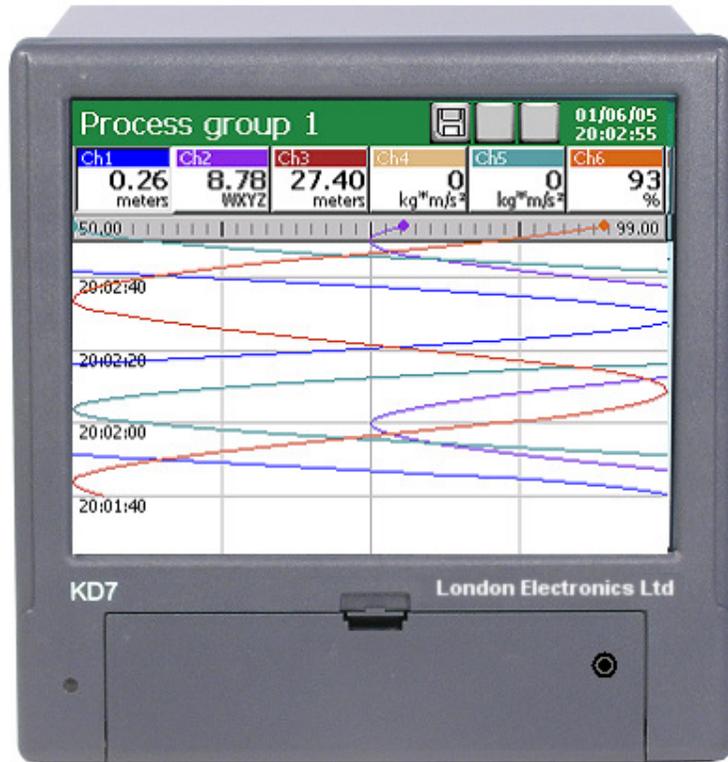


KD7 RECORDER



USER'S MANUAL FOR "KD7 ARCHIVE v.1.7" PROGRAM

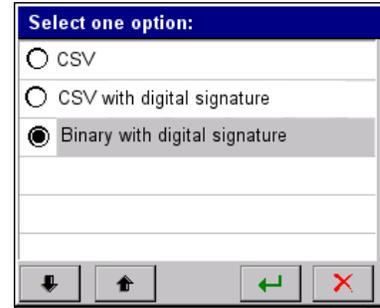
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1. APPLICATION



The **KD7 Archive** program is destined to review and analyse archived data stored in the binary format with digital signature from the KD7 recorder on a PC computer. Archive data stored in the **CSV** text format should be analysed in spreadsheet programs (e.g. MS Excel).



The **KD7 Archive** program enables to carry out following operations:

- automatic checking the correctness of stored data (digital signature),
- review of archived data in the graphical and numerical shape,
- printout of textual data and charts,
- creating reports
- storage of charts to graphical files *.bmp, *.jpg and *.png.
- files conversion from KD7 Archive version 1.0 to 1.1

Notice: the KD7 Archive program does not guarantee the correct work and service of data which have been modified or damaged. In particular, when the structure and the file integrity have been disturbed.

2. INSTALLATION OF THE KD7 ARCHIVE PROGRAM

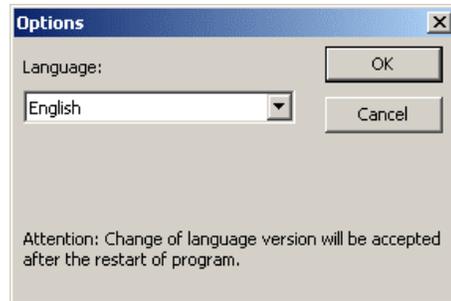
Program requirements:

- Operating system: MS Windows 2000 or newer,
- 25MB of capacity on the hard disk 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 applications destined for the MS Windows environment. The installation program is on the added CD to the recorder, in the catalog “**KD7 Archive**”. In order to start the installation, one must activate the **KD7 Archive_install.exe** program being in the indicated catalog. Next, one must proceed according to messages appearing on the screen.

The installation standard process has the following run:

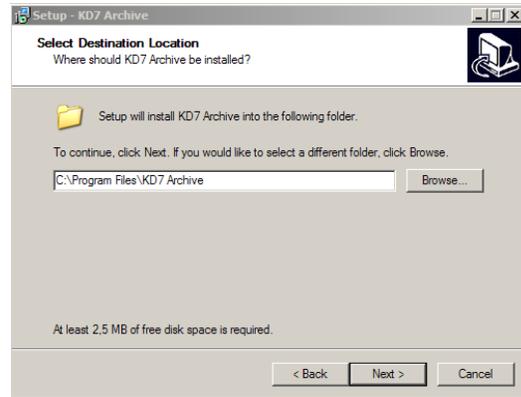
1. Selection of the language used during the process installation



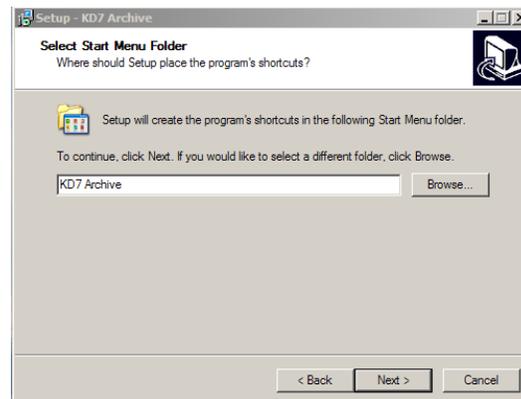
2. Welcoming window of the application installer



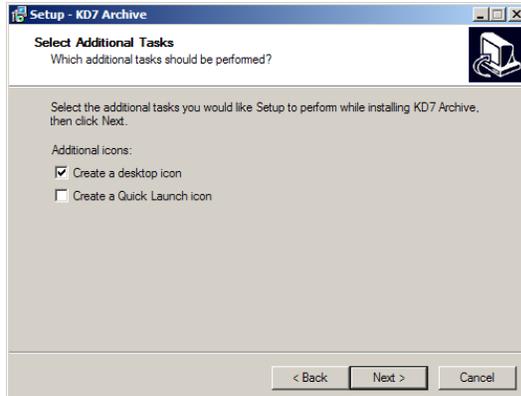
3. Selection of the destination catalog for the application



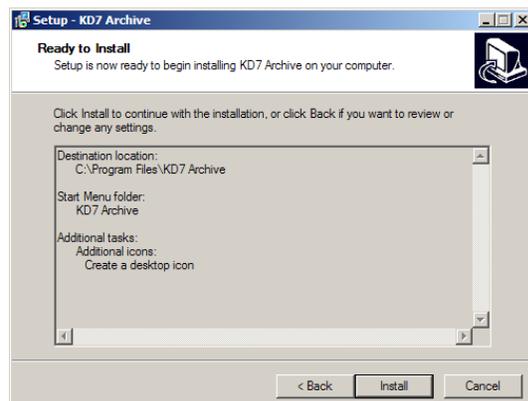
4. Selection of the group name for Menu Start



