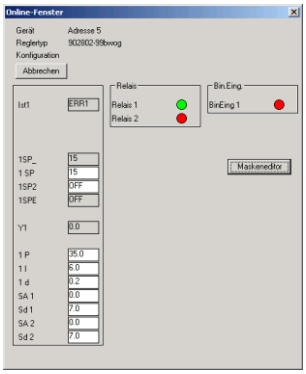
The interface software KFM – PKS offers different function areas, which can be optionally and independently used. The software is distinguished by simple handling.

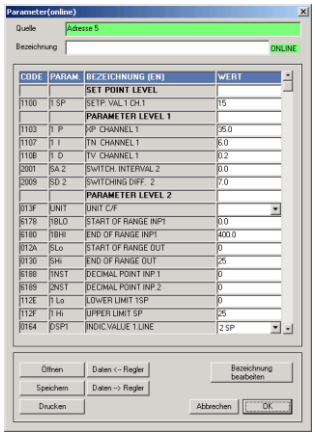
1. Online remote operation

On starting, the program automatically searches for any connected controllers. A window then appears, displaying the actual value, set value and parameters of the first controller found. Settings with a white background can be changed; changes have immediate effect in the controller. If more than one controller is connected (RS485 only), the required controller can be selected via a menu.



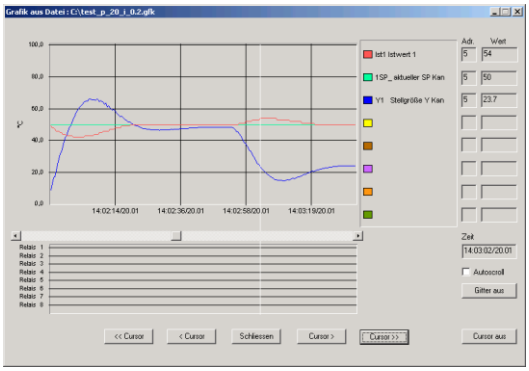
2. Data transfer

Optionally also the complete parameter block of the selected controller can be read out, edited, displayed as a table and printed out.
It is also possible to save the complete parameter setting as a file. Equally, parameter sets that have already been saved can be loaded into the controller.



3. Graphical Display (Line Recorder)

The data arriving from the controller can be displayed as a continuous diagram. Recordings made previously can also be recalled and displayed.

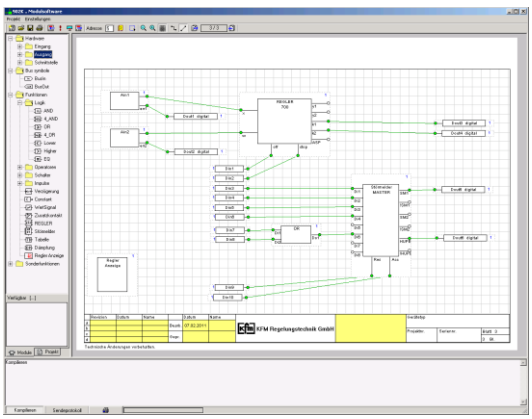


4. Data Recording (Logger)

Up to eight types of data arriving from the controller can be stored continuously in a file. This file can later either be recalled and displayed as a graph, or can be used by other programs.

5. Module software (optional)

The KFM module software provides the creation, visualization and parameterization by graphical elements of projects based on the controller series 902K..



Installation

- First end all applications which are running on the PC.
- Insert the PKS-CD in the CD drive and start the "Setup.exe" installation.
- A selection of german or english language for PKS is available.
- For installing and using of PKS agree to the liability exclusion.
- Select the destination folders of the hard disk drive into which the PKS files are to be installed in the following dialog. We recommend using the folders which are suggested.
- Apart from PKS it is possible to choose the TERMINAL program for modem configuration optionally.
- Then a link can be established with PKS in the Start menu as well as desktop icons.
- In addition to a summary of the chosen components the installation starts finally after clicking on the "Install" button.

Connection of the controller to a COM interface:
Connect the controller to the COM interface of the PC with the supplied RS232 or RS485 interface adapter. Ensure that the COM port is set accordingly after the PKS program start in the menu "options"->"settings".

