Graphical Display (Line Recorder)

## 1. Displaying the current data

The data logger provides a graphical display of the controller data, which is simultaneously saved as a file in the PKS directory. The graphics factory setting shows both actual and set point values of a controller with the address 5. (Start: see 3.).

## 2. Displaying the saved data

A previously saved data recording is displayed on a diagram ("Data logger"->"Graphic from file" menu). Switching on the cursor mode enables numerical display of the individual data. (see 3.)

## 3. Starting the graphics/data logger

The data logger is activated and the progression over time of the parameters selected in the "Data logger" -> "Settings" menu is displayed on a diagram by selecting the "Data logger"->"Start" menu item.

The names of the channels displayed, the corresponding controller addresses and the currently transmitted values appear to the right of the graphics. The time is displayed below.

If the relay status of the controller is displayed (parameter 1005), the individual switch state of the relays is additionally displayed. At the same time the relay state is displayed to the right of the graphics as a bit sequence for the relays 8 to 1 (1: Relay ON, 0: Relay OFF).

If the "Autoscroll" in the graphics window is activated, then the graphics are automatically shifted to the left with each new sample, so that the current values can always be read-off on the right hand edge of the picture. The graphics remain still in case the Autoscroll function is deactivated and can be shifted manually with the scroll bar, in order to view the preceding time graph. However the graphics are updated continuously.

The grid can be hidden or shown with the "Grid OFF" or "Grid ON" button.

A graphics cursor can be switched on or off with the "Cursor On" or "Cursor Off" button. This can be moved along the time axis with the aid of the Cursor buttons. In cursor mode the current data is not displayed, but just the corresponding value of the cursor position is displayed to the right of the graph. The time displayed represents the sampling time for the cursor position.

The continuous recording can be paused with the "Data logger" -> "Stop" menu item. If the following request for saving the recorded data will be answered by "no", then the data will be overwritten when the data logger is restarted.

Regardless of the ongoing recording the Graphics screen can be exited with the "Close" button or <ESC>. Data will continue to be recorded in the background if the data logger is not stopped. It is possible to return to the continuous recording display at any time with the "Data logger" -> Actual graphic" menu item.


*Notes for automatic data archiving:*

The continuous recording data is sent to the "GRAFIK.GFK" file. This data is overwritten when the data logger is restarted.

In the case of permanent recording the "GRAFIK.GFK" file contains the record of the current week.
Automatic archiving takes place every Sunday after the first sampling which takes place after 6.00 am or after 7 days at the latest.  The recorded file is saved and named with the days date.
Example: Recorded file "GRAFIK.GFK " is saved on the 18.12.2014 as "20141218.GFK".

The oldest data is deleted after the fourth sequential archiving, in order to limit the storage space. In order to save this data permanently it is necessary to store the required file in another directory beforehand or to rename it.
The file "GRAFIK.GFK" is located in the folder "Init" of the PKS installation directory, the file path can be seen from the menu item "About…" -> "About PKS".


4. Changing the defaults
The default graphic settings can be changed with the "Data logger"->"Settings" menu.

Another sampling time can be entered in minutes and seconds.


The scaling of the Y axis (temperature) in the graphics mode can be carried out manually or automatically. In the automatic setting, the scaling is automatically created in accordance to the smallest and largest recorded value. In the manual setting the values for the upper and lower limits can be entered.

A maximum of 8 channels can be recorded. The corresponding parameters of the connected controller are available by means of the button "…". Alternatively, parameters can be entered directly in the "Code" input boxes. The associated controller address for each parameter to be recorded is entered in the "Adr." box.  The assignment and meaning of the parameter codes can be obtained from the 99s controller-interface operating instructions (example: parameter code 1010 = actual value 1).