5. Possibility to place program icons in different places of the panel



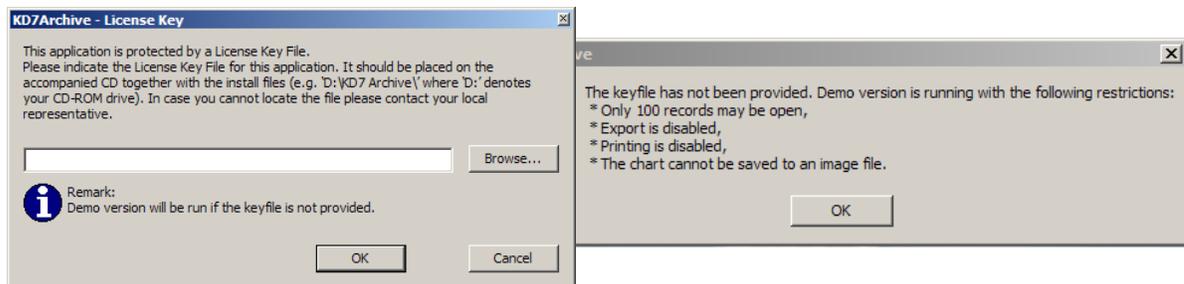
6. Settings summary before installing the software



7. Window informing about the successful end of installation

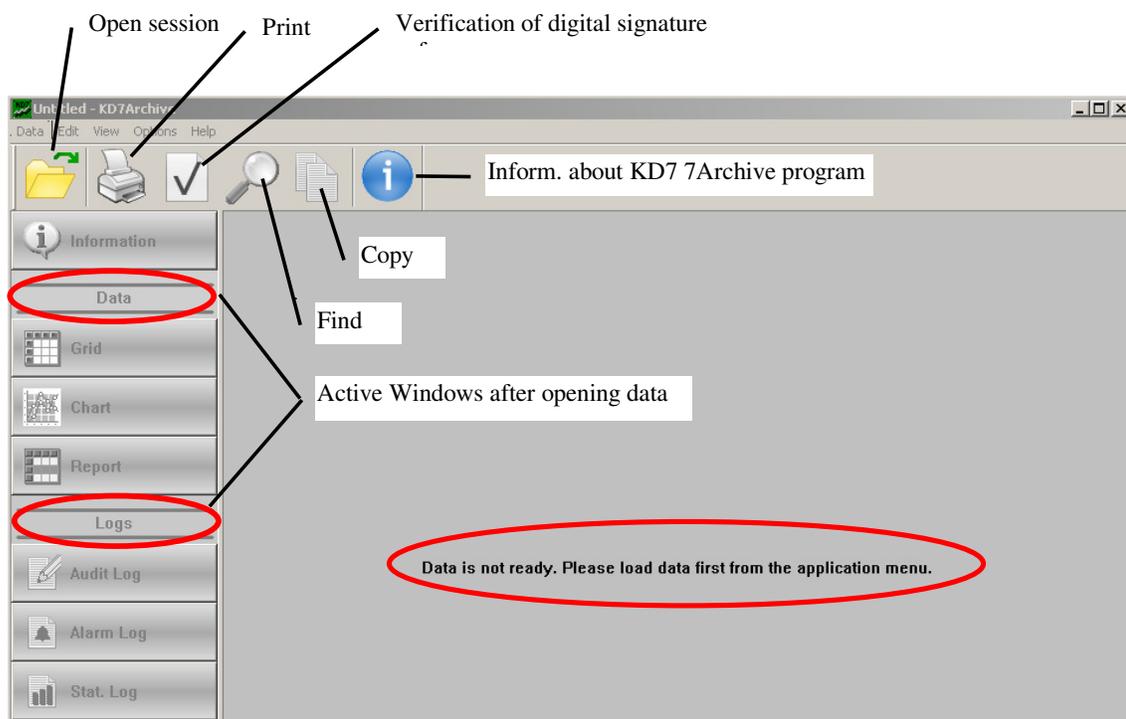


During the first run of the application you will be asked for a License Key File. When there is no licence key, the program will start in the demo version..



3. SERVICING THE PROGRAM

3.1 Main application window – view without loading a file with measuring data



3.2 Selection of the session or the file with measuring data, verification of the digital signature.

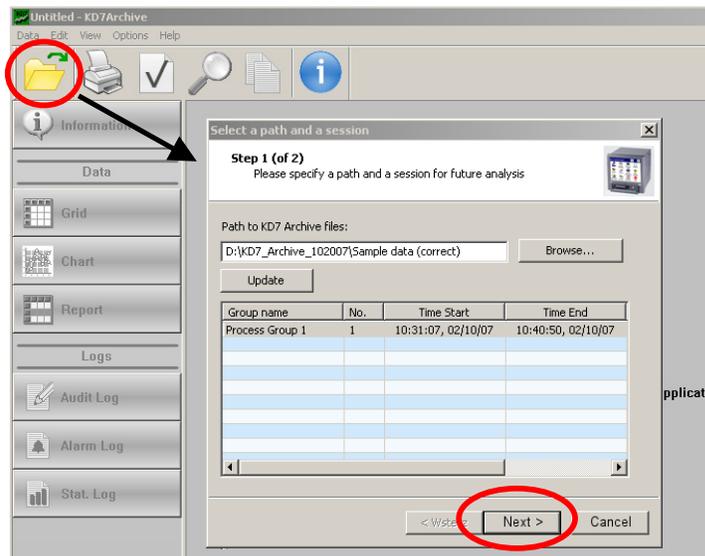
1. When the **Open session** option has been chosen



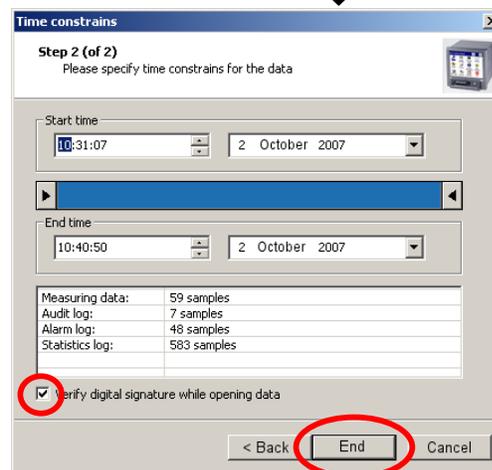
The working mode by default of the KD7 Archive program is the work with data sessions. The session is the collection of archive data for the given measuring group – in the composition of which enter: measuring data and event logs (regardless of the number of files composing the given collection).

Audit log is common for all measuring groups and is always opened as a whole. It is recommended to open data in the shape of a session and not 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.

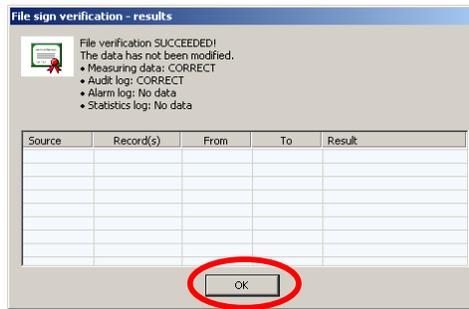


Set in the **Time constrains** window the beginning and the end of the time interval from which data will be presented and analysed in the program.

