

# SIEMENS

## SIPROM DR24

Graphical Configuration  
of the multifunction unit  
SIPART DR24

## Manual

Release 10/2003

Introduction	1
Functions of SIPROM DR24	2
Graphical Layout	3
Tabular Layout	4
Edit parameters	5
Documentation	6
Short-cut keys	7
Error messages	8
References	9
Edit function blocs	10
Display process variables	11
	12
	13
	14
	15

MS-DOS is a trade mark of Microsoft  
MS-WINDOWS is a trade mark of Microsoft

SIPART is a trade mark of Siemens AG  
SIMATIC is a trade mark of Siemens AG

All other product and system names are ( registered ) trade marks  
of the respective owner and must be handled accordingly.

Edited by  
Automation an Drives Division,  
Business range Process Instrumentation (A&D P11)  
Oestliche Rheinbrueckenstrasse 50  
D-76187 Karlsruhe

<p>Distribution and duplication of this document, as well as utilization and publication of its contents require explicit authorization. Offenders are liable to the payment of damages. All rights reserved, especially in case of the grant of a patent or utility model registration.</p> <p>© Siemens AG 2000 All Rights Reserved</p>	<p>The contents of this document were checked for conformity with the described software. However, deviations can not be completely excluded and we are not liable for total conformity. The information in this document is regularly reviewed and the required corrections included in the following issues.</p> <p>We are open to any remarks and suggestions.</p> <p>Subject to modification</p>
---	--

Release: 10 / 2003 (english)  
Pages incl. cover: 72

Printed in the Federal Republic of Germany

# SIPROM DR24

## Operating Instructions

**10.2003**

	Page	
1	Introduction	9
1.1	Components and Delivery	10
1.2	Hardware and Software Requirements	11
1.3	Connecting SIPART DR24 to the PC	12
1.3.1	END-END data link (RS 232)	13
1.3.2	PROFIBUS DP data link	14
1.4	Default Settings of SIPART DR24	17
1.5	Installing the software from CD-ROM to Hard Disk	18
1.6	Programstart under MS-WINDOWS XP (or NT, 2000)	19
2.	Functions of SIPROM DR24	21
2.1	Functions of operator interface	21
2.1.1	File, New ...	22
2.1.2	File, Open ...	24
2.1.3	Controller, Load from controller ...	25
2.1.4	Change controller type	25
2.1.5	Options, Program ...	26
2.1.6	Options, Communication ...	26
2.1.7	Options, Passwort ...	27
2.1.8	Options, Language ...	27
2.1.9	Help	27
2.2	Functions of the working mask	28

	Page	
2.2.1	File, Print ...	29
2.2.2	File, Compare	30
2.2.3	Controller, Load from controller ...	31
2.2.4	Controller, Change keyword ...	32
3	Graphical Circuit Design	35
3.1	Select pages	35
3.2	Page overview	36
3.3	Partial Circuits	38
3.4	Example Circuit	39
3.5	Graphical properties	41
4	Tabular Circuit Design	43
5	Edit Parameters	47
5.1	On-Line-Parameters	48
5.2	Off-Line-Parameters	49
5.3	Clock-Parameters	50
5.4	Define Hardware	51
5.5	Uni – Modul Parameters	52

		Page
6	Documentation	53
7	Shortcut Keys	59
8	Error Messages	61
9	References	65
10	Function Block EDITOR	67
10.1	Example Subtractor	68
10.2	Example Binary Integrator	69
10.3	Example Analog Input	70
11	Display Process variables	71
11.1	Process values	71
11.2	Status bits	72

## **1. Introduction**

SIPROM DR24 is a MS-WINDOWS application (32-Bit) for comfortable configuration of multifunction units SIPART DR24. It's possible to configure the old controllers DR24 (6DR2400-..) as well as the actual controllers (6DR2410-..).

The software includes a function library for the multifunction unit, which allows to define all function blocks on a maximum of 100 pages ( FDEF ). After defining and placing the blocks, they are connected from data sources to data sinks ( FCON ). Analog and binary signals are distinguished by colors. The position of the function blocks, i.e. their process sequence, is defined automatically.

The configuration entered via PC is saved on hard disk or diskette, output on a printer, or, if a SIPART DR24 is connected, transmitted to the controller via serial interface ( RS 232C or Profibus DP).

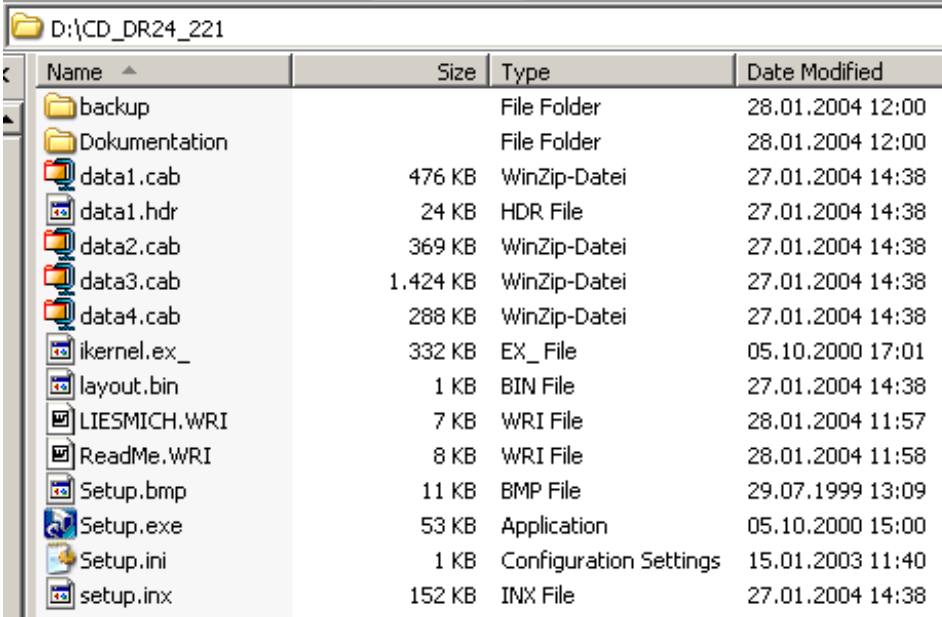
For modification, storage, or tabular print-out, programs of the SIPART DR24 can be transferred to the PC as a tabular device data plan.

## 1.1 Components and Delivery

The software SIPROM DR24 is delivered on CD-ROM. The manual is on CD-ROM in the format MS-WINWORD.

A SETUP routine copies all files from the CD-ROM to a hard disk. The compressed files are decompressed during the copy procedure.

Contents of CD-ROM:



Name	Size	Type	Date Modified
backup		File Folder	28.01.2004 12:00
Dokumentation		File Folder	28.01.2004 12:00
data1.cab	476 KB	WinZip-Datei	27.01.2004 14:38
data1.hdr	24 KB	HDR File	27.01.2004 14:38
data2.cab	369 KB	WinZip-Datei	27.01.2004 14:38
data3.cab	1.424 KB	WinZip-Datei	27.01.2004 14:38
data4.cab	288 KB	WinZip-Datei	27.01.2004 14:38
ikernel.ex_	332 KB	EX_File	05.10.2000 17:01
layout.bin	1 KB	BIN File	27.01.2004 14:38
LIESMICH.WRI	7 KB	WRI File	28.01.2004 11:57
ReadMe.WRI	8 KB	WRI File	28.01.2004 11:58
Setup.bmp	11 KB	BMP File	29.07.1999 13:09
Setup.exe	53 KB	Application	05.10.2000 15:00
Setup.ini	1 KB	Configuration Settings	15.01.2003 11:40
setup.inx	152 KB	INX File	27.01.2004 14:38

## 1.2 Hardware and Software Requirements

Personal-Computer with Pentium CPU (e.g. SIMATIC-PG) in basic design for MS-WINDOWS XP, NT, 2000

RAM:	min. 64 MB
Hard disk:	10 MB free area
Drive:	CD-ROM
Graphic card:	fast graphic card (SVGA or better)
Serial Port:	COM 1 until COM 4 are supported
	Profibus DP via CP 5611 or CP 5511 for
	Laptops (cable see chapter 1.3.3)
Parallele interface:	LPT1 (CENTRONICS) for printings
Cable:	6DR2902-8AB for Point to Point-link
(RS 232C)	between PC (9-pol. female) and controller
	(9 pol. female)
(MPI-cabel, Profibus)	6ES7 901-0BF00-0AA0; 5m length

**Note:** By use of a SIMATIC programming device (e.g. PG 740) the hardware requirements for Profibus DP on the master side are not relevant. Via the integrated MPI-interface, it is possible to configure the SIPART DR24, if the software driver package „**SOFTNET-DP**“ is installed.

Operating System:	MS-WINDOWS XP, NT, 2000 (MS-WINDOWS 95/98 as 32-Bit Application)
Profibus DP driver:	SOFTNET DP Version $\geq$ 2.2 for CP 5611 (6GK1 704-5DW61-3AA0) (release: 10/2002)



### 1.3 Connecting SIPART DR24 to the PC

The following links between SIPART controllers and higher-level systems can be realized with the interface module **6DR2803-8C** or **-8A**:

END-END connection ( V.24/V.28 or RS 232C )

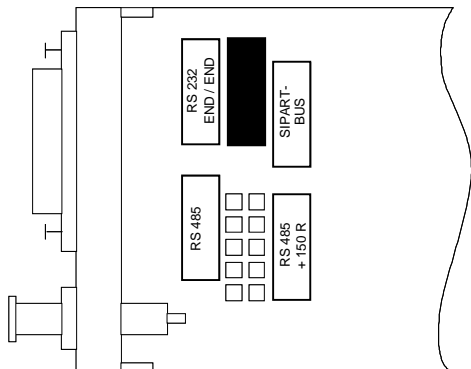


Figure 1.3.1 Setting RS 232C END-END with 6DR2803-8C

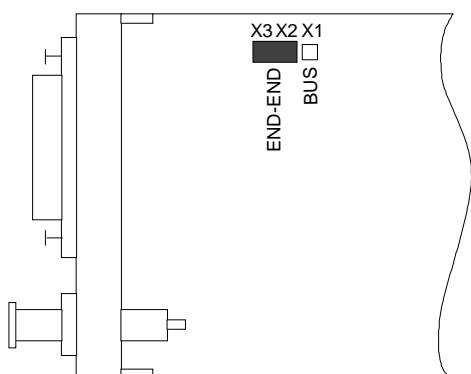


Figure 1.3.2 Setting RS 232C END-END with 6DR2803-8A

### 1.3.1 END-END data link ( V.24/V.28 or RS 232C )

Generally, either shielded or unshielded round cable ( e.g. LiYCY 4x0.14 mm<sup>2</sup> ) should be used for **END-END** data links. The maximum lengths are 10 m ( shielded ) and 30 m ( unshielded ).

PC - AT		SIPART DR SES	
COM 1 ... 4		6DR2803-8C / -8A	
25 - pol. male		Jumper to END-END	
25 - pol. female C74451-A347-D38		9 - pol. female C73451-A347-D39	
TxD	PIN 2	PIN 3	RxD
RxD	PIN 3	PIN 2	TxD
GND	PIN 7	PIN 7 and 8	GND

PC - AT		SIPART DR SES	
COM 1 ... 4		6DR2803-8C / -8A	
		Jumper to END-END	
9 - pol. female C74451-A347-D39		9 - pol. female C73451-A347-D39	
RxD	PIN 2	PIN 2	TxD
TxD	PIN 3	PIN 3	RxD
GND	PIN 5	PIN 7 and 8	GND

**Table 1:** END-END link ( V.24 / V.28 / RS 232C )

### 1.3.2 Profibus DP - Link

The Profibus interface (6DR2803-8P) uses another transmission technique as with RS 232C. A Point to Point link can be realized with a so called MPI cable (9-pin male).

Since Personal computers have no interface for Profibus DP, a special master card CP 5611 (or a CP 5511 in a laptop) has to plug into a PC.

Additionally to the card, a special driver software for MS-WINDOWS (SOFTNET DP) has to be installed.

The pin configuration of the cable follows from Fig. 1.3.7.

The Profibus cable have to set in position ON at the master side and the (last) slave with its terminating resistor.

