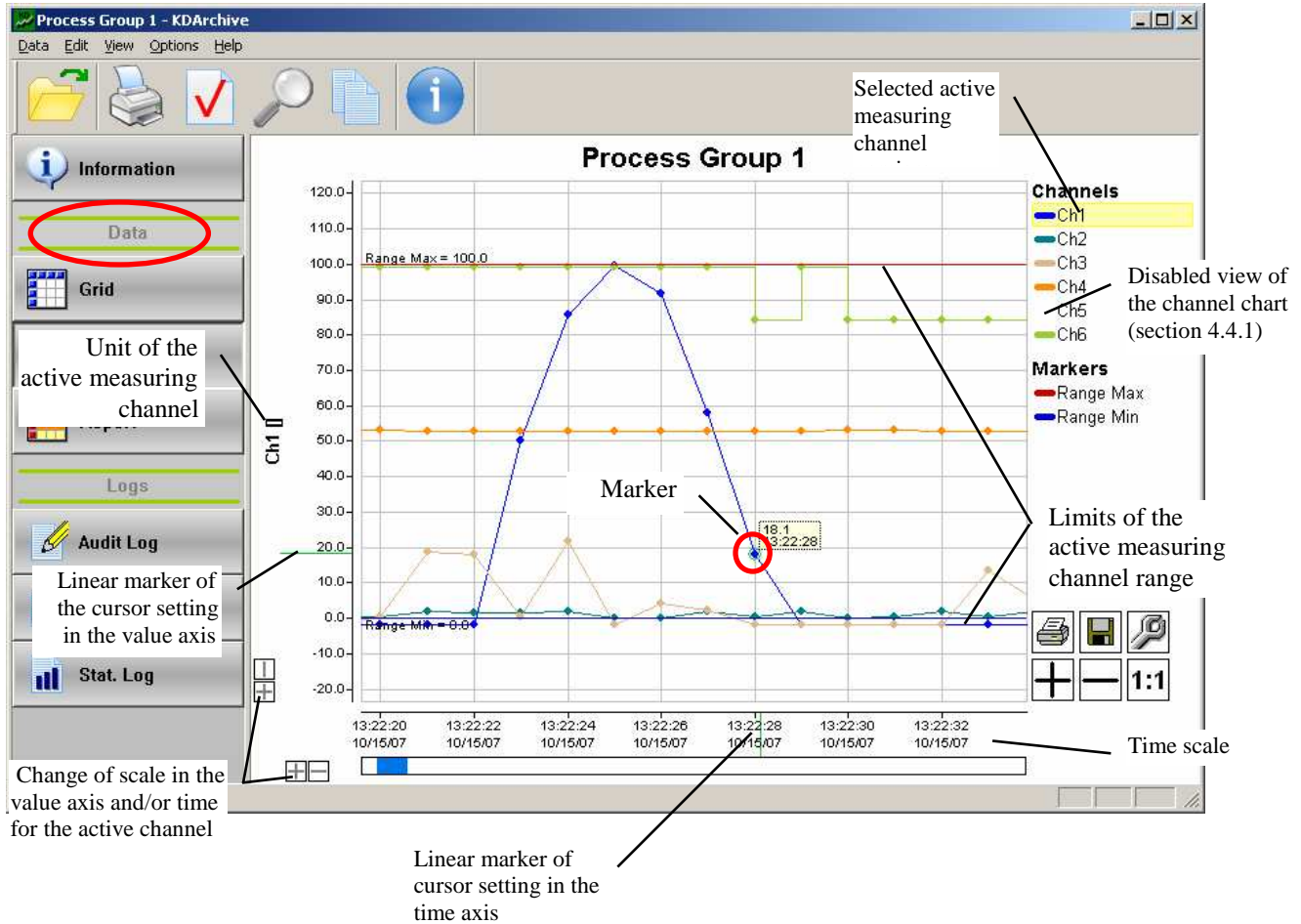
- **Chart view**

If there is a lack of measuring data, please follow the steps in the section 3.2. After choosing the