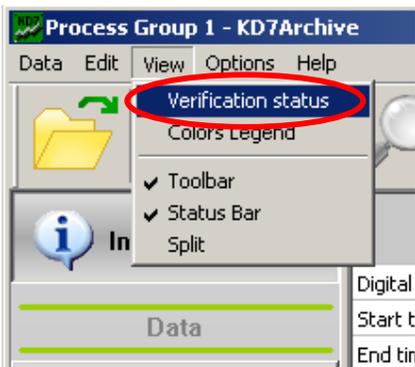
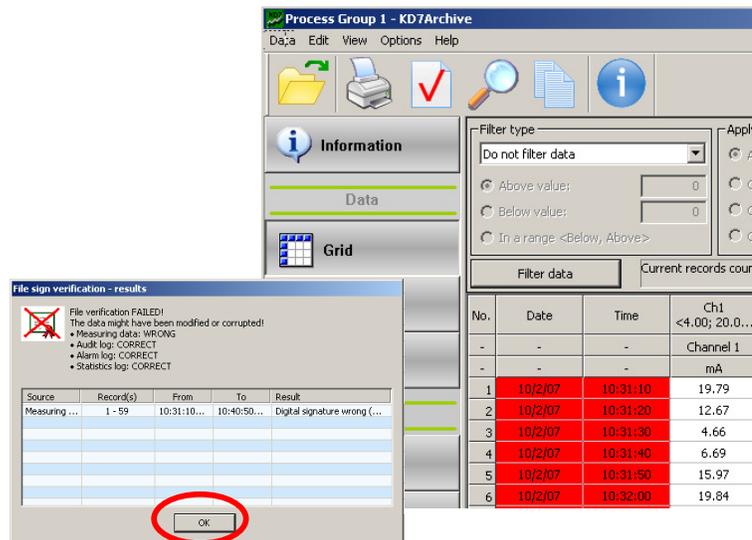


After finishing the selection of the time interval, when the option **Verify digital signature while opening data** will be marked in the **File sign verification** window – results, information about the result of the displayed signal verification is displayed.

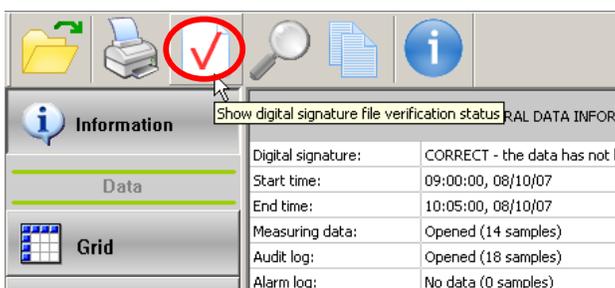
- **Succeeded** , when file of data and logs were not be modified or submitted to damage.



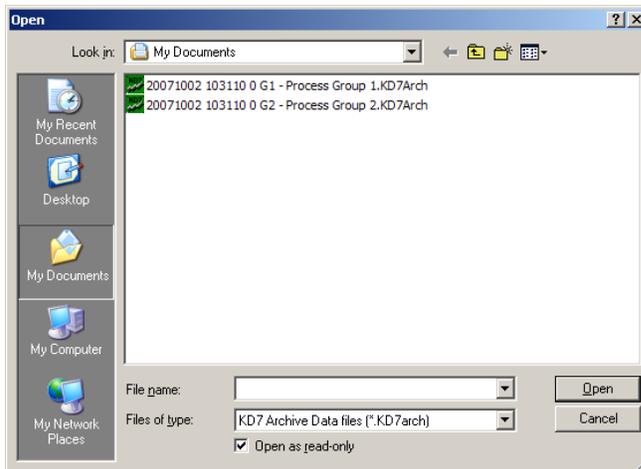
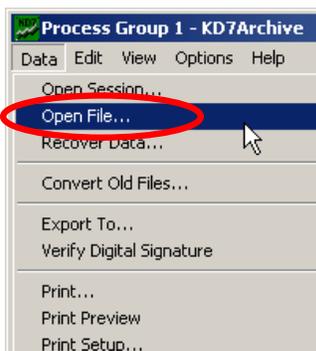
- **Failed**, when files were modified or submitted to damage (in the verification table, numbers of data records negatively verified are given, and in the **Data** table they will be marked with red colour).



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

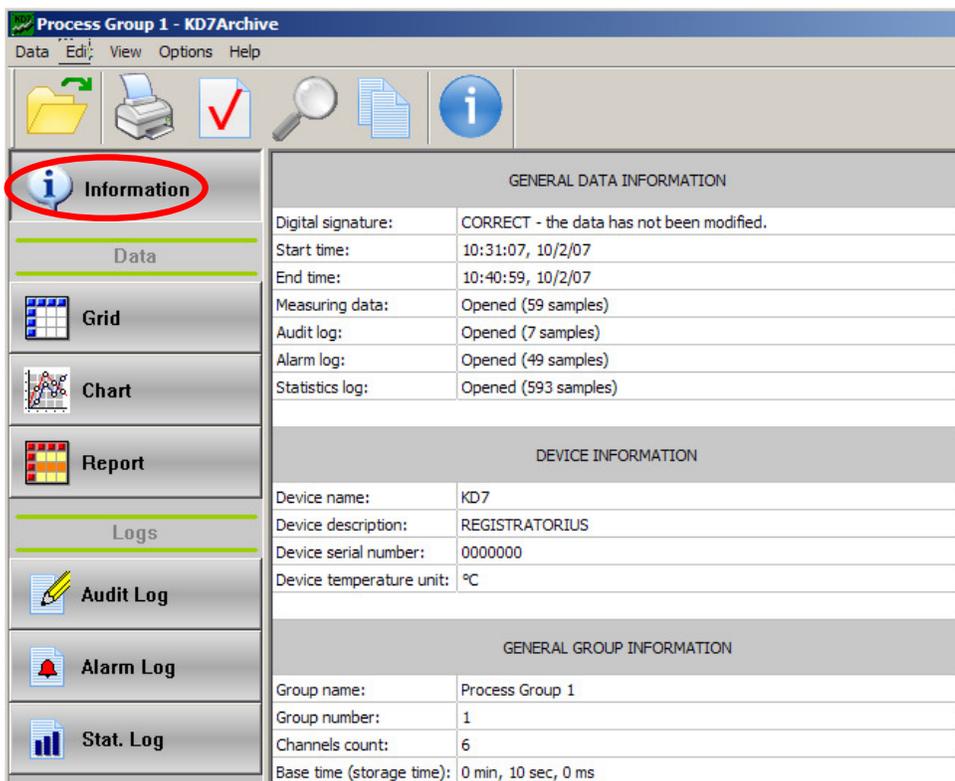


2. When choosing the **Data** → **Open File** option in the menu, the standard window of file selection will be opened.



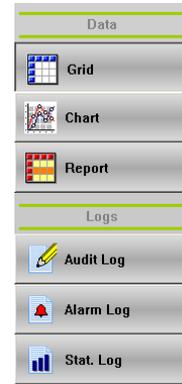
After choosing one of the stored files with data for analysis and accepting the choice, the **Time constraints** window will be opened. Further procedure, as above.