<b><u>Standard cable:</u></b>	(see catalog: IK PI 2004)
Type of cable:	02Y (ST) CY
Terminating resistor:	$150 \pm 15 \Omega$ bei 3 bis 30 MHz
Conductor cross section:	$\geq 0.64 \text{ mm}^2$
Working capacitance:	28.5 nF / km

<b><u>Siemens-Order No.:</u></b>	
CP 5511:	6GK1 551-1AA00
CP 5611:	6GK1 561-1AA00
MPI – Cable:	6ES7 901-0BF00-0AA0 (Length: 5.00 m)
Standard cable:	6XV1 830-0EH10
Bus connectors:	6ES7 972-0BA41-0XA0

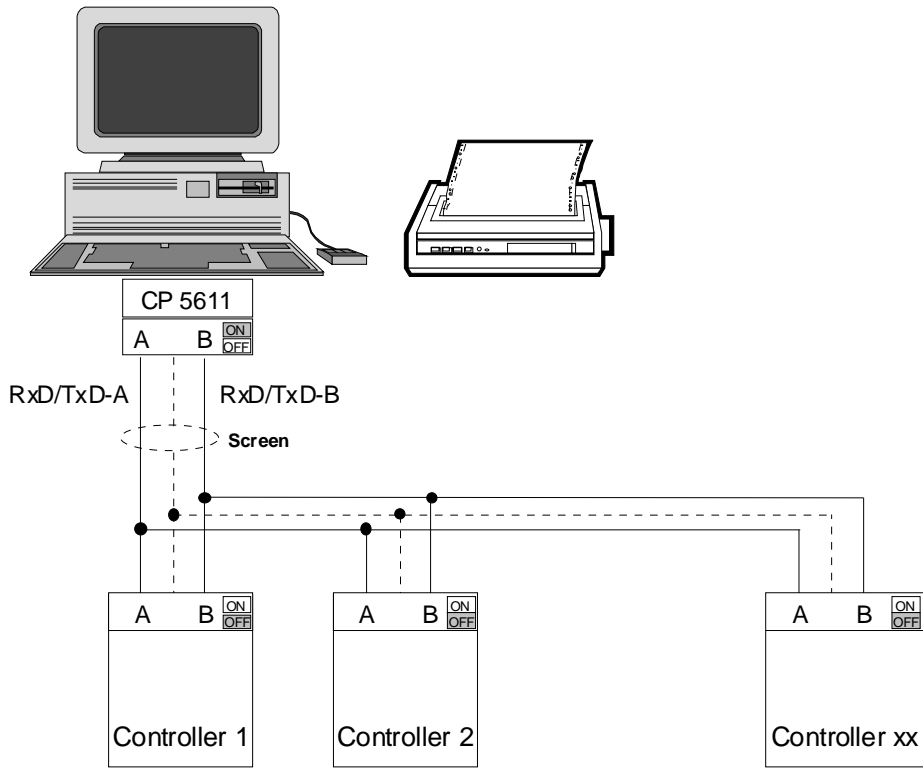
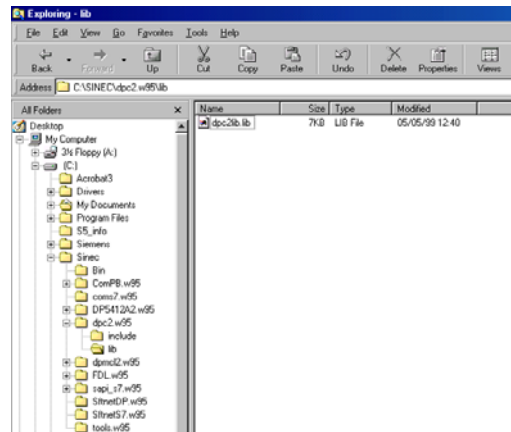
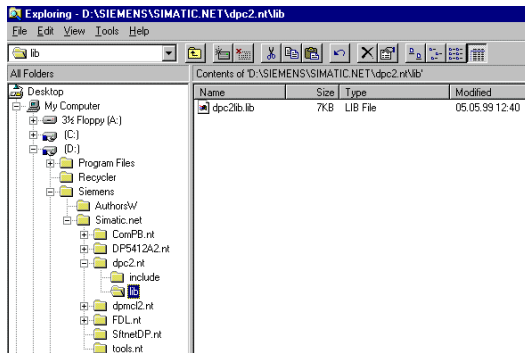
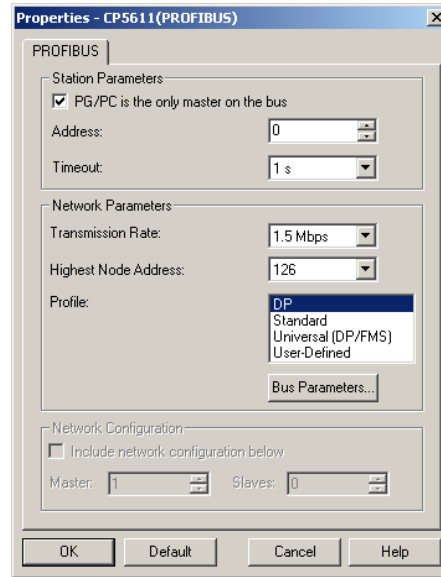
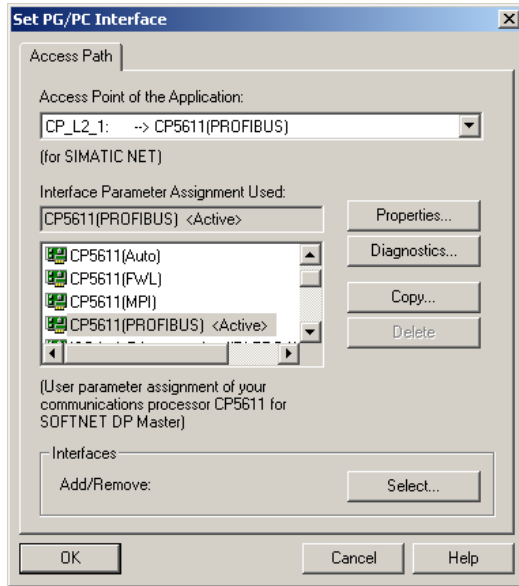


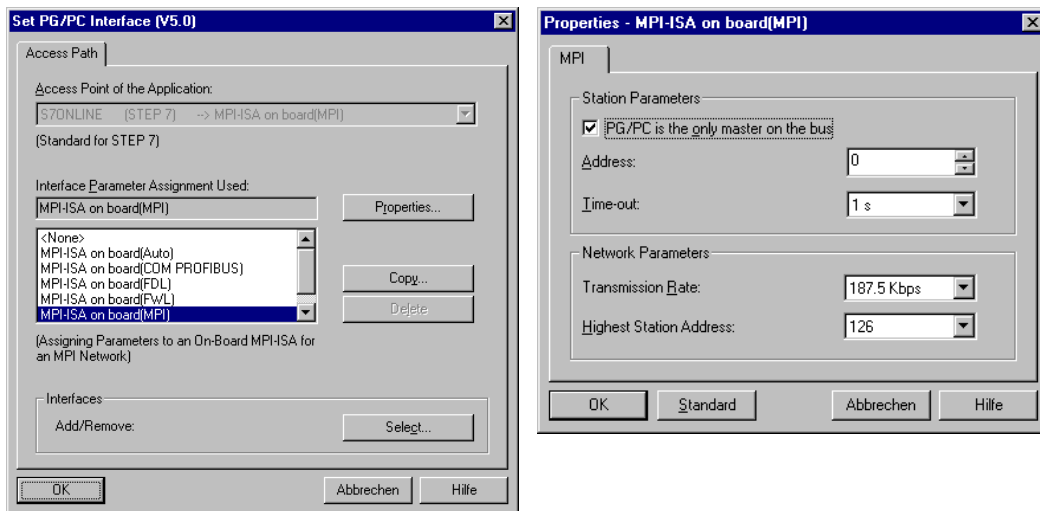
Fig. 1.3.3 Profibus DP – Master – Slave link

Configuration in „Settings“, „Control Panel“:

1. CP 5611 / 5511 and driver installation



## 2. MPI interface in a SIMATIC PG (PG 740,..)



On a Profibus DP with more than one master (PC/PG and SIMATIC S5/S7) there is a marking „PG/PC is the only master on the bus“ necessary in the settings according to point 1 or 2!.

### 1.4 Default settings in a SIPART DR24

For a communication with a PC, the SIPART DR24 must be prepared with default settings. If necessary, the factory settings are set with the function „All Preset“ (Apst). In the level "Structure" ( STRU ) - "Off-Line-Parameters" (OFPA), the slave address of the SIPART DR24 must be programmed accordingly:

Operation	Display
Press gray key, tA5, for approx. 6 sec	"PS" in digital display dd3
Select " <b>OFPA</b> " with key tA2	"oFPA" / "roLL" / "PS"
Acknowledge with tA6	"oFPA" / "SEt" / "PS"
Acknowledge with tA4 for approx. 6 sec	"0.0" / "dA1.1" / "dA"
Select parameter " <b>Snr</b> " with tA6	"0" / "SES" / "Snr"
If required, change station number with tA2/tA3	
All other parameters of the serial interface remain in factory settings	
Return to process level with 2 x tA1	all displays are dark

### 1.5 Installing the Software from CD-ROM to Hard Disk

- Start from MS-WINDOWS XP  
(or MS-WINDOWS 95/98/NT 4.0/2000)
- Insert CD-ROM with SIPROM DR24 in the corresponding drive.
- Select command **Run** from the menu **File** of the Program-Manager or File-Manager.
- Enter **<LW>:setup** in the command line.
- Start by hitting the RETURN key or by clicking "**OK**".

This starts the SIPROM DR24 installation program which gives the necessary instructions for the installation:

Note: Before installing an update version, you should deinstall the old version via „Control Panel“. The user data under „CONFIGxx“ are not erased.

**- Directory:**

The default directory is **C:\SIPROM\SIP\_DR24**.

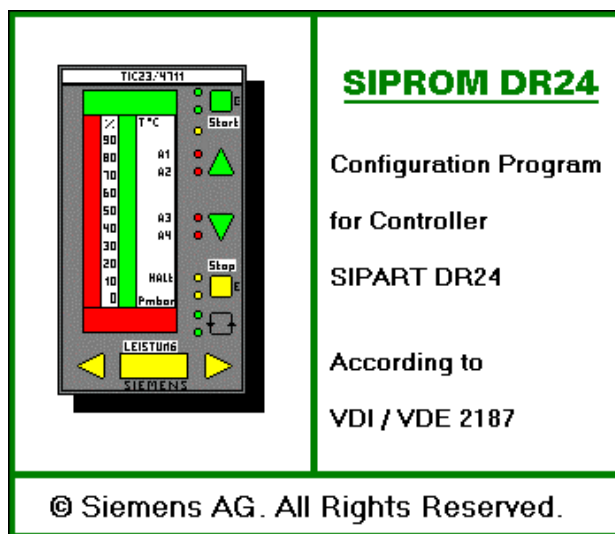
If required, this path ( drive and directory ) can be changed.

SETUP will generate the program group "**Siemens Process Devices**" from where the program is started with „START, Programs, <Program group>“.

**1.6 Starting the Program under MS-WINDOWS XP (or NT, 2000)**

SIPROM is started by <LeftClk> on the SIPROM DR24 icon in the program group.

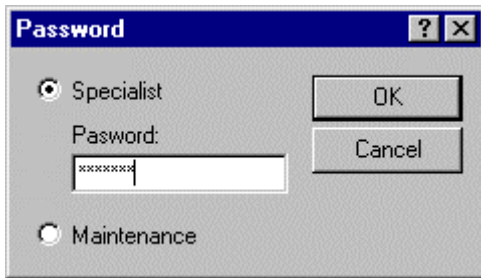
For a few seconds a SIPROM flash window appears:



After approx. 5 s the first window appears automatically. By pressing any button, you will come to the window, where you are asked to start for servicing or as a Specialist without delay time. Via „**Specialist**“ you put in your password.



The window "Password" appears after the flash of SIPROM DR24 in a few seconds. Then you can choose between "Specialist" and "Maintenance".



Insert your valid password and acknowledge with [OK]. The default setting for the initial program start is **SIEMENS** (big or small letters). The "Specialist" can change this setting at any time.

See chapter 2.1.7 „Options / Change Password.

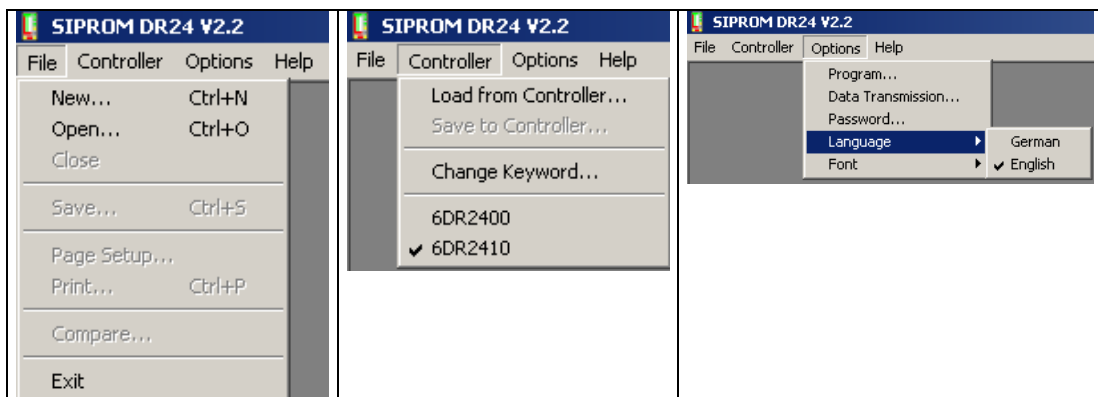
## 2. Functions of SIPROM DR24

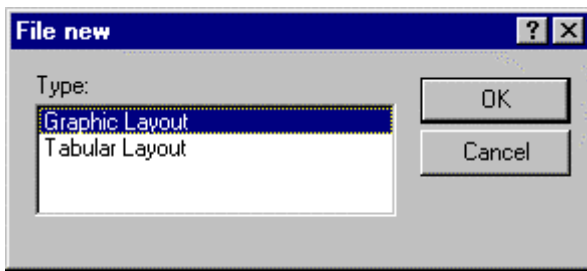
Generally, the former functionality of SIPROM DR24 under MS-WINDOWS 3.1 or MS-WIN95 has been maintained. In some points, however, the program has been extended.