Connection of the controller to a USB interface:
Connect the controller to the PC with the supplied USB interface adapter. The driver is installed automatically depending on the operating system, otherhwise manually: After you get the message "new hardware found", insert the included driver CD and launch the installation from the CD in the windows dialog. Following installation, the USB adapter appears in the windows system level as a further COM port. During driver installation the desired COM port is requested.
Ensure that the COM port of the USB adapter is set accordingly after the PKS program start in the menu "options"->"settings".

Connection of a device via Ethernet interface:
Connect the controller to the network interface of the PC with the supplied Ethernet interface adapter. Ensure that the COM- setting "Ethernet" and the IP-address of the Ethernet- interface adapter are set accordingly after the PKS program start in the menu "options"->"settings".
Further informations: → see manual: "B 99se E"

Information on uninstalling software

The interface software PKS and the software TERMINAL for modem configuration can be completely removed by execution of the program \uninst0000.exe wich is located in the PKS installation directory. If a link in the start menu has been created during the installation, it is possible to launch the "PKS,Terminal uninstall" from there.

Program operation

ADDRESS SEARCH window

Scanning for connected controllers is carried out once the program is started. The controller addresses are interrogated individually. As soon as a controller is found, the address appears black and the ONLINE window, respectively the configuration window in case of a bus adapter, is called up automatically.

Notes for working with several controllers:
If several controllers are operated simultaneously with PKS (only possible with the RS485 connection, suitable interface adapter necessary), the first controller found will be registered and it's data displayed in the ONLINE window. The address of this controller appears black in the ADDRESS SEARCH window.
The addresses of other controllers found are also displayed. All windows (apart from the ADDRESS SEARCH window) must be closed if another controller is to be selected. Afterwards the required address can be selected by clicking it in the ADDRESS SEARCH window. The ONLINE window of this controller opens automatically. Then handle the controller as described above.

ONLINE window

The ONLINE window shows actual values, setpoint values, switch states of the relays as well as the binary inputs and the most important parameters of the controller found. The data is updated continuously. Values can be changed in the input boxes (white). Changed values are sent immediately to the controller. The ONLINE window can be closed with <ESC> or by clicking the "close" button and reopened again with <F8> or the "Online"->"Online window" menu item.

Hint to mask editor
The display of the relays and the binary inputs in the ONLINE window can be inverted here and identifiers may be given to them (the inversion does not affect the actual switch state).
The mask setting and identifiers can be opened and saved manually with the "open and "save" buttons. If the "Open and save mask automatically" box is activated then the mask setting and identifiers will be saved and used automatically for the next operation with PKS.

Transfer of complete parameter data records

1. Reading out parameters
Alternatively to the ONLINE window the complete data record of the controller can be read out with the <F5> key or with the "File" -> "Data ← Controller" menu item. The parameters are displayed in the PARAMETER window and can be saved as a file or be printed ("File" menu). In addition a previously stored data record can be reloaded. In the PARAMETER window it is possible to add a comment in the form of a description of the controller to the file.

2. Parameter transmission
A changed or loaded data record can be transmitted to the controller by pressing the <F6> key or with the "File" -> "Data → Controller" menu item, changes have immediate effect if a controller is connected (display "online", green background).

*Note: Depending on the device, template files are optionally available for new data records without connected hardware, the files are saved in the PKS installation directory and can be used with the menu item "File"->"open" (file type: *.PKV).*

Important: A previously stored and reloaded data record (display offline, red background) is only active after transmission to the controller.

WARNING: Incorrect changes of the data records may prevent the controller from working properly. It is therefore recommended to carry out modifications using professionally trained personnel.

Note only for LCD and TFT controller, for example 902../903../93.. or 824..
The descriptive texts for displayed values on the controller can be edited and archived with the menu item "edit label". Available descriptive texts are factory set in german and english language, they can be altered by using the buttons paste "DE" and paste "EN" (also with cyrillic characters). The desired descriptive texts can be activated after using the >OK<-button.