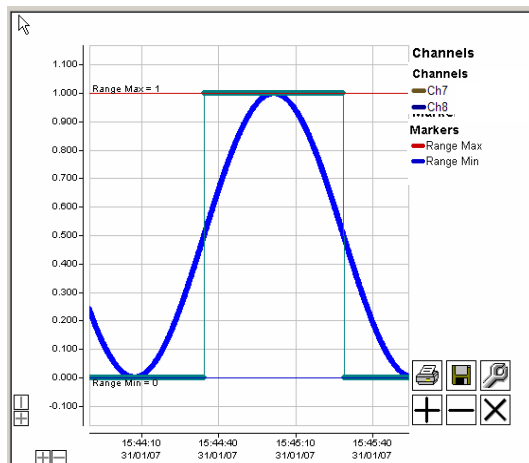
button in the left menu, measuring data are displayed in the graphic form.

The chart shows maximum time range corresponding to 100 thousand samples. When there are more samples, please move the chart using one of the hand grippers (see below).

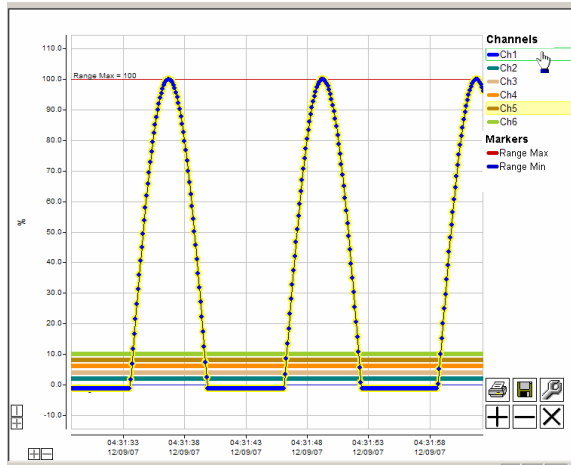


After choosing the active measuring channel in the program window (setting the cursor on the channel number and left clicking – the area of the channel number will have a yellow background). The unit, range limits, value scale and time scale are displayed in the chart window.

View of the screen with analog data (Ch1) and binary data (Ch2).



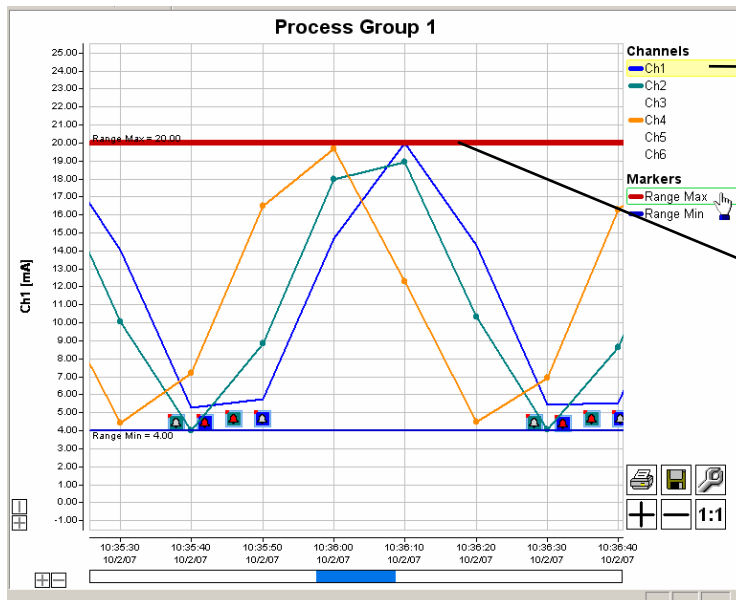
- **Lighting-up the selected measuring channel**



Lighting up the chart of the given measuring channel (cursor is over the channel symbol area)

- **Lighting-up limits of the measuring range**

After setting the cursor in the area of the **Min. Range** or **Max. Range**, the line of the chosen range limit will be thickened.