The following extensions with regard to elder versions have been implemented:

1. New install procedure (InstallShield); Deinstallation is included
2. New filenames according to other SIPROM programs
3. Select language in install procedure: *GERMAN/ENGLISH*
4. New print functions
5. More document functions; Front- / Rear side and block diagram more Edit-functions
6. Zoom-function in EDIT window
7. Integration of all new functions of SIPART DR24 (6DR2410-..)
8. Now: 32-Bit-application for MS-WINDOWS XP (NT, 2000, 95, 98)
9. Communication via Profibus DP (CP 5611, 5511)
10. Protection of user program with keyword
11. Conversion of old DR24 data and continuation with modifications
12. Display program for process values and status information

### 2.1 Functions of the working window



2.1.1 File, New ...

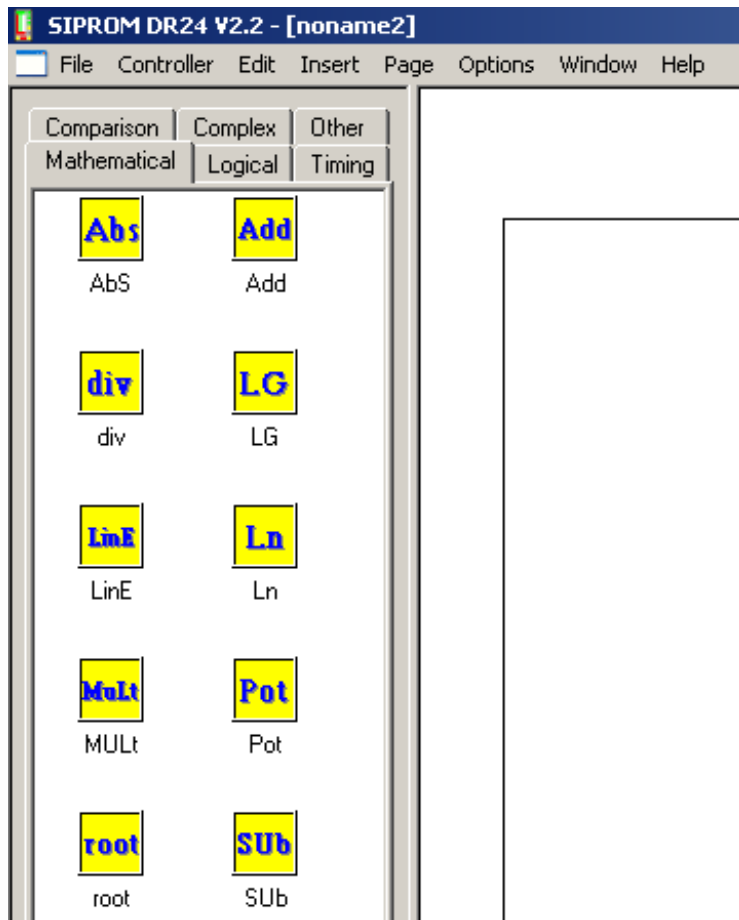
By selecting “**Graphic Layout**”, an empty schematic is opened in the working area for graphic layout.

By selecting “**Tabular Layout**”, you reach the working area for Tabular Layout.

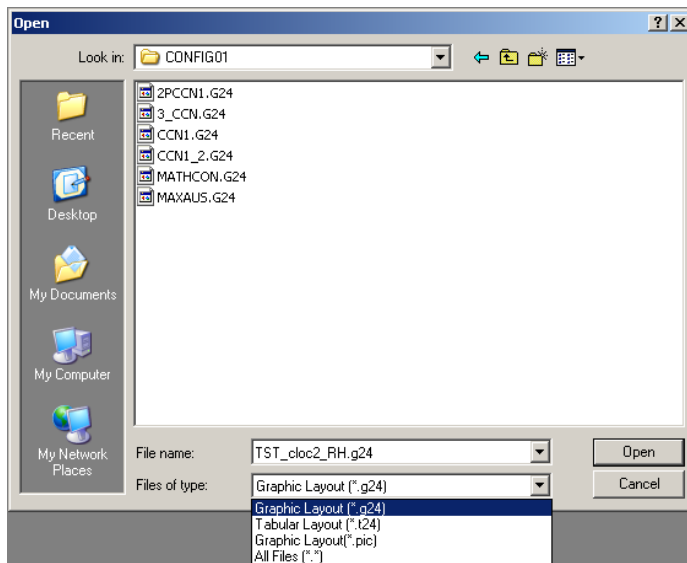
In both cases the factory settings are loaded.

The graphic and tabular layouts are not linked within the software, that means that a DR24 cannot be read out in graphical mode.

After selecting a new graphical layout, an empty schematic appears with a function block library on the left side. The empty schematic has the format "Landscape".



## 2.1.2 File, Open ...

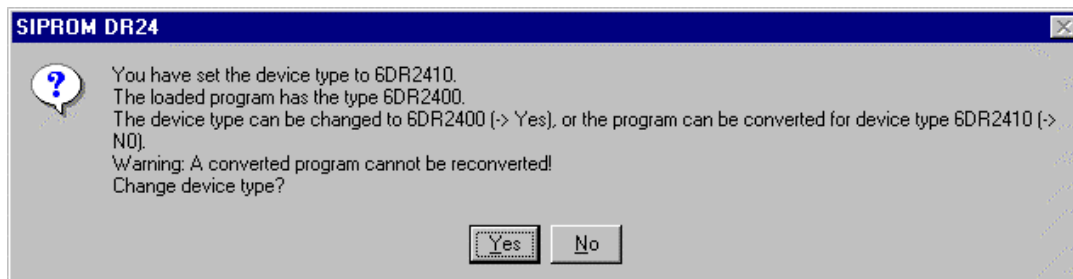


If you select one of the existing files with the extension **\*.g24**, **\*.t24** and **\*.pic** the conversion is done automatically.

Afterwards this file can be modified for a new DR24 (6DR2410-) by quitting with **"No"**. All Input- and Output-functions stay in the 2-level-format, when it was an old file, by quitting with **"Yes"**.

The 4-channel-format can be created with a new schematic or after converting with "No" to DR2410.

Regarding the kind of the loaded file, SIPROM DR24 switches to the actual device type:

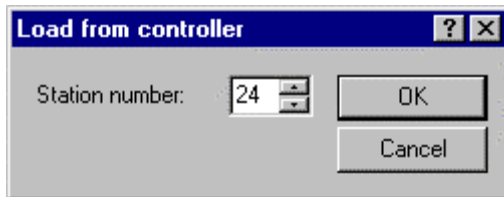


Selecting the extension \*.pic loads a circuit design created under GEM/3 from a disk or hard-disk and converts it for further processing. PIC-files, which only include tabular device data are automatically loaded to the tabular layout.

### **Important!**

A new device ist better set to factory settings with the function „**ALL PRESET**“ in order that the extended RAM area is erased.

#### 2.1.3 Controller, Load from controller ...

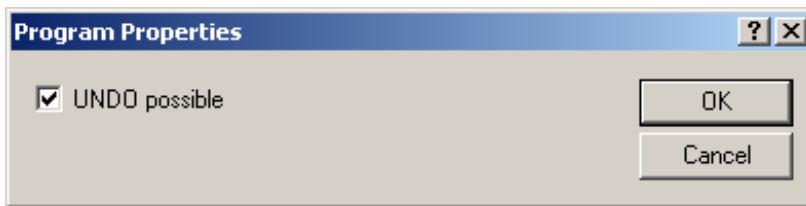


That function reads out a SIPART DR24 in tabular layout.

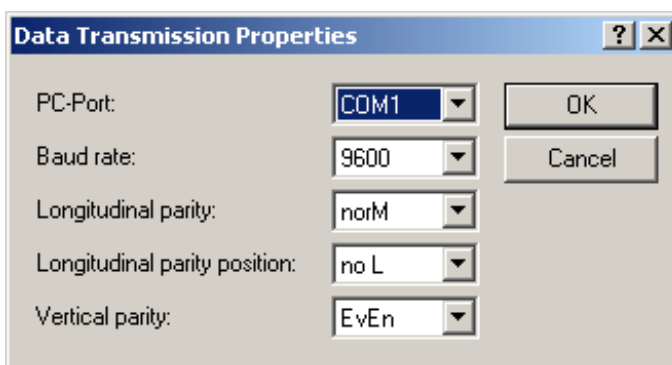
On the PC interface -COMx or PROFIBUS-DP- is connected a DR24 with the specified station number (example: 24).

#### 2.1.4 Select controller type

Bevor you work with a graphic- or tabular layout you can select an old DR24 (6DR2400-) or a new one (6DR2410-).

2.1.5 Options, Program ...**Important:**

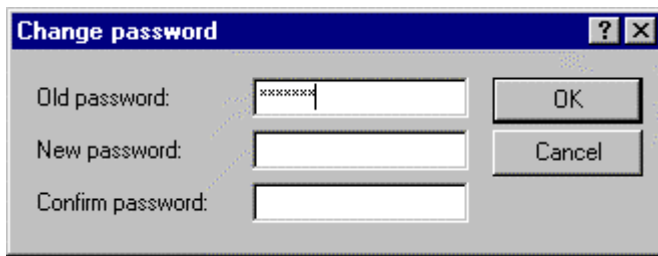
With "UNDO possible" you will get a loss of performance related to the type of PC, the existing area of RAM or the make of the graphics board!

2.1.6 Options, Data Transmission ...

With SIPROM DR24 it is possible to configure the controller via RS 232C and Profibus DP (CP 5611 / CP 5511). The parameters have to be the same on each side!

Modified settings remain active until they are rechanged, even after terminating SIPROM DR24.

## 2.1.7 Options, Change Password ...



The default setting of the password for a specialist "SIEMENS" can be changed with that function.

## 2.1.8 Options, Language ...

That function selects GERMAN or ENGLISH.

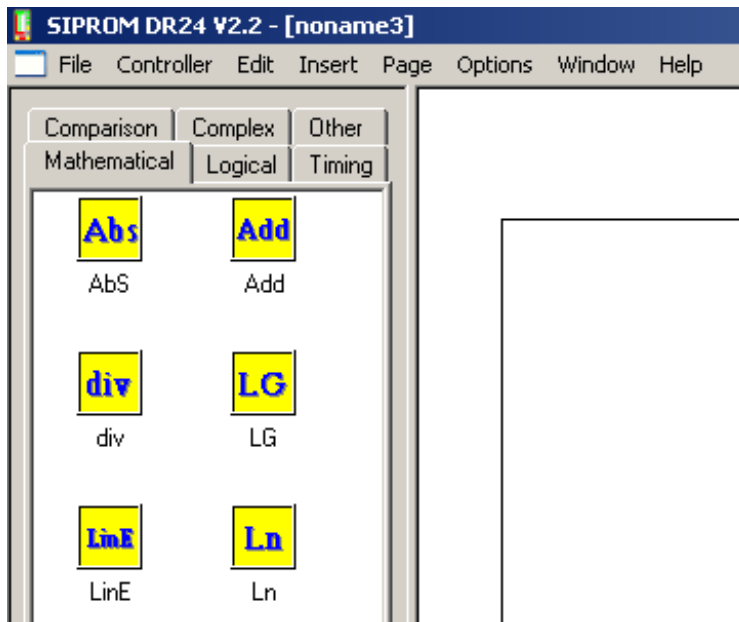
## 2.1.9 Help, Contents ...

The menu item "Help" includes all the different help functions of SIPROM DR24.

**"About SIPROM DR24"** displays the current release of the program.



## 2.2 Functions in the working area



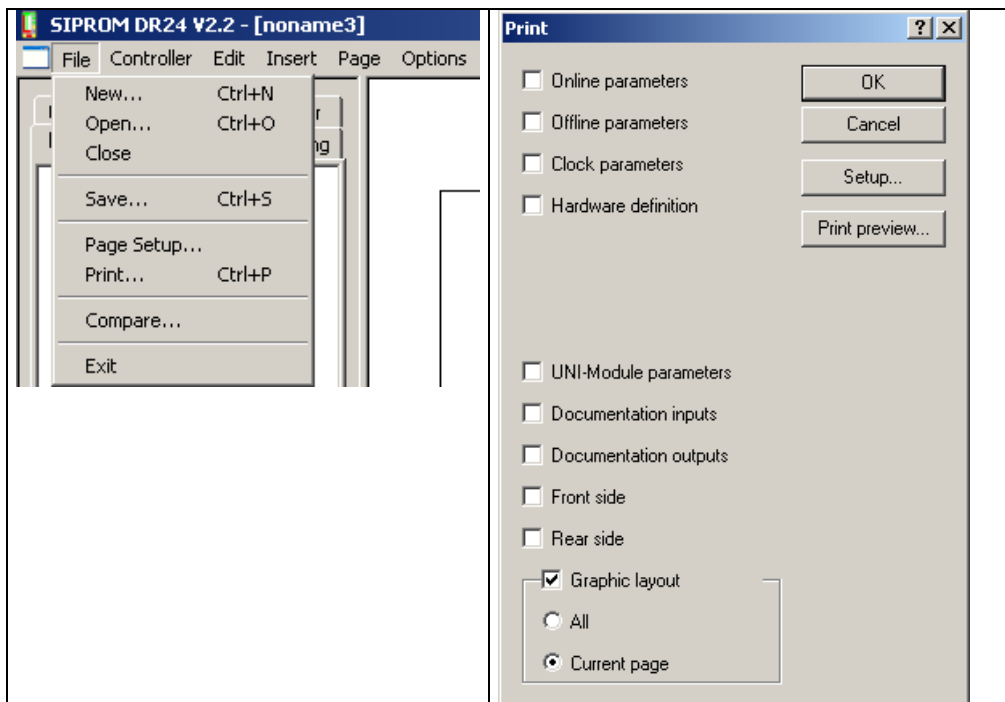
This window provides functions for creating a graphical data set for the SIPART DR24. Available data are read either from hard disk / diskette or from the connected controller for tabular layout.

The following menus are inserted to the working window:

Graphical layout: **Edit, Insert, Page, Window**

Tabular layout: **Edit, Window**

## 2.2.1 File, Print ...



The function **"File, Print"** can print a graphical or tabular data set and/or the documentation of the device.

All parts of the device data (ONPA, OFPA, ... ec.) and even the complete connections on the rear side and front functions can be selected.

When no data are selected, only the documentation header is printed out.