After choosing the **File sign verification-results** window, information about collected measuring data, and about the collected 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 lateral menu of the KD7 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.

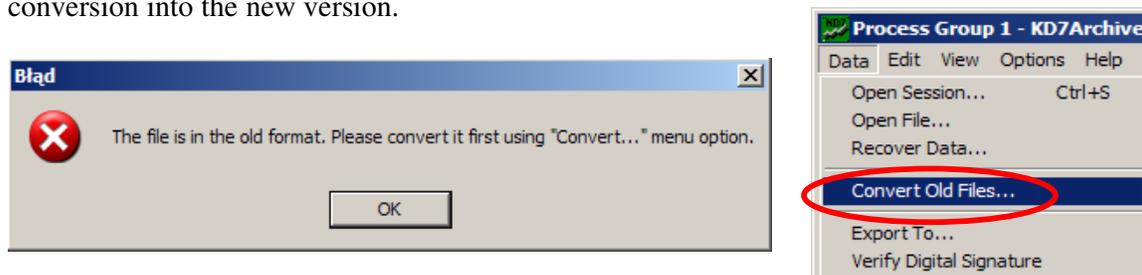


4.1 Data presentation in the shape of data table

If there is lack of measuring data, one must collect data acc. to the section 3.2. Next, choose the pushbutton in the lateral 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), one must carry out their conversion into the new version.



Collected measuring data will be presented in the program in the shape of a table.

Selection of filtration type for channel (s) Select. of channels in data window Closing/opening of the filtration setting window

Setting acceptance

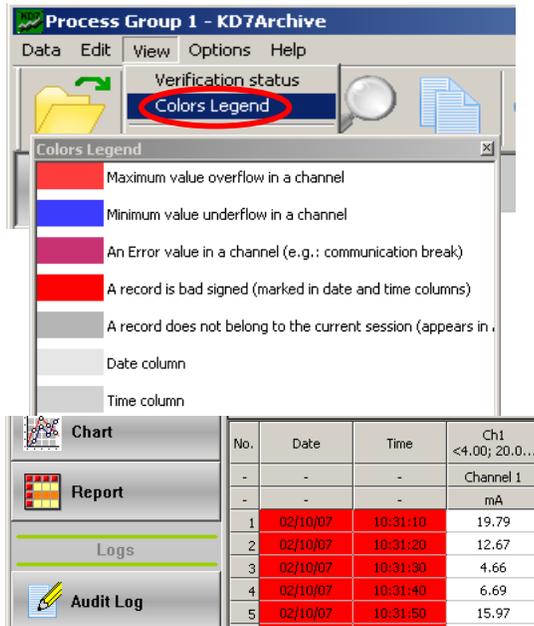
No.	Date	Time	Ch1 <4.00; 20.0... Channel 1 mA	Ch3 <4.00; 20.0... Channel 3 mA	Ch4 <4.00; 20.00> Channel 4 mA	Ch5 <4.00; 20.0... Channel 5 mA	Ch6 <4.00; 20.0... Channel 6 mA
1	02/10/07	10:31:10	19.79	14.64	10.69	7.06	4.64
2	02/10/07	10:31:20	12.67	5.72	4.11	4.44	6.63
3	02/10/07	10:31:30	4.66	5.36	8.33	12.19	16.01
4	02/10/07	10:31:40	6.69	14.05	17.52	19.62	19.85
5	02/10/07	10:31:50	15.97	19.99	19.20	16.63	12.93

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

- Without filtration,
- Favours filter, (e.g. below, above or in the range of given data values),
- Concealing filter (e.g. below, above or in the range of given data values),
- Show only data with an erroneous digital signature,
- Show the range exceeding,
- Show only incorrect values (e.g. lack of data).

In the **View** window, one can select these measuring channels from which data will be displayed in the table. Set filtration options will be realized after choosing the **Filter data** pushbutton.

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.

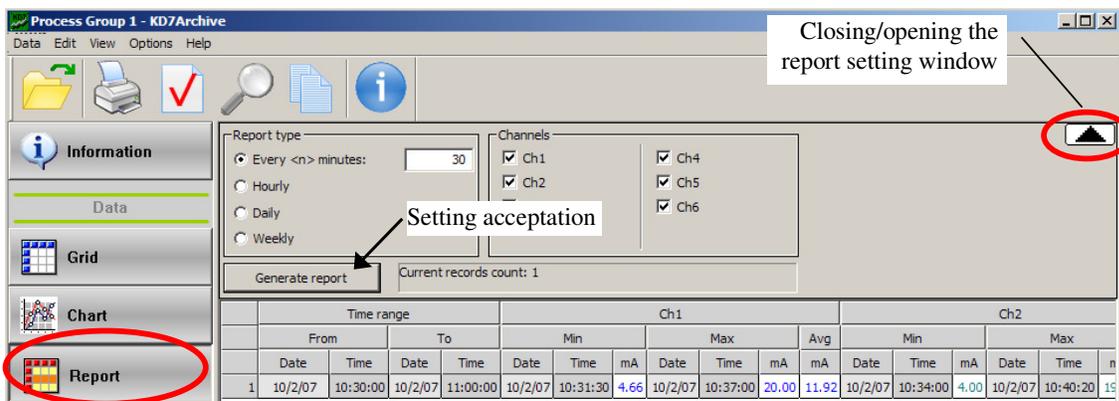


4.2 Data presentation in the shape of reports

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



Pushbutton in the lateral menu.



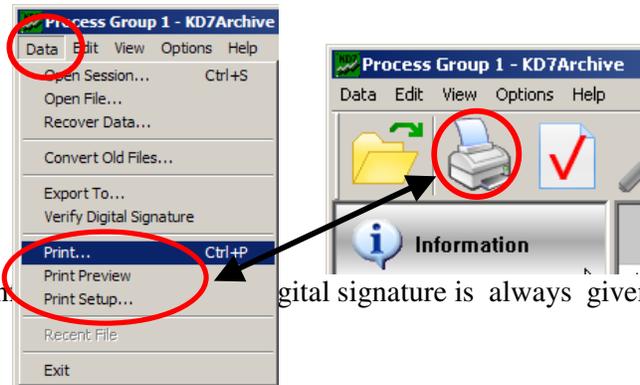
After setting the report type and measuring channels from which data will be displayed, select the **Generate report** pushbutton in the report window. The report will be displayed in the program window.