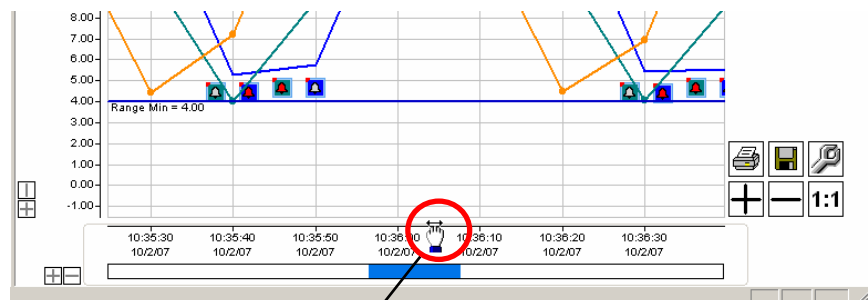


Active measuring channel

Upper limit of the active measuring channel range






- **Moving of the chart in the window, in the time and axis value.**

After setting the cursor in the area of time or value axis description, you can shift the chart in this axis.



Mouse cursor

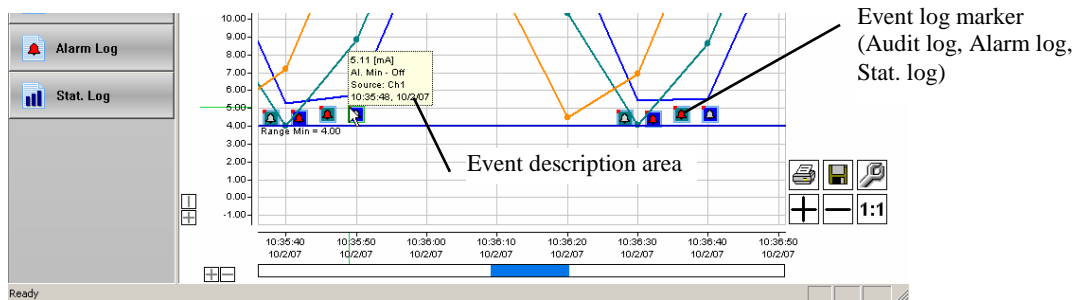
4.4.2 Information icons on charts:

-  - status of an enabled alarm
-  - status of a disabled alarm
-  - icon of a statistics log
-  - icon of an audit log
-  - icon of an operator's message

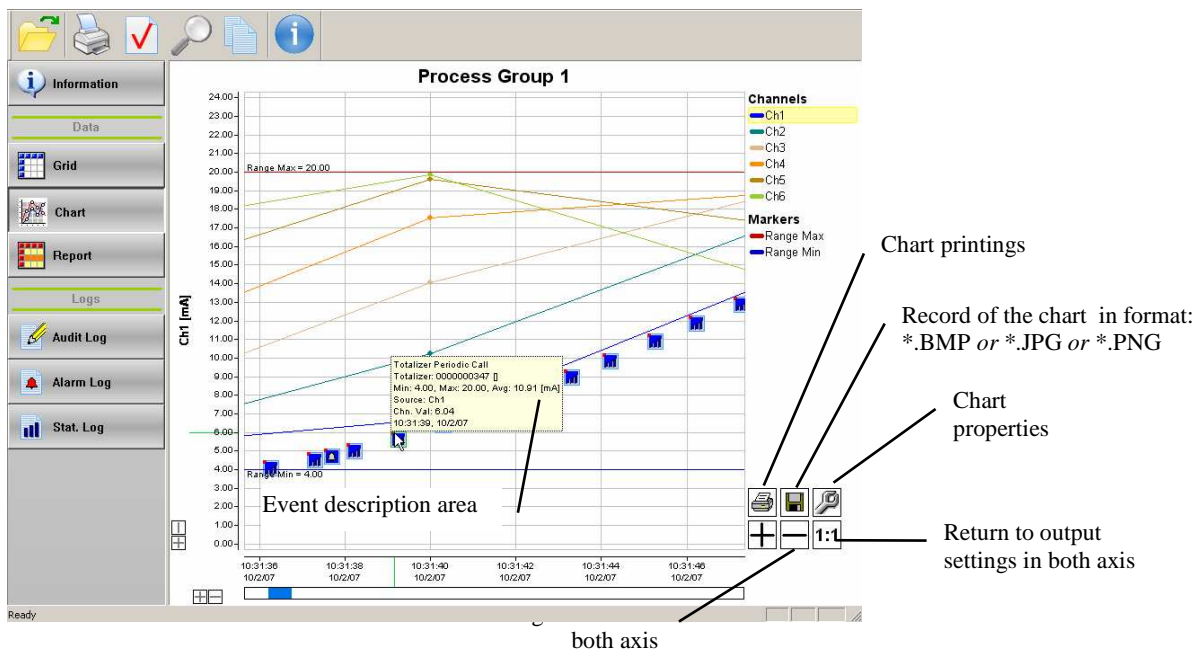
Notice:

1. The upper-left red corner of logs and alarms icons marks the occurrence place of an event in the time and value scale,
2. Alarm and totalizer icons have a channel background colour which they occur for,
3. Audit log icons, since they are not related to measuring channel values, are placed at the bottom of the chart window,
4. An audit log is always opened entirely. When an audit icon description area is grey that means, that data does not belong to the current session, hence it is not displayed on the chart.

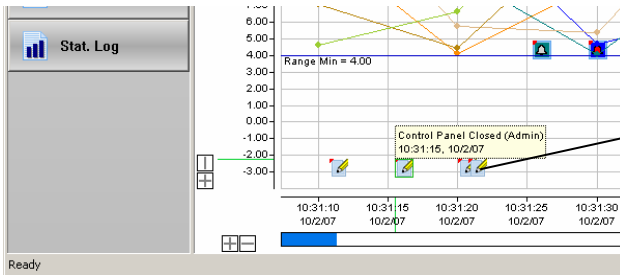
Alarm icons



Statistics icons



- **Audit icons**



Event log icon (**Audit log**, alarm log, stat.log). Event description area.

After moving the cursor over the icon of an event log marker (audit *or* alarm *or* statistics), information with the description of this event (description area) is showed.

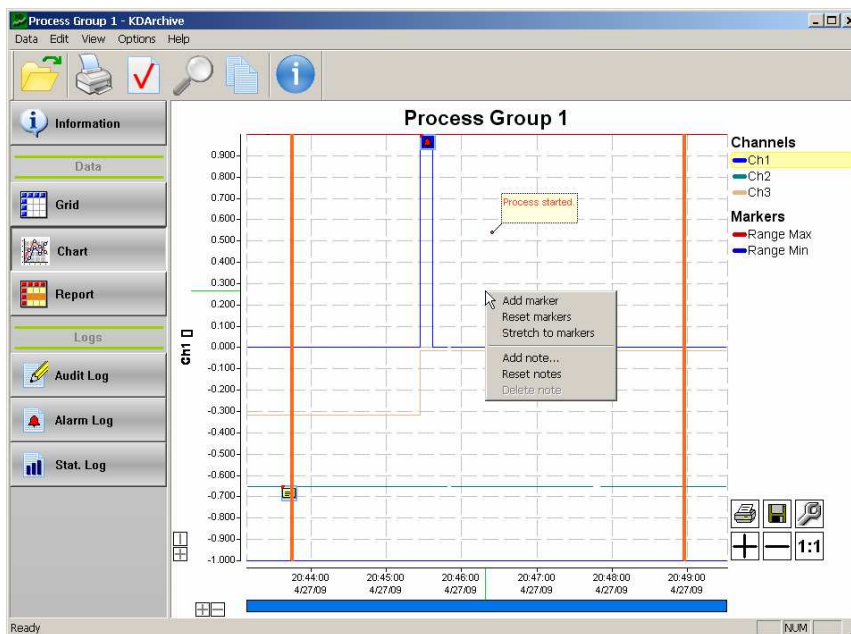
4.4.3 Context menu of the chart

Context menu is available to a user after right-click in the area of chart. The following options are available:

Option	Description
Add marker	Adds a vertical time marker in at the mouse click position.
Reset markers	Removes all time markers from a chart.
Stretch to markers	Stretches a chart to the closest time markers in a time scale.
Add note	Adds custom user's note at the mouse click position (max. 255 chars).
Reset notes	Deletes all notes.
Delete note	Deletes the selected note.

Attention:

Time markers and user's notes disappear when data is closed.

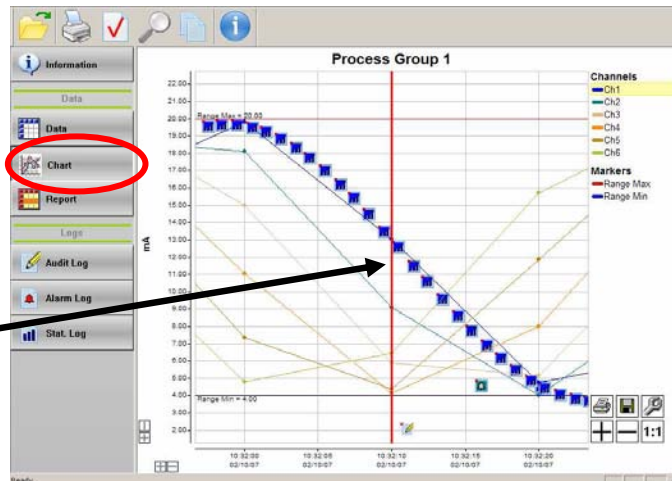
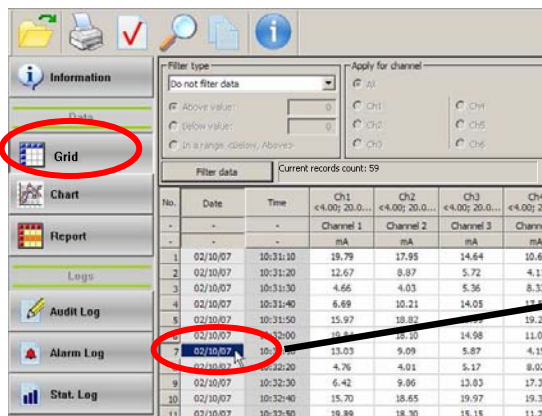
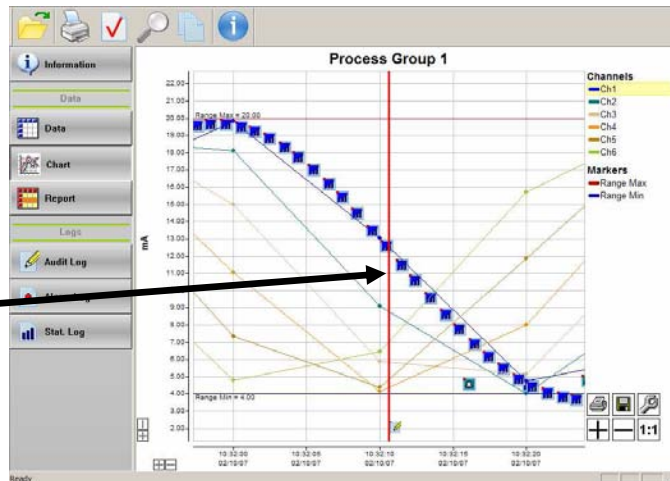
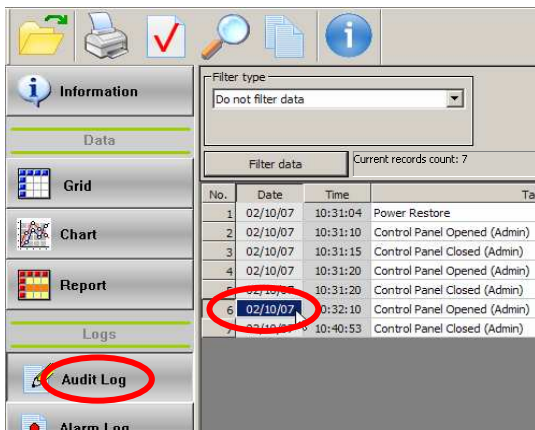