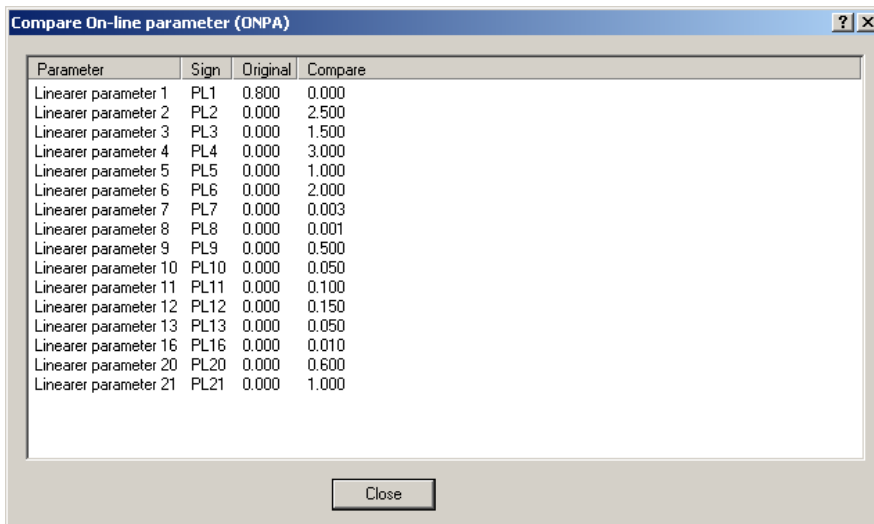
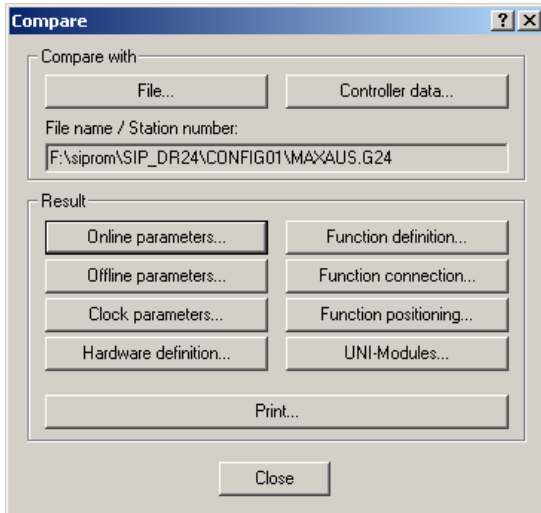
Another printer is selected via the function **Printer Setup**, in which other formats as "Portrait" or "Landscape" can be adapted.

The button **Print Preview** shows you the print in advance on the screen.

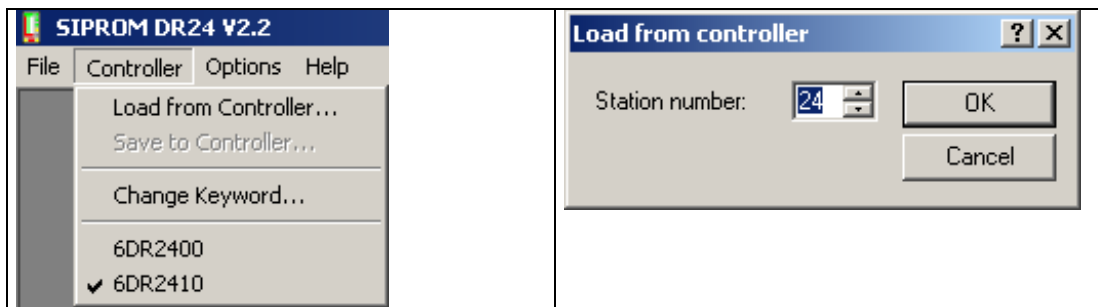
This function shows the graphical and tabular device data on one or two pages at the same moment, which could be zoomed in two stages.

2.2.2 File, Compare ...

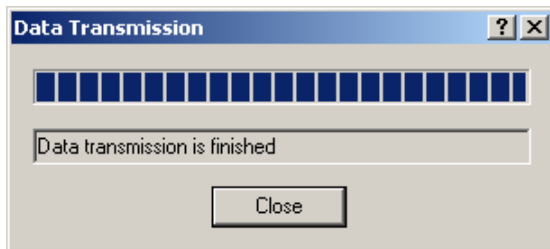
The function **"File, Compare"** compares an actual data set in the RAM area with a file or with device data from a DR24. The differences in the different levels (Parameters, Hdef, Fdef, Fcon and Fpos) can be monitored via buttons and be printed out if required.



2.2.3 Controller, Load from Controller ...



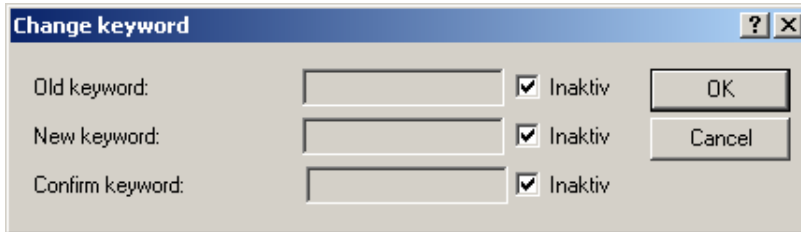
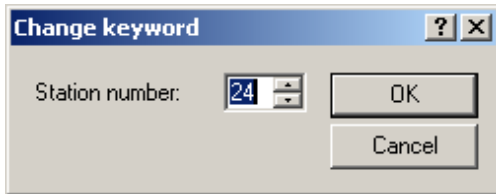
After selecting [OK] the communication is started. The status display is monitored in the following window>



After [Close] the DR24 data can be monitored and changed in tabular layout format.

The function "Controller, Save to Controller ..." follows the same way.

## 2.2.4 Controller, Change Keyword ...



That function will protect a user program in the referenced controller.

**Activate Keyword:**

- Select "New keyword" and "Confirm keyword"
- Edit keyword between "0 ... 65534"
- The protection is activated at once; only the On-Line-parameters can be changed now, all other levels are blocked; in the display "BLS" is monitored.

**Change Keyword:**

- Switch all edit fields to "activ"
- Edit "Old keyword"
- Edit "New keyword" and "Confirm keyword"

**Deactivate Keyword:**

- With the keyword "65535" (FFFF<sub>Hex</sub>) the protection is canceled permanent.
- If there is a wrong trial, the next trial can be started after a certain time:

- |                       |               |
|-----------------------|---------------|
| 1. Trial:             | ca. 1 min.    |
| 2. Trial:             | ca. 5 min.    |
| 3. Trial:             | ca. 10 min.   |
| each following trial: | ca. 1.5 hours |

Starting with software release: **C5** the keyword protection of OFPA, CLPA, CAE4/5, HdEF, FdEF, FCON and FPOS in the SIPART DR24 (6DR2410-) can be realized.

**Caution:** By loss of the actual keyword, the controller have to be send back to the manufacturer!

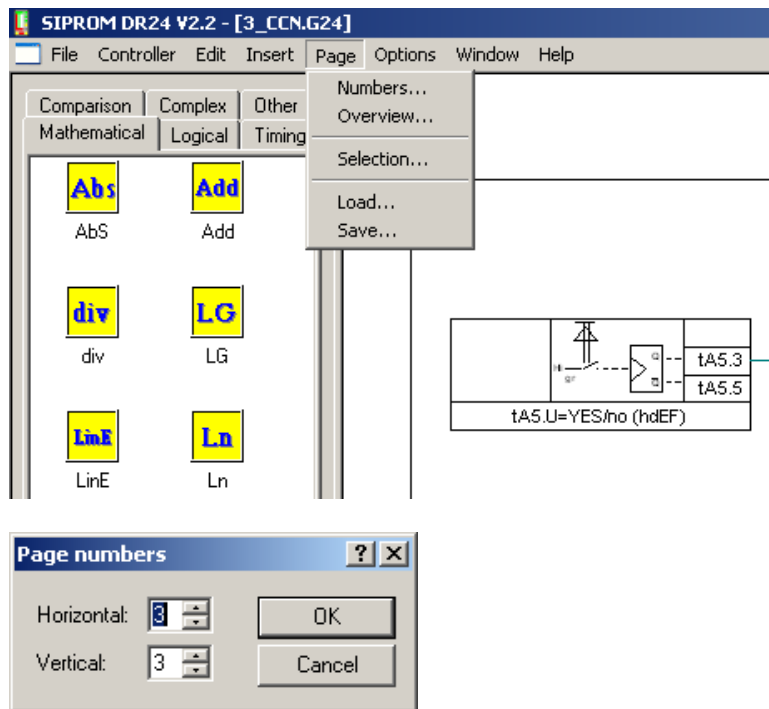
(blank page)

### 3 Graphical Layout

Only the **Specialist** can carry out the following actions. A graphic layout is created by **inserting** blocks on one or several **pages** and by dragging **links** and - in case of paging - **transitions** between the blocks. Free **text** entries can be added to the created schematic. A block can be either a **function**, an **input**, an **output**, a **signaling function**, a **parameter**, or a **constant**.

#### 3.1 Number of pages

The space requirements of the current graphic circuit can be defined in the menu item **Page / Numbers**:



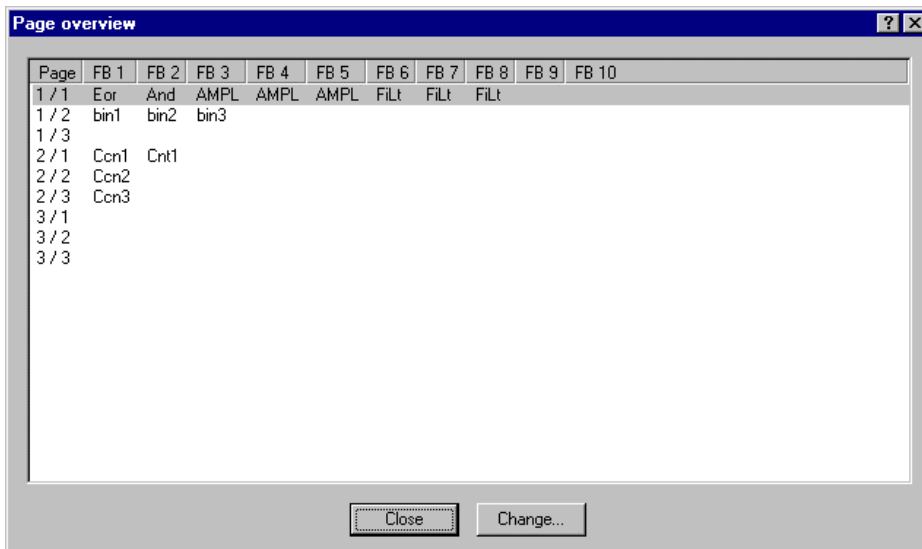
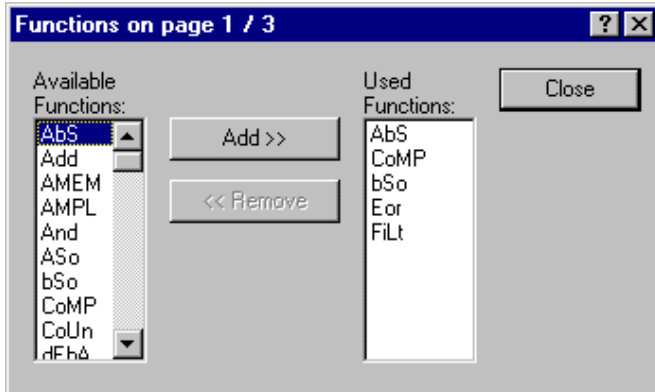
In the above dialog box, the space requirement was set to 9 pages. The maximum page number is 100; i.e., 10 vertical and 10 horizontal pages arranged in a matrix.



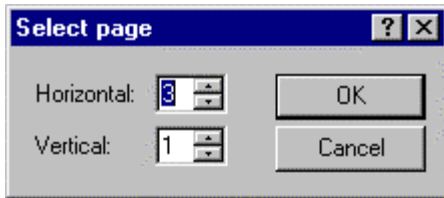
### 3.2 Page Overview

The function "**Page, Overview**" prepositions a maximum of 10 visable function blocks on the selected pages.

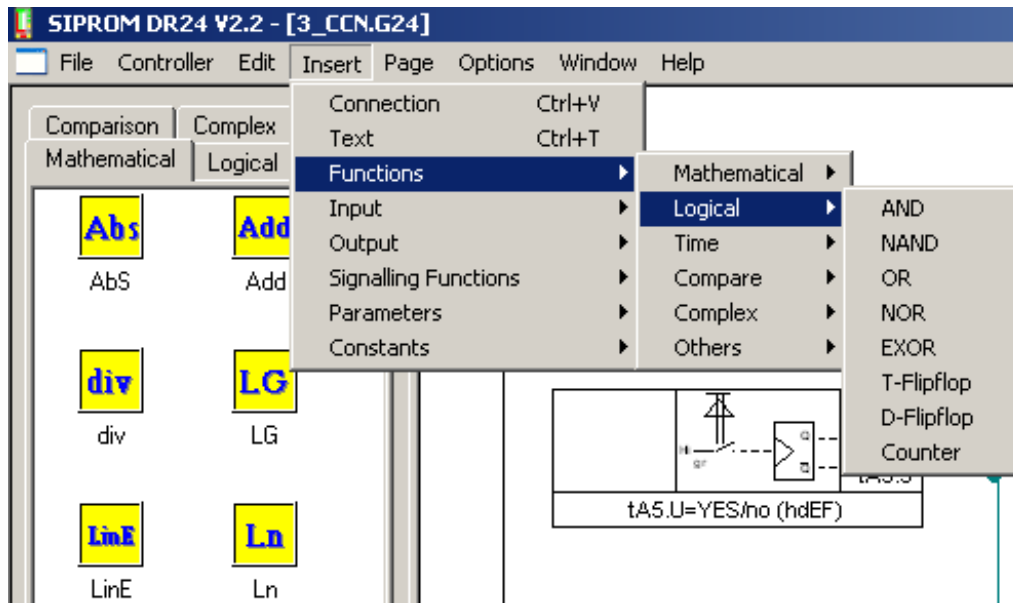
It is possible to select more than 10 blocks, so far there is enough place on a selected page.



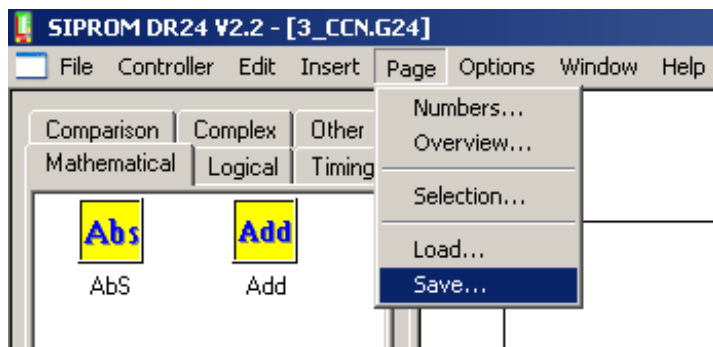
Processing continues with the function **Page / Selection...** if another page than 1/1 is required.