4.3 Printing, copying, export and data recuperation

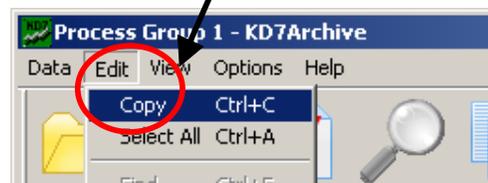
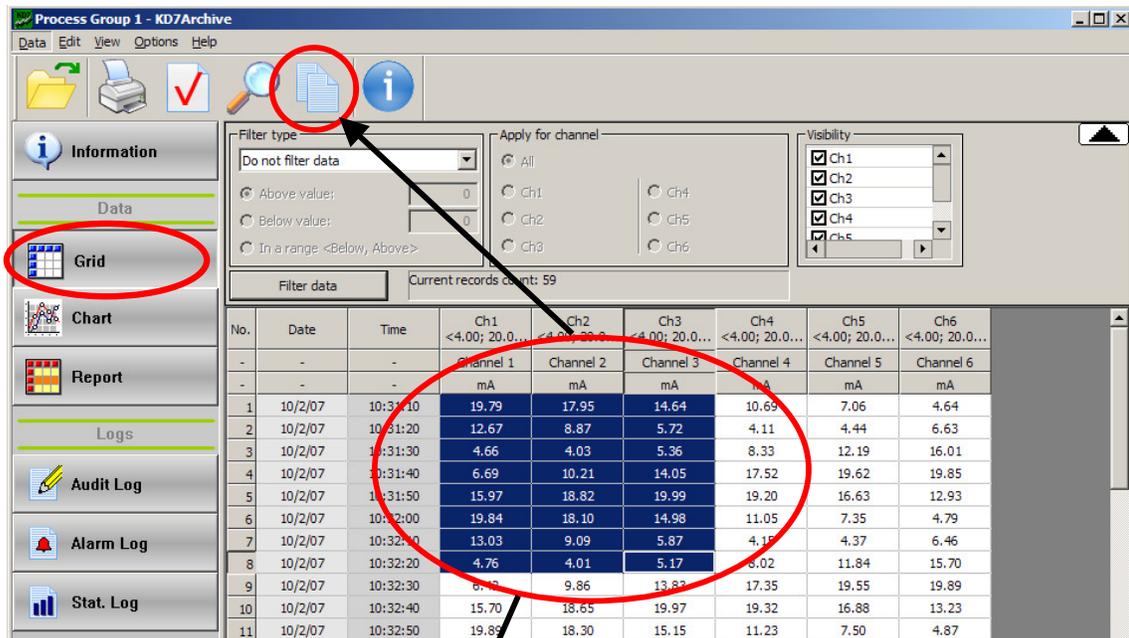
4.3.1 Printing

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

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

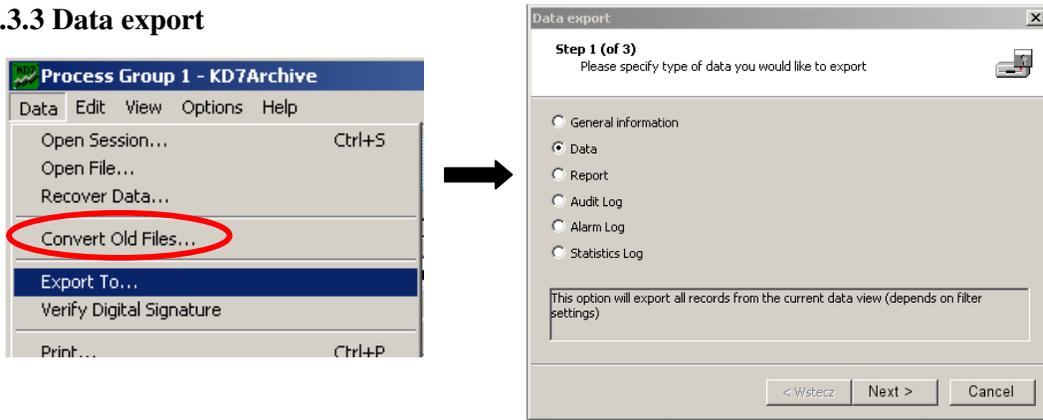


4.3.2 Copying of textual data



After marking with the mice cursor the data area and choosing in the toolbar, in the **Edit** → **Copy** menu, data will be copied in the system locker and next they can be utilized in other programs.

4.3.3 Data export



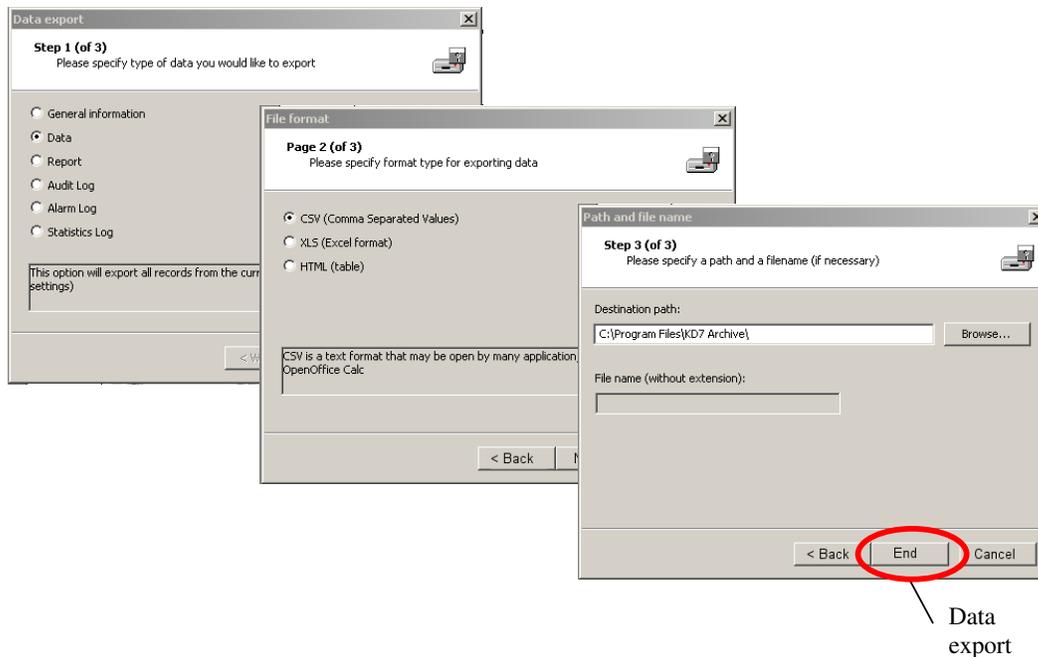
After choosing the **Eksport to** option in the toolbar of the **Data** menu, one must select the type of data (General information, Data, Report, Audit log, Alarm log or Statistics log) which have to be exported.