4.4.4 Switching between grid presentation and the chart view

Notice: Log icons are drawn on the chart after setting the visibility properties in the chart options (see section 4.4).

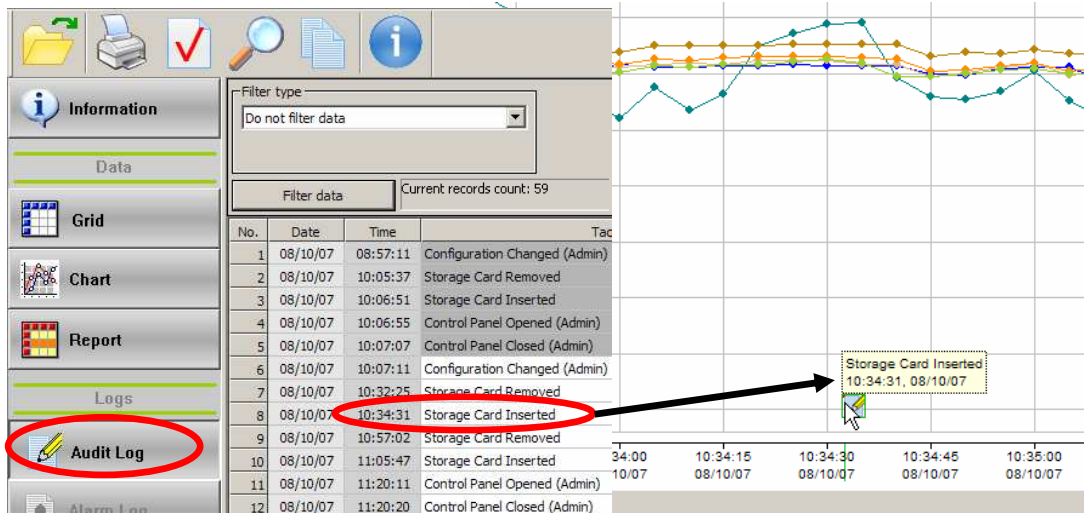


A double click on the line of data table or the table of the selected event log causes the automatic switch to the chart, with a time marker on that position (if the chart view exists).