With the menu **"Insert"**, all the required blocks are selected, placed on the pages, and connected. Often used blocks are drawn from the left library window with the mouse to the actual page (FDEF).



### 3.3 Save pages



Partial circuits created on one page can be saved to the hard disk with the function **“Page, Save”**. Loading partial circuits with the function **“Page, Load”** from the hard disk to an empty page is possible, too.

The files have the extension **\*.p24**. While loading, the software checks whether the blocks are still available or not. If not there will be a message box.

**Important:**

Old \*.p24 files are not converted!

### 3.4 Example Circuit

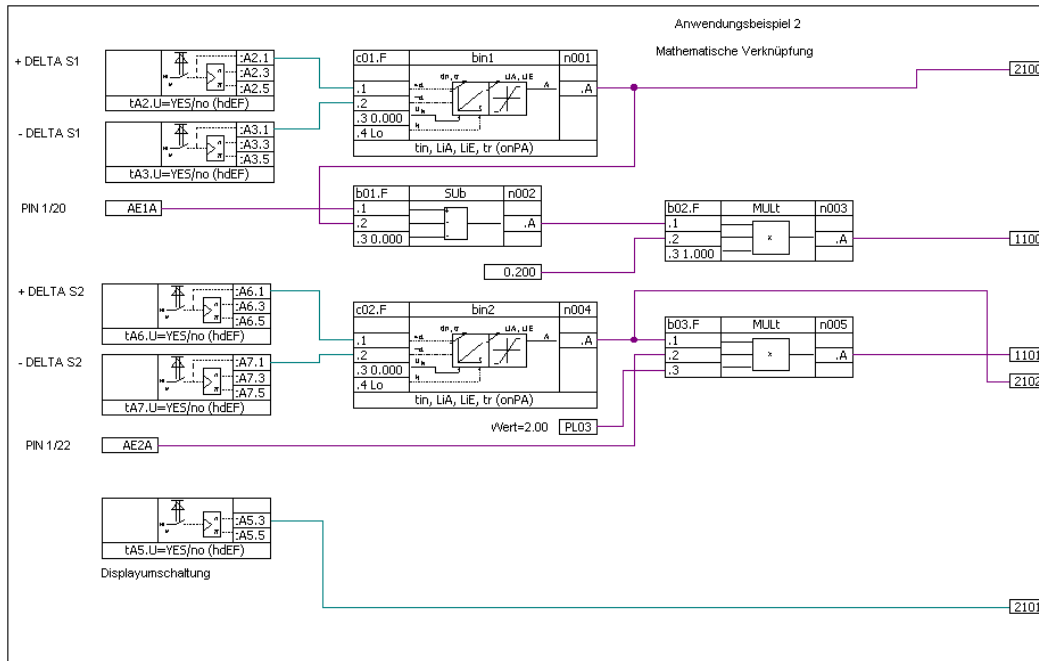
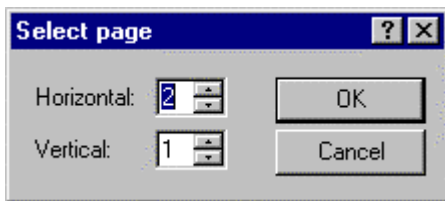


Figure 3.4.1: Example circuit from the manual SIPART DR24 (page 7-4 ff)

All graphic elements are inserted to page 1/1 and page 2/1 via the menu item **Insert**. The connections are inserted with the function **Insert, Connection** or the short-cut key **Ctrl+V**. The page transitions are inserted on the right edge outside the work space via mouse click.



The free text entries are added via **Insert, Text** or the short-cut key **Ctrl+T**.  
 The Edit-function is supported by the keys **DEL, BACKSPACE, ...**, but not **TAB**.

A quick page transition from page 1/1 to page 2/1 is carried out with the short-cut key **CTRL →** (cf. chap. 7).

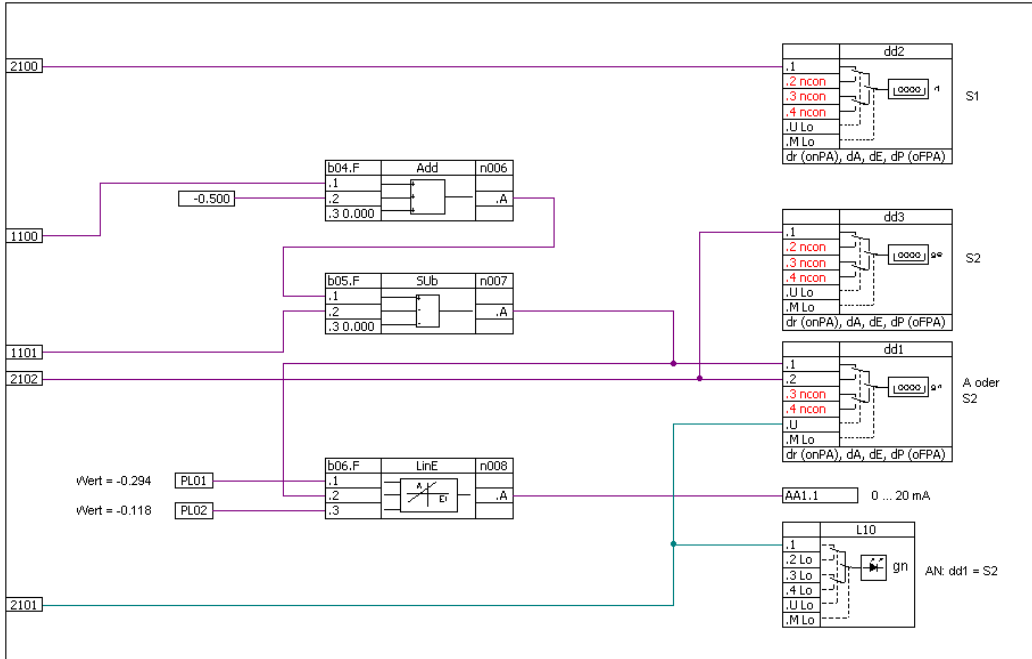
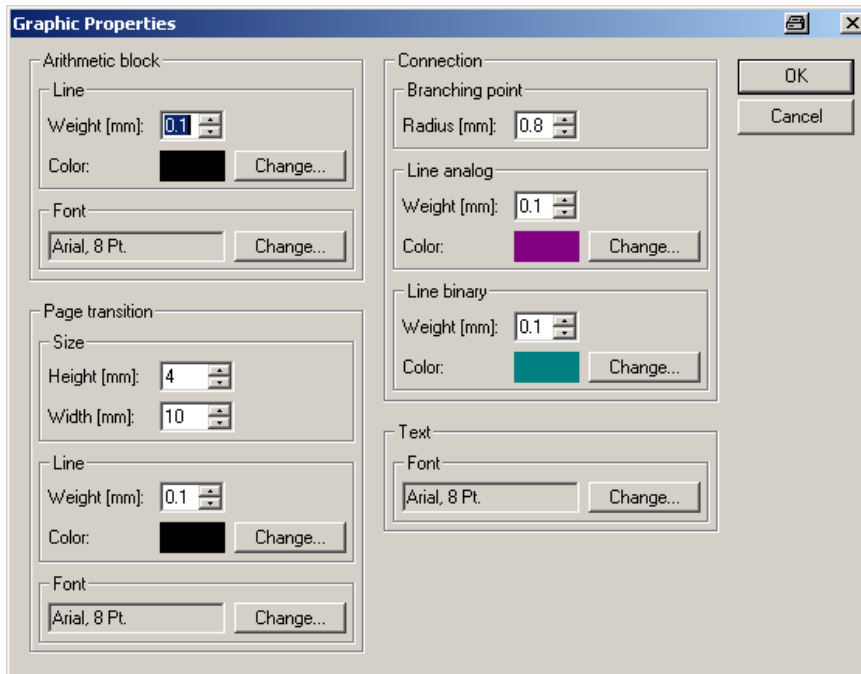


Figure 3.4.2: Page 2 of the example circuit

### 3.5 Graphic properties

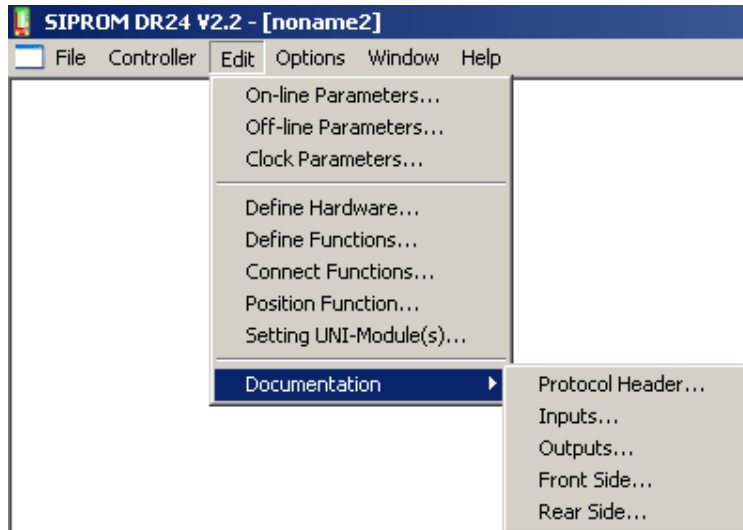
Starting from „Factory settings“ its possible to change the graphical properties of the function blocks, the page transitions, the connection dots and text strings. The function will be select via „**Options / Graphic...**“



(blank page)

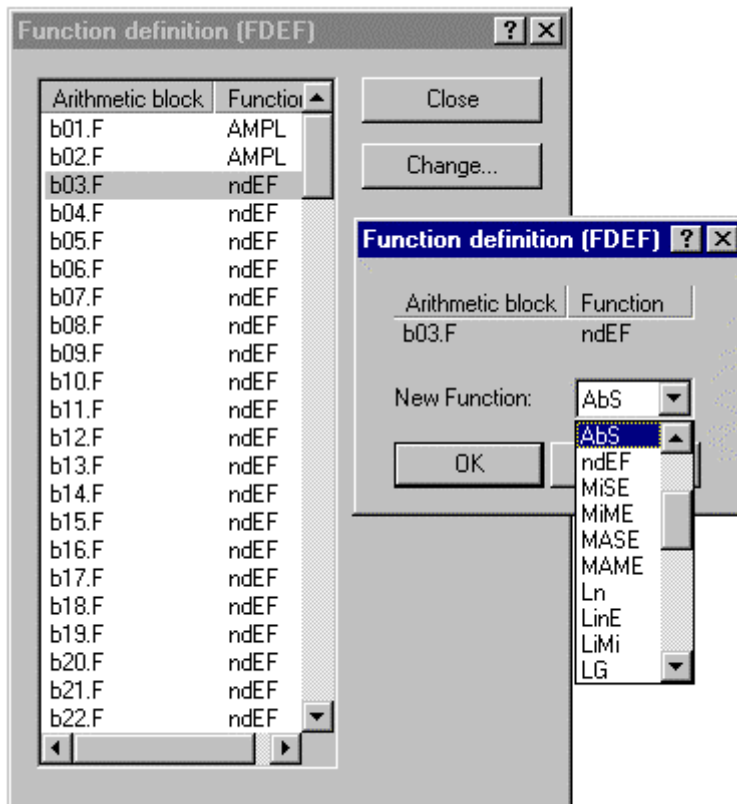
## 4 Tabular Layout

The tabular layout is opened with the menu **File, New ...**. Then, the pull down menu **Edit** displays the different configuration levels **Parameters, Define Hardware (Hdef), Define Functions (Fdef), Connect Functions (Fcon), Position Functions (Fpos)** and **Documentation**. Like for graphic circuit design, the different parameters are selected in pull down menus. The parameters of the Clock function block and the option "UNI-module" are only released, when the function "**Cloc**" was defined in FDEF or "**Uni\_..**" in HDEF for AE4/5 was defined.



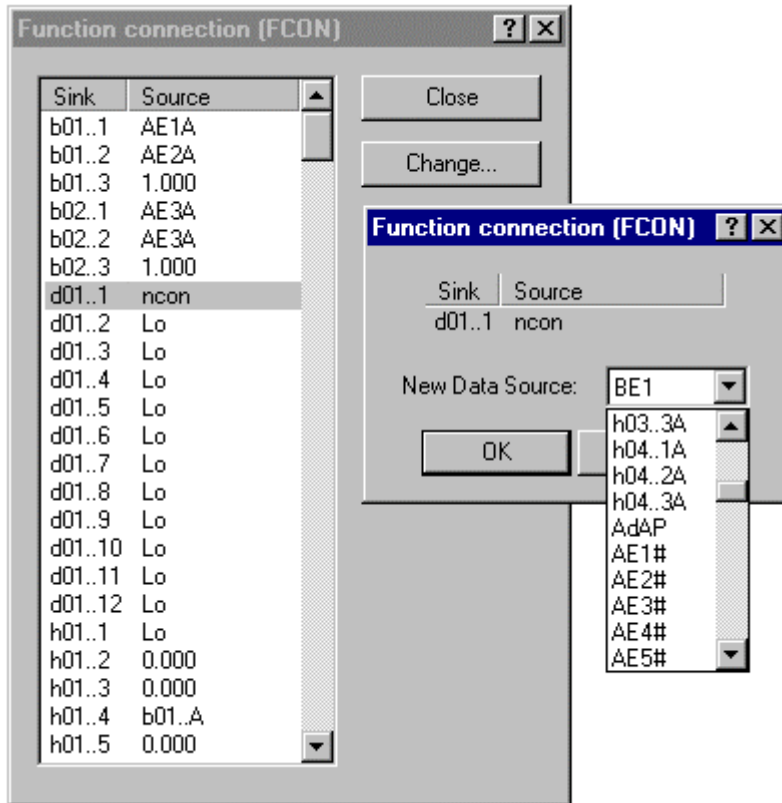


A new function is assigned either by selecting an arithmetic block and then [ **Change...**] via mouse click or directly by double-click. In the selection list of **New Functions**, the valid functions of an arithmetic block are displayed. The abbreviations of the function blocks are identical to the ones in the SIPART DR24 manual.