Next, depending on the data type:

1. Select the kind and format of exported data:

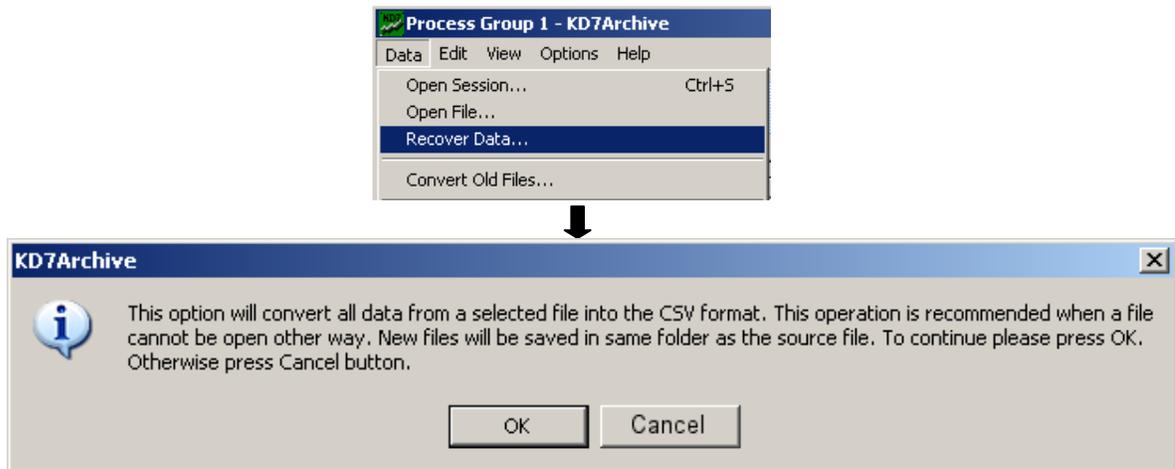
- measuring data: **CSV** (textual format) or **XLS** (format of MS Excel application, the export is only possible for the first 65 thousand data) or **HTML** (data in the shape of tables)
- reports: only **HTML**
- information: only **HTML**

2- Define the incoming path and the filename for exported data.



4.3.4 Data recovery

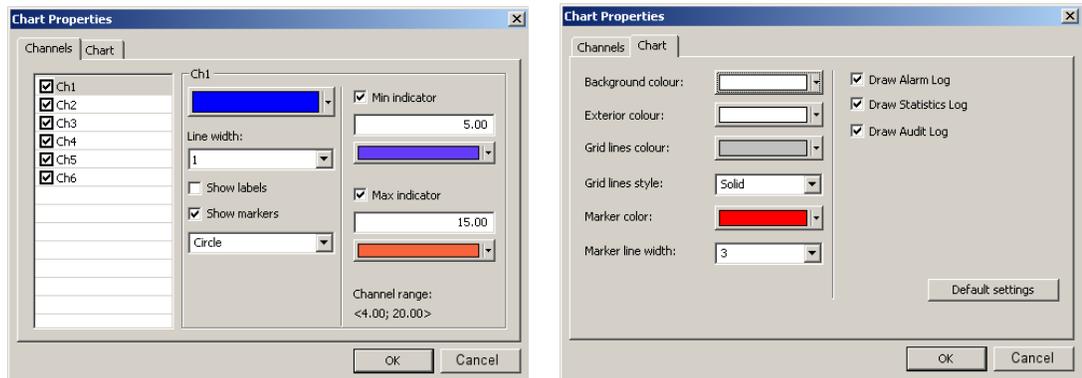
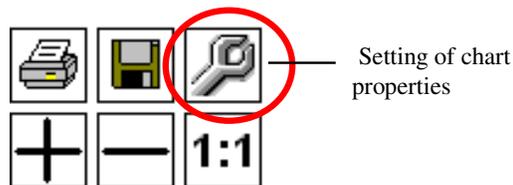
After choosing the **Data** → **Recover data** option in the toolbar, the program converts data in the defined file into the **CSV** textual format, stored in the same catalog.



4.4 Data presentation in the shape of a chart

4.4.1 Chart servicing

- **Setting chart properties**



In the chart properties window, one can set:

- Measuring channels which will be displayed in the program window,
- The colour and the marker line width for the given channel,
- The setting visibility of additional minimum and maximum markers for the given channel,
- The visibility of labels ,the visibility and shape of markers on the chart for the given
- Colours of chart window elements,
- Display of event log icons.

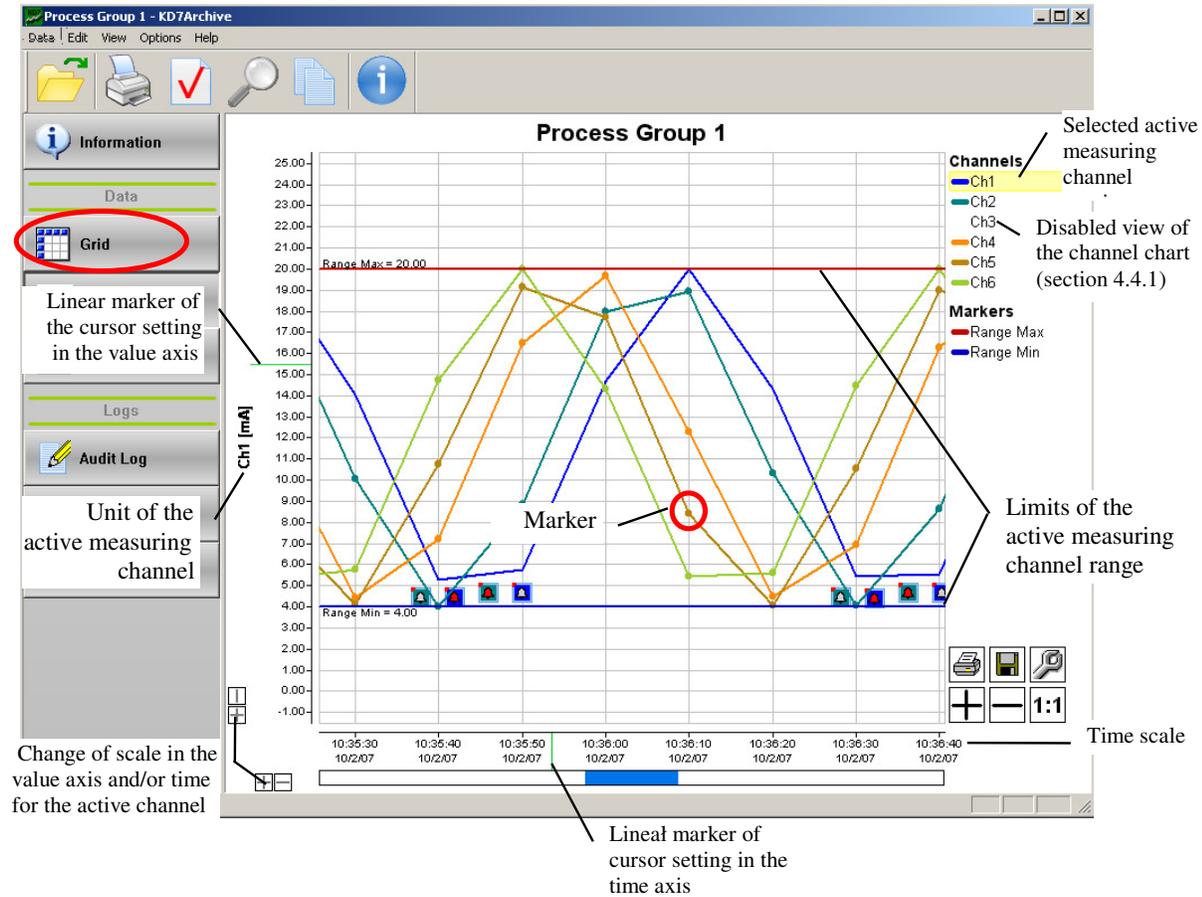
Or, one can choose:

- Settings by default

- **View of data in the shape of chart**

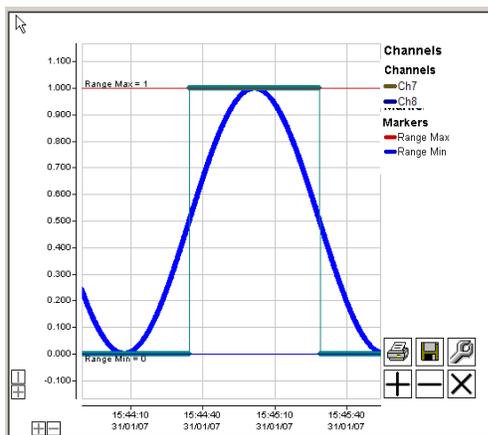
If there is lack of measuring data, one can collect data acc. to the section 3.2. After choosing the

 **Chart** pushbutton in the lateral menu, measuring data are displayed in the graphic form. The chart shows on the screen, the maximal time corresponding to 100 thousand samples. When there is more samples, one must rewind the chart (see below).

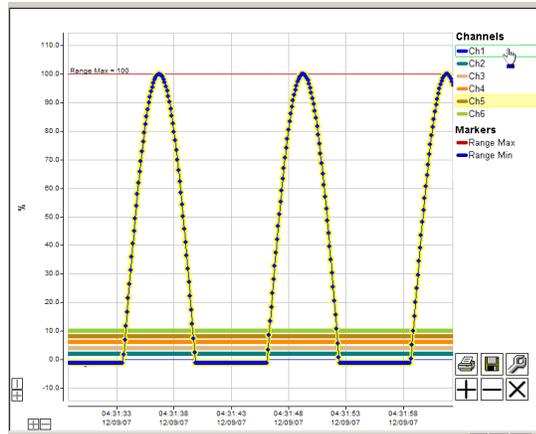


After choosing the active measuring channel in the program window (setting the mice cursor on the channel number and clicking – the area of the channel number will be marked by a yellow background). The unit, range limits, value scale and time scale are displayed in the chart window.

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



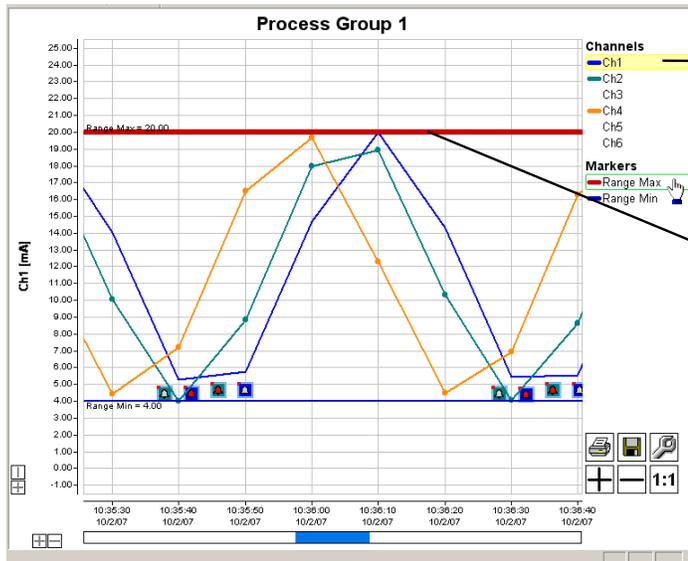
- **Lighting-up the selected measuring channel**



Lighting up the chart of the given measuring channel (mice cursor in the channel symbol area)

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

After setting the mice 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

- **Displacement of the chart in the window, in the time or axis value.**

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



Mice cursor

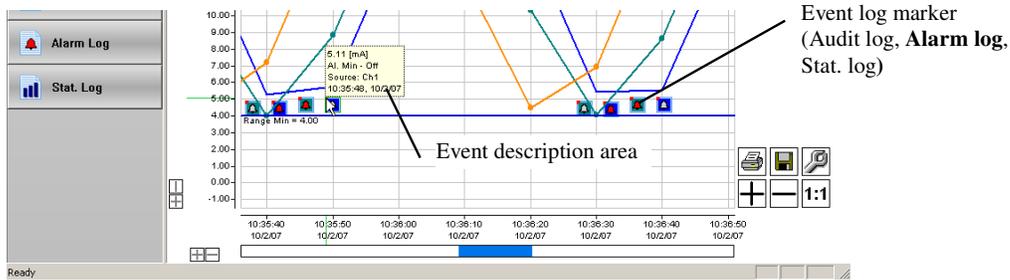
4.4.2 Information icons on charts:

-  - alarm icon enabled
-  - alarm icon disabled
-  - icon of statistics log
-  - icon of audit log

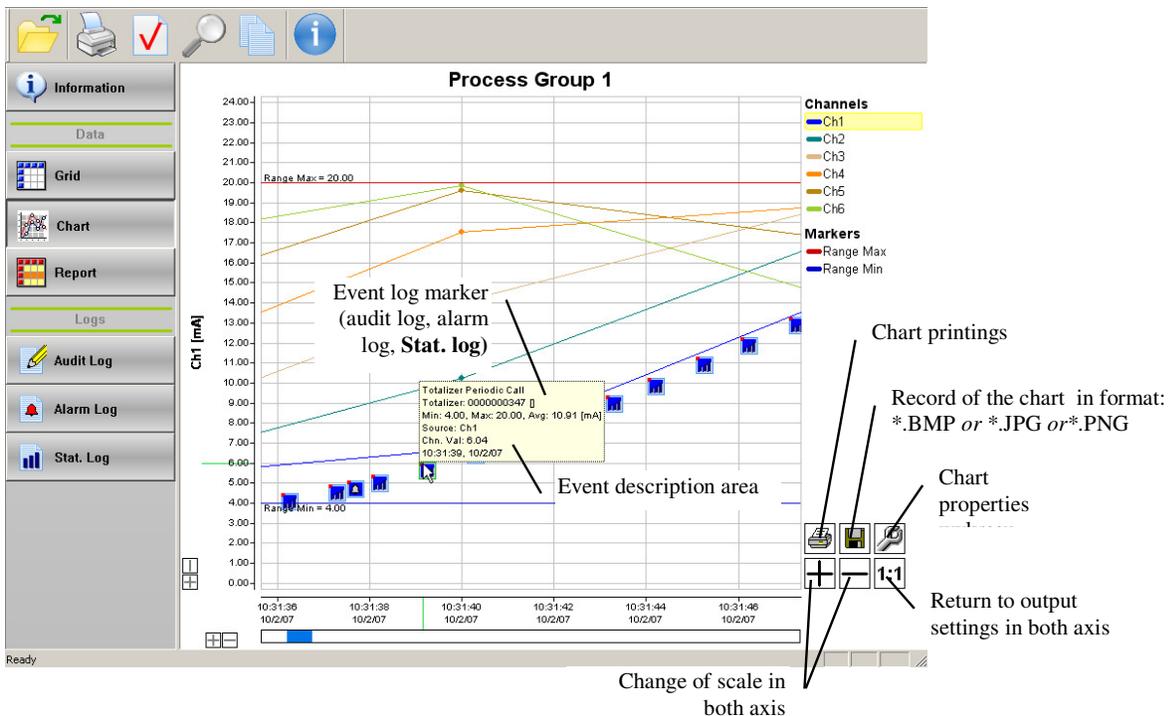
Notice:

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

• Alarm icons



• Statistics icons



- **Audit icons**

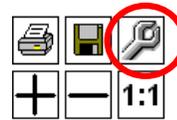


Event log icon (**Audit log**, alarm log, stat.log). Event description area.