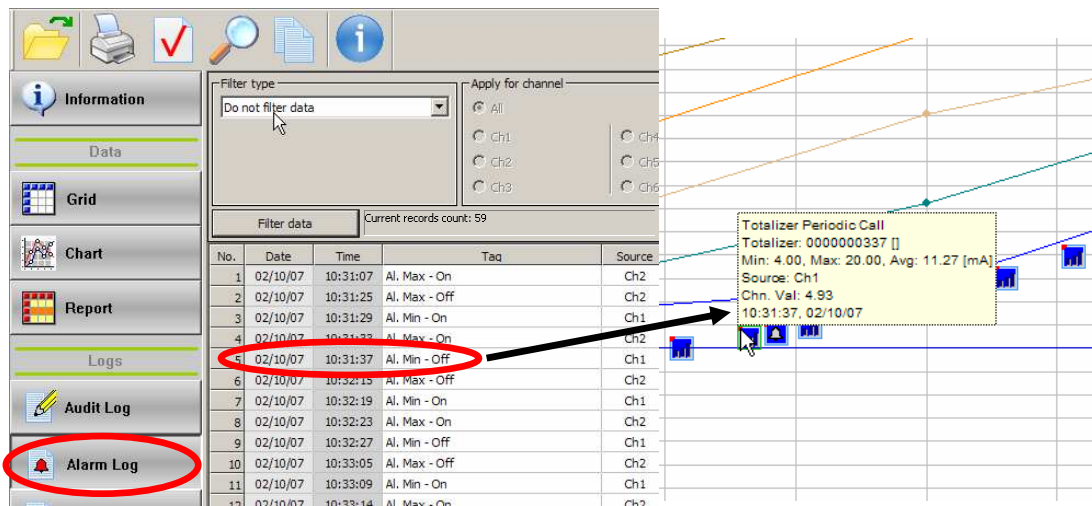


Set the marker configuration (colour and time thickness) in the properties menu of the chart view (see section 4.4.1). The right click on the chart removes the time marker.

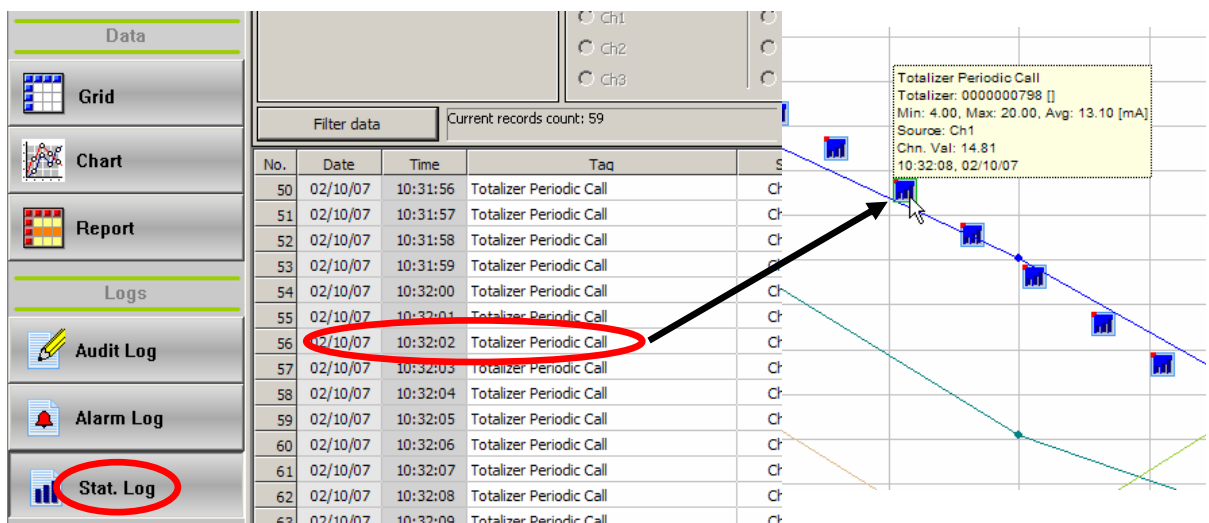
- Audits in the log and on the chart



- Alarms in the log and on the chart



- Statistics in the log and on the chart





SALES PROGRAM

- DIGITAL and BARGRAPH PANEL METERS
- MEASURING TRANSDUCERS
- ANALOG PANEL METERS (DIN INSTRUMENTS)
- ANALOG and DIGITAL CLAMP-ON METERS
- PROCESS and HOUSEHOLD CONTROLLERS
- CHART AND PAPERLESS RECORDERS
- POWER CONTROL UNITS and SOLID-STATE RELAYS
- AUTOMOTIVE DASHBOARD INDICATORS
- 1-PHASE AND 3-PHASE WATT-HOUR METERS
- NUMERICAL AND ALPHANUMERICAL LARGE SIZE DISPLAYS
- ACCESSORIES FOR MEASURING INSTRUMENTS (SHUNTS AND MODULES)
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