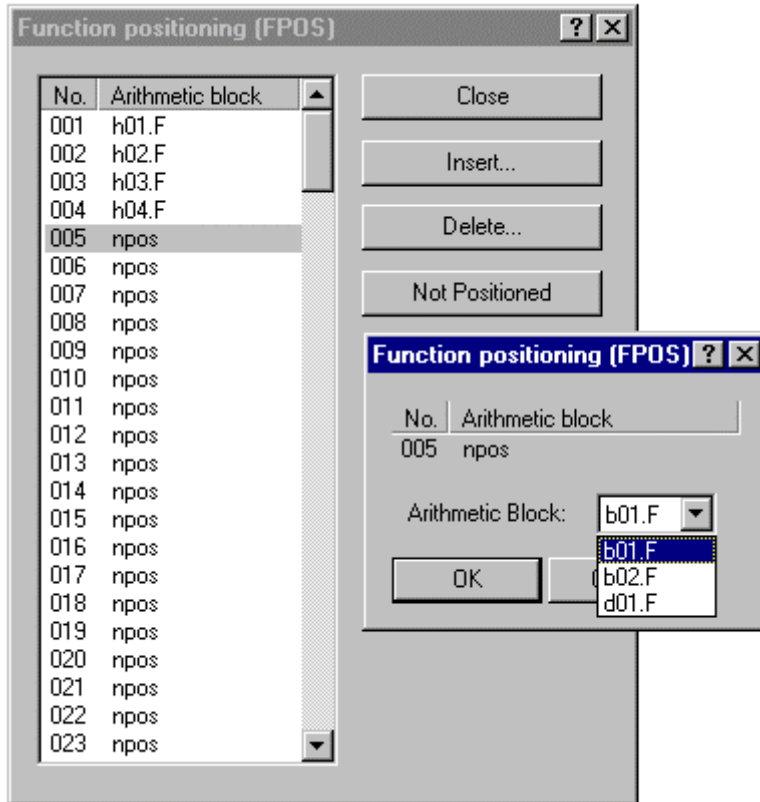


Via mouse click and [ **Change...** ] or double mouse click on a **Data Sink**, a new **data source** can be assigned.

In the selection list **New Data Source**, the available data sources are displayed.



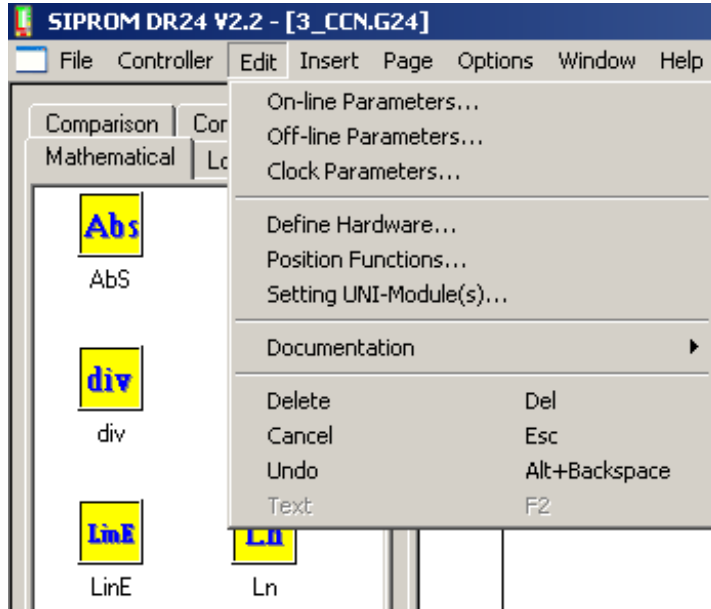
Via mouse click and [ **Change...** ] or double mouse click on an [ **Arithmetic block No.**  ], a new arithmetic block is assigned for the sequential programming. In the selection list **Arithmetic block**, the available arithmetic blocks are displayed.



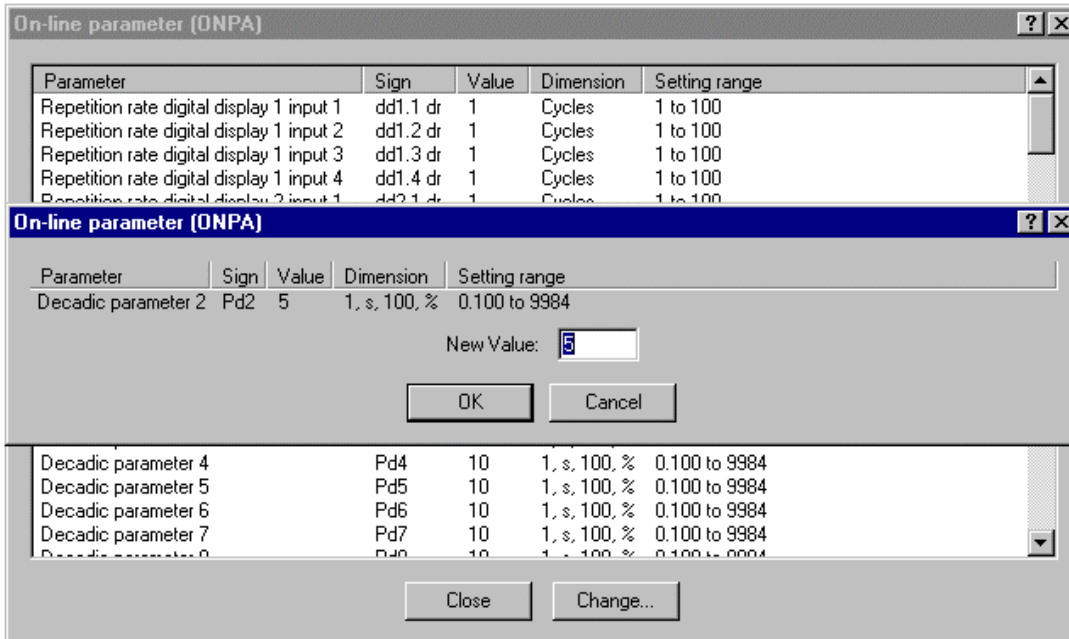
**Note:** With "**Not Positioned**", npos spacings are generated. These spaces are rejected as errors by the controller firmware, only after data transmission is completed.

## 5 Edit Parameters

Via the menu item **Edit**, the parameter levels **On-Line Parameters**, **Off-Line Parameters**, **Clock Parameters** and **UNI-modules (CAE4/5)** could be selected. The Clock- and CAE4/5 parameters are selectable, when they are defined in HDEF or FDEF.



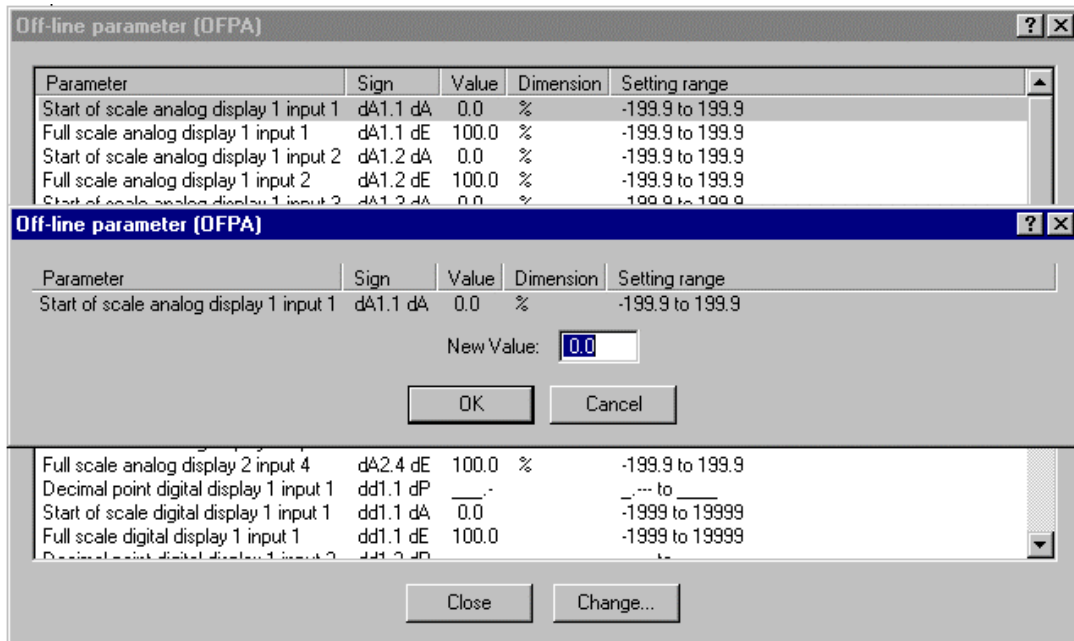
## 5.1 On-Line-Parameters



New **Values** within the **Setting Range** can be entered in this box. Values outside the setting range are rejected.

The new value is adopted by clicking **[OK]**, clicking **[Cancel]** leads back to the **On-Line Parameters** dialog.

## 5.2 Off-Line-Parameters



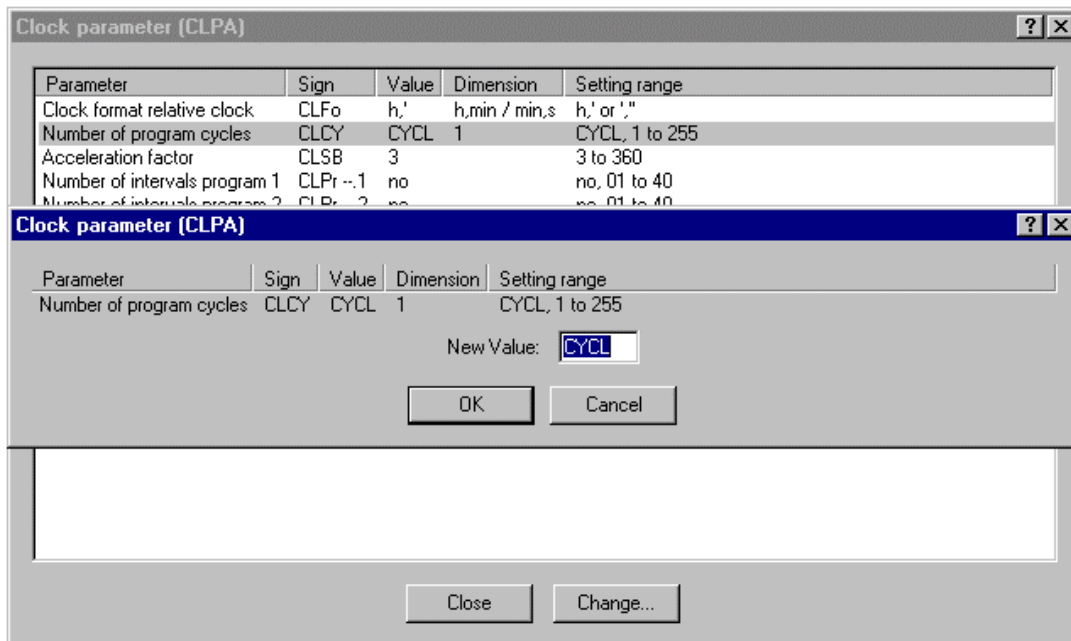
New **Values** within the **Setting Range** can be entered in this box. Values outside the setting range are rejected.

The new value is adopted by clicking [**OK**], clicking [**Cancel**] leads back to the **Off-Line Parameters** dialog.

The parameters of the serial interface (Baudrate,, ... etc.) are not displayed. The printout of OFPA shows the controller adress always as "zero".

### 5.3 Clock Parameters

**Clock Parameters** can be selected only, when the Clock function has been defined as type **d01.F**, **d02.F**, or **d03.F** in the **Define Function** level (FDEF).

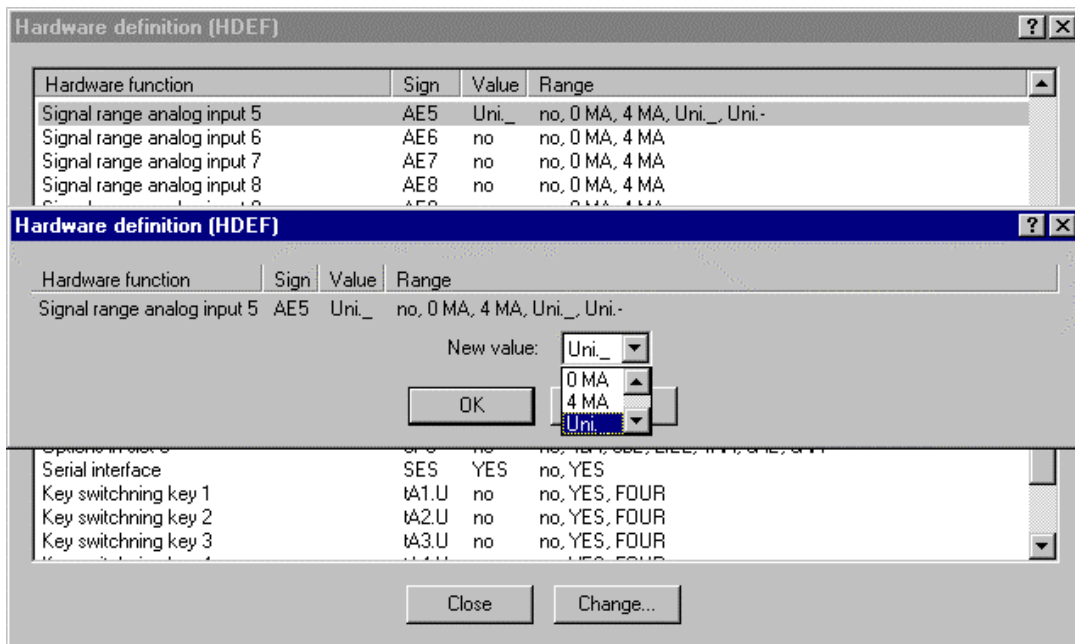


The change dialog for the required parameter is opened via mouse click and [**Change...**] or directly by double-click.