After setting the cursor on the icon of the event log marker (audit *and/or* alarm *and/or* statistics), information with the description of this event (description area) is displayed.

4.4.3 Transition from log or data table presentation into the chart

Notice: Log icons are visible on the data chart after connecting their lighting in the setting menu of chart properties. (see section 4.4).

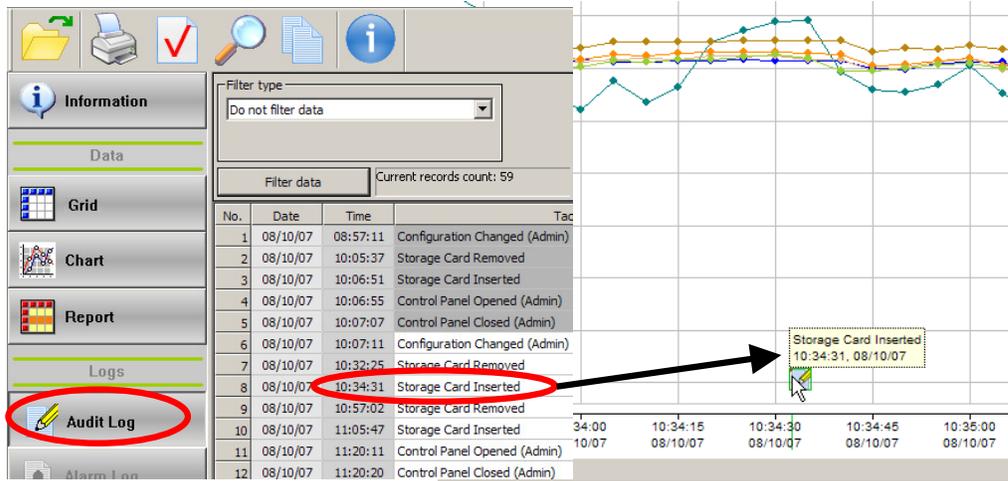


A double click of the mice cursor on the line of data table or the table of the selected event log causes the automatic displacement of the cursor on the chart, in the shape of a time marker (unless that the chart exists).

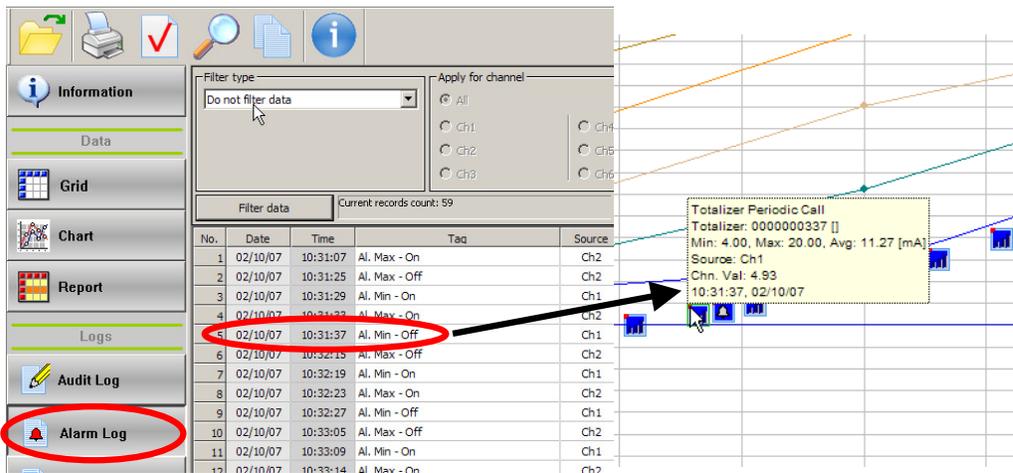
The top screenshot shows the 'Audit Log' icon circled in red in the left sidebar. The chart on the right shows a time marker at 10:32:10. The bottom screenshot shows the 'Grid' icon circled in red in the left sidebar. The chart on the right shows a time marker at 10:32:10. The chart displays multiple channels (CH1-CH6) and markers for Range Max, Range Min, and Range.

Carry out the marker configuration (colour and time thickness) in the setting menu of chart properties (see section 4.4.1). A click by the right mice pushbutton on the chart removes the time marker.

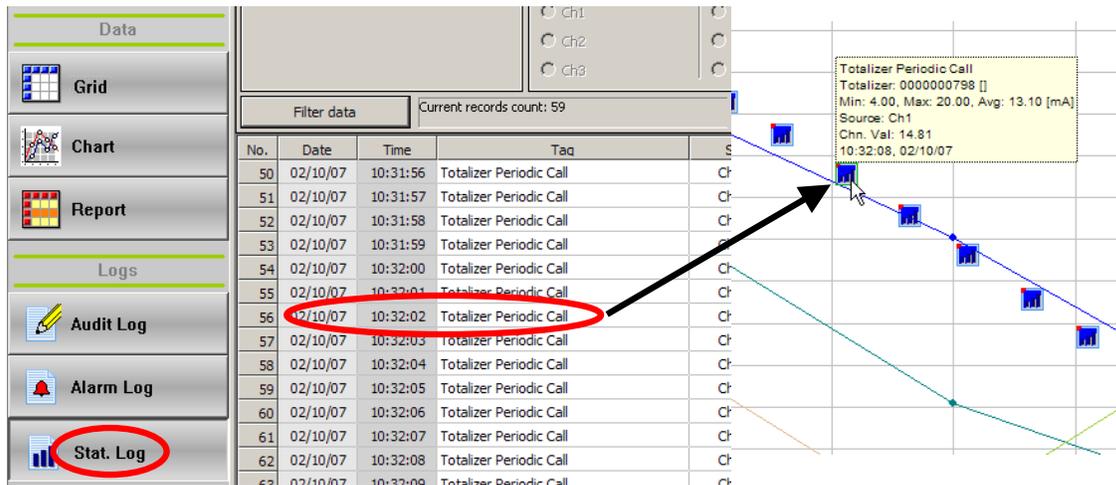
- Audits in the log and on the chart



- Alarms in the log and on the chart



- Statistics in the log and on the chart



KD7-09/3.B

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London Electronics Ltd , Warren Court, Chicksands, Shefford SG17 5QB
Tel 01462 850967 Fax 01462 850968
www.london-electronics.com