Options / Settings

The settings of the serial interface and the data transfer mode are carried out under the "Options" -> "Settings" menu. Password- protected menu items can be displayed by using the button "extended>>>".

Serial port

Enables the selection of the active interface of the controller / MODEM and the Baud Rate to be used, the IP- address and a port must be set for an Ethernet connection.

Besides a fixed selection of the Baud Rate of 9600, 19200 and 38400 the automatic Baud Rate detection can be selected. The automatic Baud Rate detection is recommended.

Data transfer mode (COM- interfaces only)

LOCAL:
The data is transferred by a controller connected directly to the serial interface.

REMOTE:
Transfer of the data from the controller to the PC is by means of remote data transfer/MODEM. Following the activation of the "REMOTE" option, the user is requested to enter a telephone number. Following confirmation, the PC MODEM tries to create a connection to the controller MODEM. This procedure can take around 30 seconds. If connection succeeds, the red "Offline" display of the dialog window changes to a green "Online" display. The telephone symbol in the background of the main window also changes from red to green. The connection remains active until the "Disconnect line" button is activated.

extended>>>

Allows to select additionally menu entries for displaying under the menu item "Extras". The selection is protected by passwords.

Extras / KFM-device programming (to display: "Options" -> "extended>>>")

KFM-device programming offers the possibillty for a device update with KFM provided software.

The device has to be connected to the PC and registered by address scanning in advance: choose the menu item "Extras" -> "Controller programming".

The device programming is protected by a password, the factory setting is 1.

To prevent unauthorized use a new password can be assigned after entering the correct password.

The COM port setting must be set accordingly and the respective file has to be selected to start the device programming.
You will be guided automatically through the rest of the proccess, a protocol shows the progress.

Extras / Accessory device for external setpoint and analogue signal outputs (99e..)

See instruction manual 99e.., e.g. for commissioning.

In case of a detected accessory device, (with or without connected controller to the accessory device) the respective configuration window opens automatically, it is manually available under the menu item "Extras" ->"99e..".

The configuration window shows the interface address of the controller which is connected to the accessory device. The configuration of the connected accessory device is being requested and displayed with the button read, the button send saves the actual configuration to the accessory device.

The corresponding parameters of the controller, which is connected to the accessory device, are available by means of the button "…", without connected controller there is a selection of the most common parameters available. Alternatively, parameters can be entered directly in the "Code" input boxes.

The buttons open and save allow to create archives and archived configurations can be reloaded.

Important: A previously stored and reloaded data record (display offline, red background) is only active after transmission to the accessory device.

Extras / Profibus-DP-adapter (99spde)
Extras / Modbus-adapter (99sm)

In case of a detected bus adapter, the respective configuration window opens automatically, it is manually available under the menu item "Extras" ->"99spde.. " for Profibus respectively Extras" ->"99sm.. " for Modbus.

The configuration window shows the bus address (configured at the bus adapter by a rotary encoding switch) as well as the interface address of the connected controller.
The configuration of the connected adapter is being requested and displayed with the button read, the button send saves the actual configuration to the adapter.

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.

Modify the parameter for reading from the controller or sending to the controller.

The buttons open and save allow to create archives and archived configurations can be reloaded.

See instruction manual interface 99spde, e.g. for organization of the profibus data modules and manual interface 99sm for the supported Modbus functions.

Notes for Modbus adapter 99sm
It is neccessary for the Modbus to select the data modules and the baudrate.

Optionally a latency period and a surveillance period for the bus can be entered, setting 0 deactivates the function.

Extras / read history or fault message

Recording times, message texts and the status of the operating- and fault messages are read out from connected KFM- malfunction alarm devices and displayed in a table view. The table can be saved and printed.

Extras / TFT display: → see manual: "B 99pkd E"
Extras / 903K module software: → see manual: "B 99pkm E"
Data logger: → see manual: "B 99pkl E"

Online / KFM Monitor

The values of any parameter from connected devices can be read or send with the KFM monitor. The communication is continuously displayed in a protocol and can be printed.

Note for the KFM Monitor:
The usage of the KFM- monitor is recommended to experienced users only! For the provided parameters see also manual 99s.