New **Values** within the **Setting Range** can be entered in this box. Values outside the setting range are rejected.

The new value is adopted by clicking [**OK**], clicking [**Cancel**] leads back to the **Clock Parameters** dialog.

## 5.4 Define Hardware



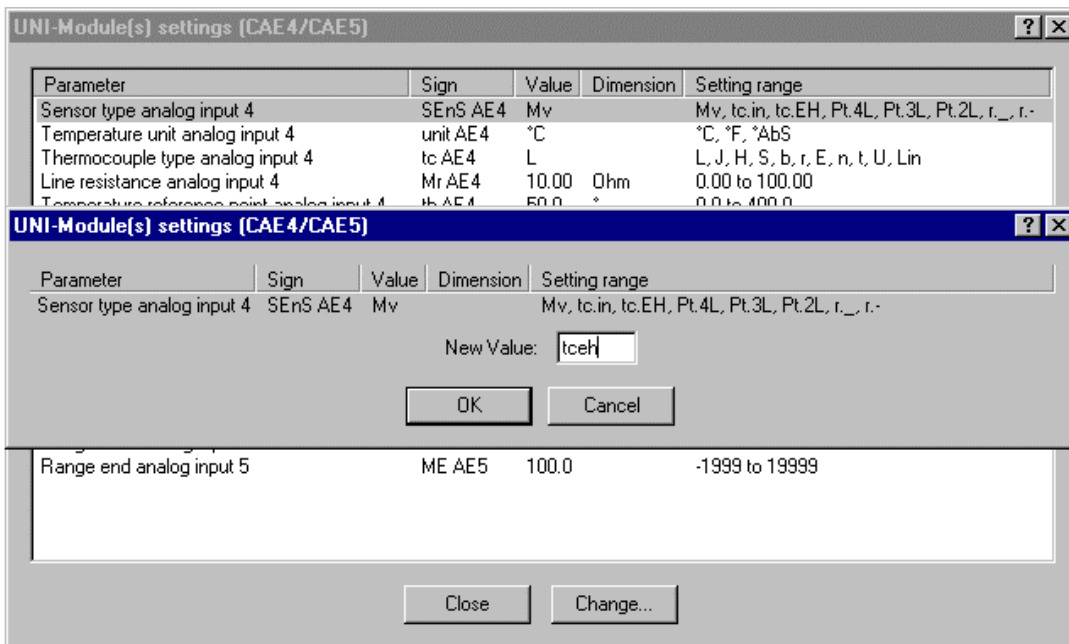
The change dialog for the required parameter is opened via mouse click and **[Change...]** or directly by double-click.

New **Values** within the **Setting Range** can be entered in this box. Values outside the setting range are rejected.

The new value is adopted by clicking **[OK]**, clicking **[Cancel]** leads back to the **Define Hardware** dialog.



5.5 UNI - Modul (CAE4/5 - Parameters)



The [Change...] dialog for the required parameter is opened via mouse click or directly by double-click.

New Values within the Setting Range can be entered in this box. Values outside the setting range are rejected. It is not a command to edit the parameters in big or small letters, with special characters (°) or linking dot.

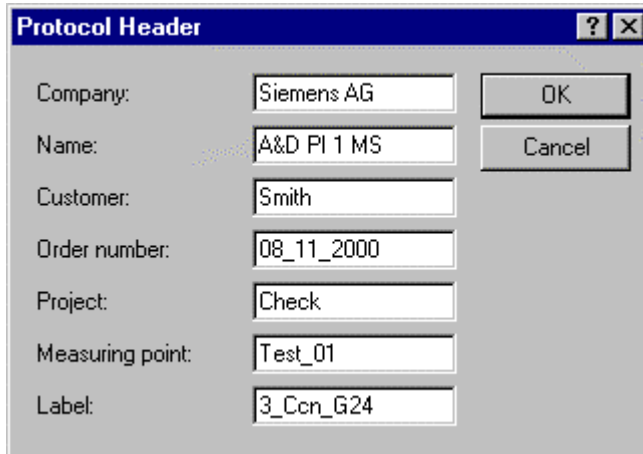
**Note:** The value "H" for thermocouple type (tc / AE5) is equivalent to "K".

The new value is adopted by clicking [OK], clicking [Cancel] leads back to the CAE4/5- dialog.

## **6 Documentation**

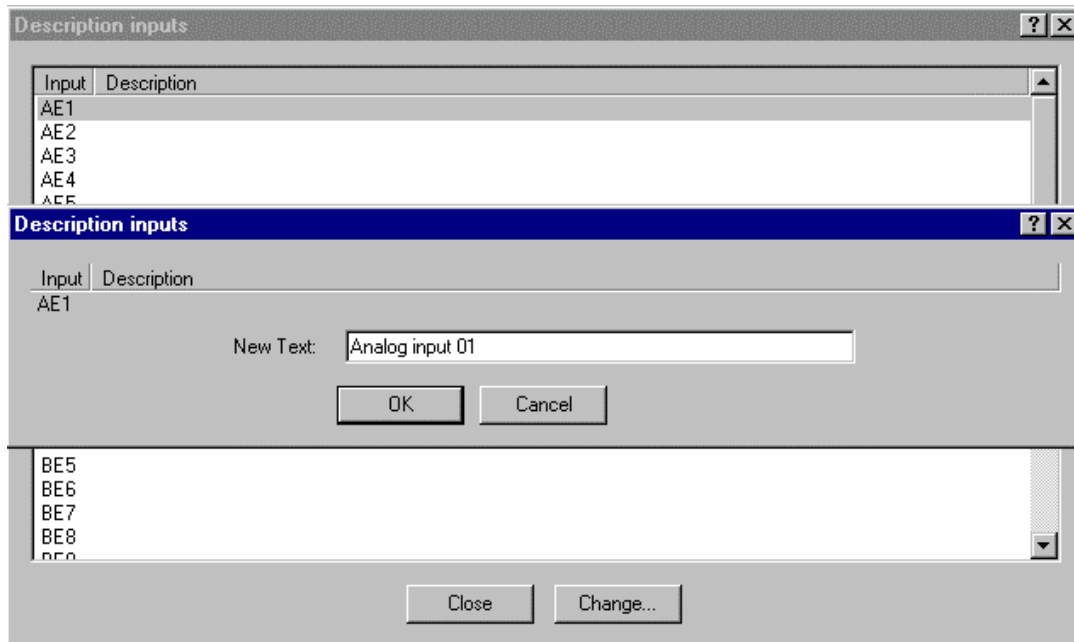
Assignment and identification data of the controller setup are entered in these dialog boxes. The data appear in the printed controller documentation. You can use 20 characters with size 11 / Arial for landscape format and 13 characters with size 11 / Arial for portrait format

The header data are entered in the first dialog for the documentation cover and frame:



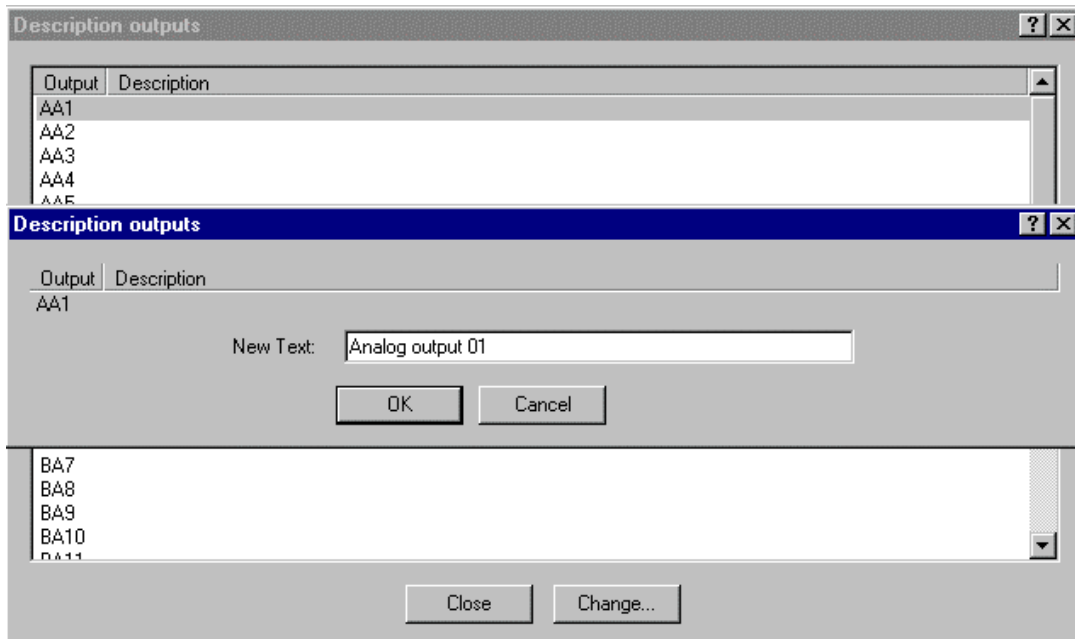
Field	Value
Company:	Siemens AG
Name:	A&D PI 1 MS
Customer:	Smith
Order number:	08_11_2000
Project:	Check
Measuring point:	Test_01
Label:	3_Ccn_G24

The inputs of the SIPART DR24 are described by max. 110 characters / Arial/11 for the format DIN A4 / landscape.

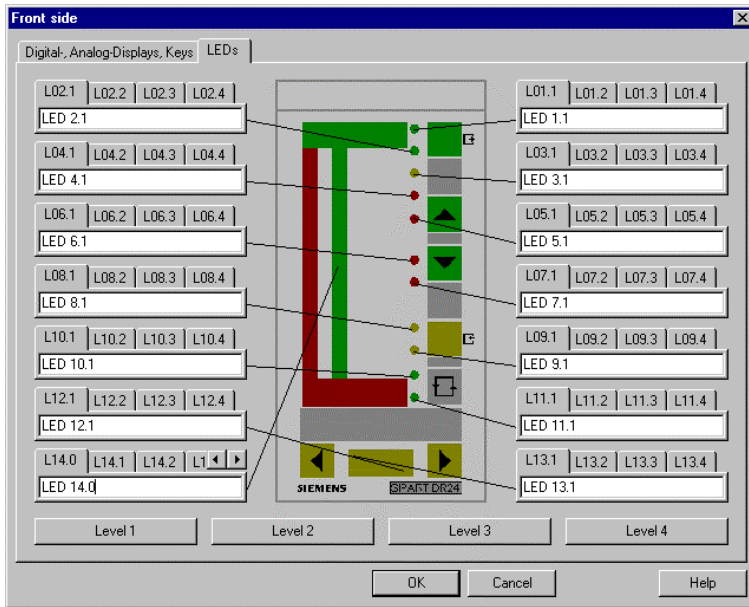
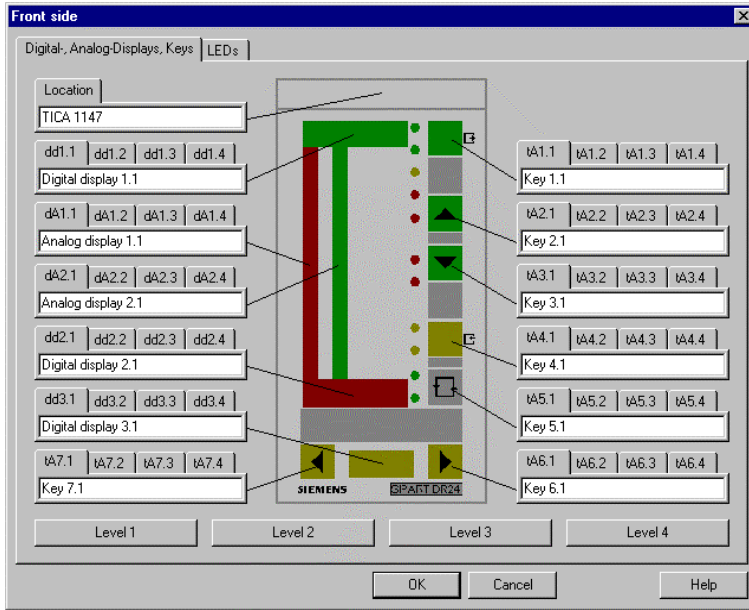


In order to change text strings, you can use the standard edit keys, such as BACKSPACE, TAB, arrows, Del, ....

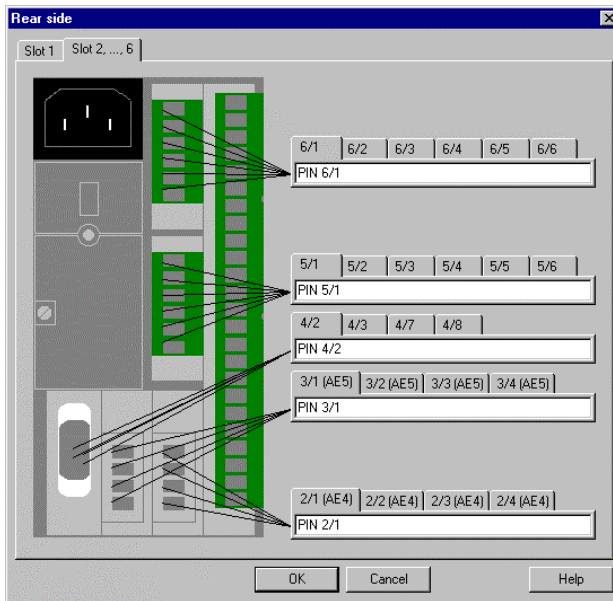
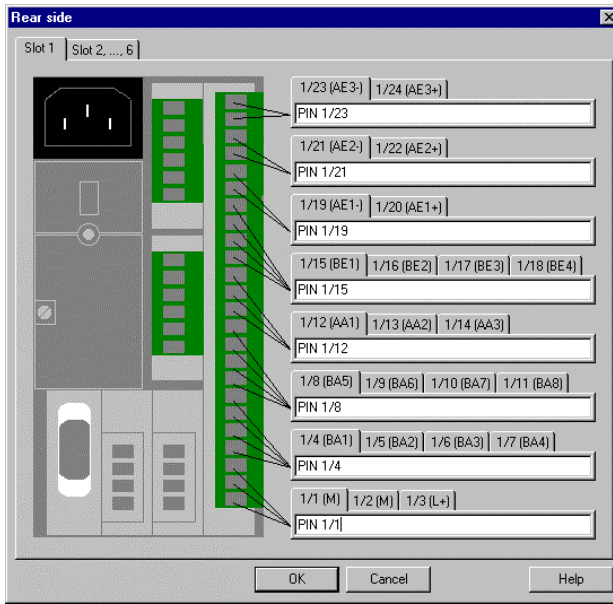
The outputs of the SIPART DR24 are described by max. 110 characters / Arial/11 for the format DIN A4 / landscape.



In order to change text strings, you can use the standard edit keys, such as BACKSPACE, TAB, arrows, Del, ....



Front display with examples for the different levels.



Rear side display of the different PIN connections.

(blank page)

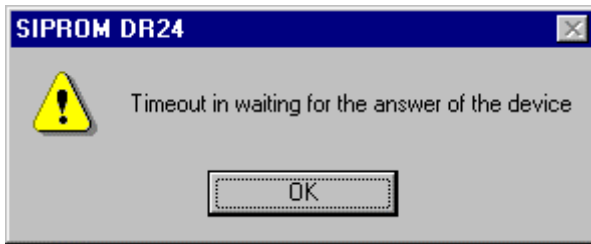
**7 Short-cut Keys**

1.	Del	delete arithmetic block or link
2.	Esc	cancel action
3.	←	scroll left
4.	→	scroll right
5.	↑	scroll up
6.	↓	scroll down
7.	Shift + ←	scroll one line to the left
8.	Shift + →	scroll one line to the right
9.	Shift + ↑	scroll one line up
10.	Shift + ↓	scroll one line down
11.	Ctrl + ←	scroll one page to the left
12.	Ctrl + →	scroll one page to the right
13.	Ctrl + ↑	scroll one page up
14.	Ctrl + ↓	scroll one page down
15.	Ctrl + P	print
16.	Ctrl + O	load circuit design (Open file)
17.	Ctrl + N	new circuit design (New file)
18.	Ctrl + S	save circuit design (Save file)
19.	Ctrl + T	insert text
20.	Ctrl + V	insert link
21.	Alt + Backspace	undo last action
22.	TAB-key	Tabulator ahead
23.	Shift + TAB-key	Tabulator back
24.	Backspace	Backspace



(blank page)

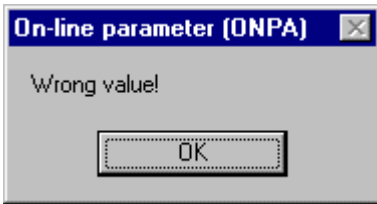
## **8** Error messages



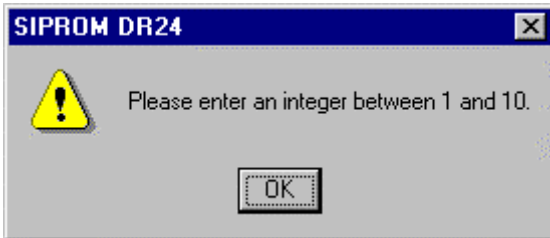
Check the connection of the SIPART DR24:

- the configuration of the PC interface
- cable connection
- power ON of the SIPART DR 24
- power OFF during transmission
- accordance of SIPART DR 24 configuration with OFPA:  
Station Number (Snr), Baud Rate (bdr), Longitudinal Parity Check (Lrc),  
Longitudinal Parity Position (LEt), Vertical Parity (Prt)

**Note:** The configuration in SIPROM DR24 for data transmission and the configuration inside the controller have to be the same!



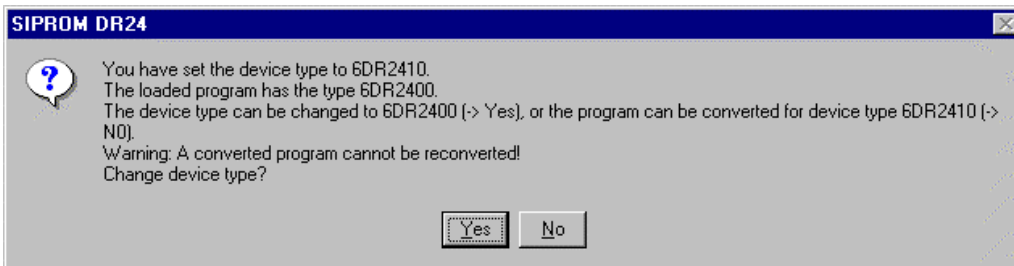
One of the parameters entered is outside the valid range.



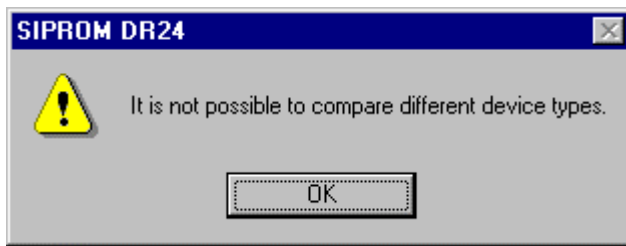
Wrong input for number of pages (horizontal/vertical).



It is not enough place for a new function block.



Collision between two different data sets!



The data sets of a new DR24 and an old one are not comparable.



Check your password once again.

(blank page)

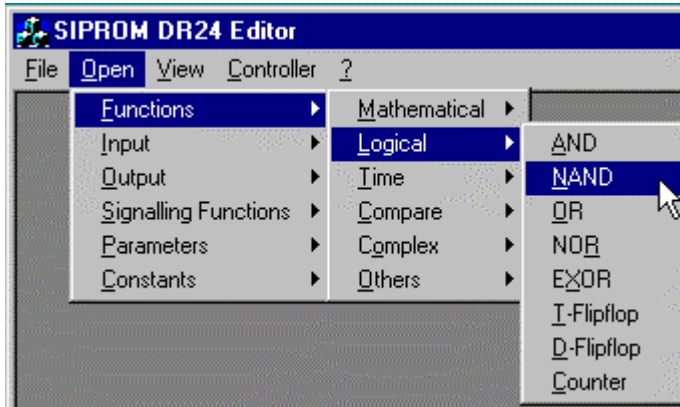
**9    References**

- /1/    Operating Instructions SIPART DR24,  
Serial SIPART DR24 V.28-Bus Interface  
Order number: C73000-B7476-C135
  
- /2/    Multifunction Unit Manual SIPART DR24, 6DR 2410  
Order number: C79000-G7476-C153
  
- /3/    User's Guide Microsoft® Windows™,  
Operating System NT Version 4.0 SP6 or greater  
Operating System XP Version 5.1 SP1 or greater
  
- /4/    The Windows™ Interface  
An Application Design Guide

(blank page)

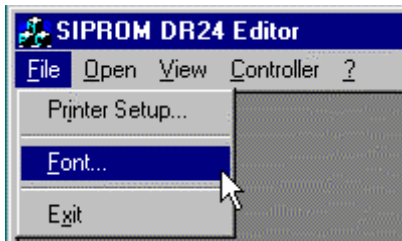
## 10 Function Block EDITOR

With the editor "**SIPROM DR24 Editor**", the contours of the graphic blocks are changed on a default factory settings basis. The editor is located in the path "**C:\SIPROM\SIP\_DR24\**" and is started from the File-Manager. However, the file "**DR24CFG.INI**" in the path „**C:\SIPROM\SIP\_DR24\**" should be copied to a custom user path as backup, e.g. "**C:\MYPATH\SIPROM\...**", prior to starting.



After clicking [OK], the modified coordinates are written to the respective positions of the file "**DR24CFG.INI**".

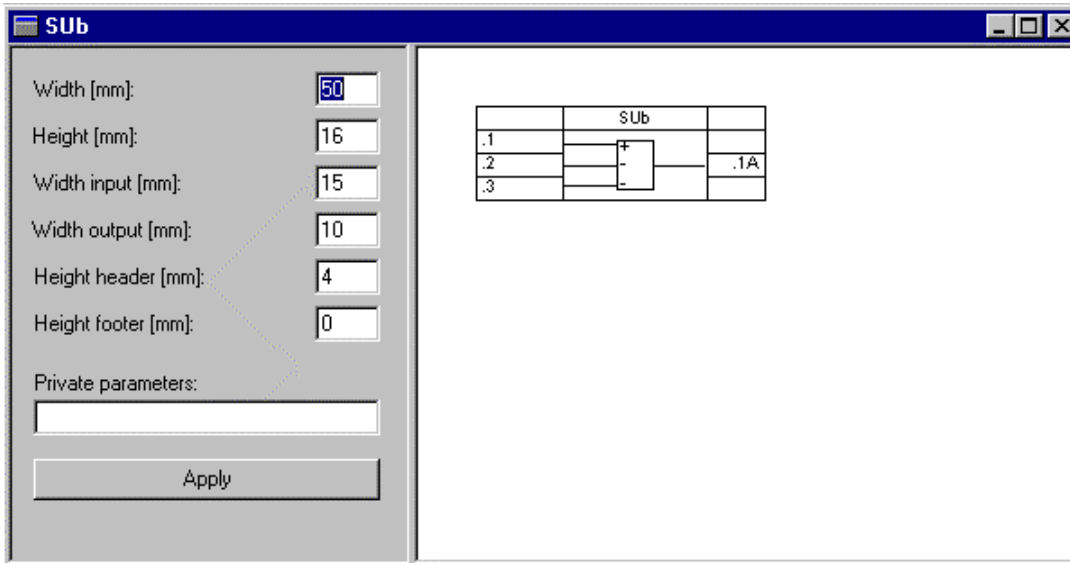
The font size in the function blocks is adjusted to the block size via "**File / Font**".





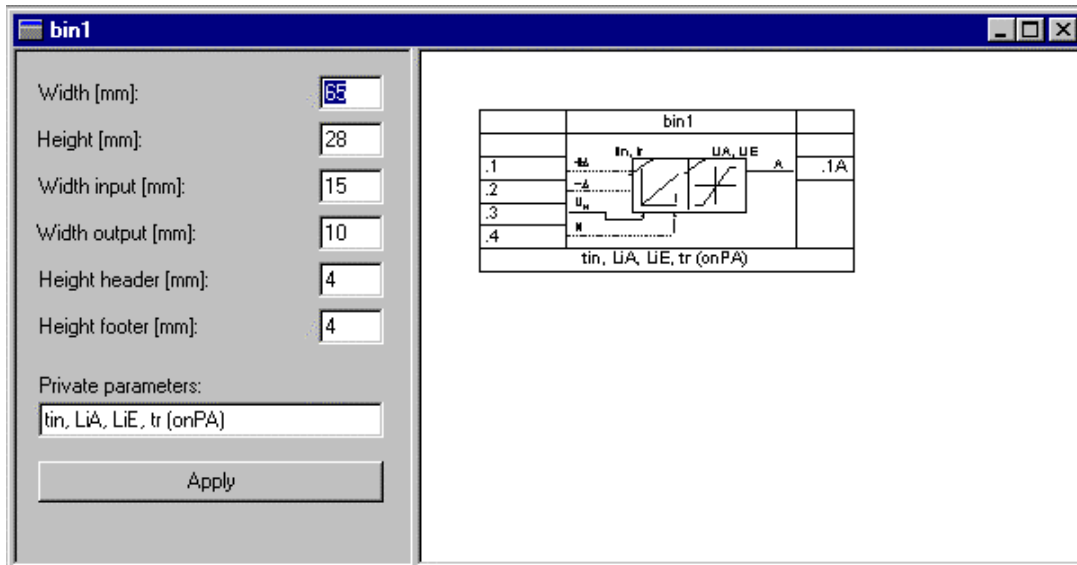
**10.1 Example Subtractor (SUB)**

Default factory settings for the coordinates of a subtractor:



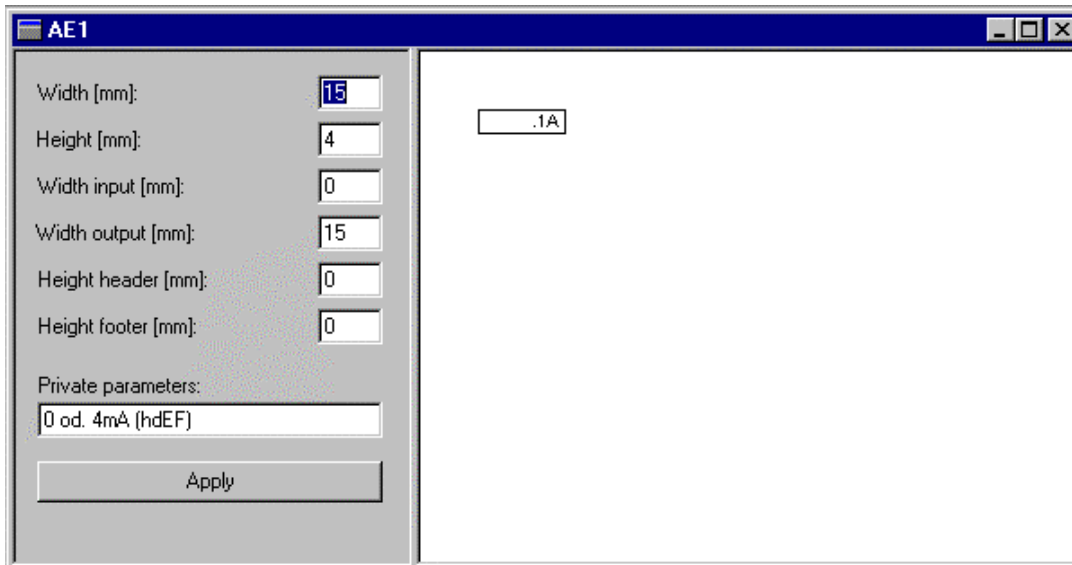
### 10.2 Example Binary Integrator (bin)

Default factory settings for the coordinates of a binary integrator:



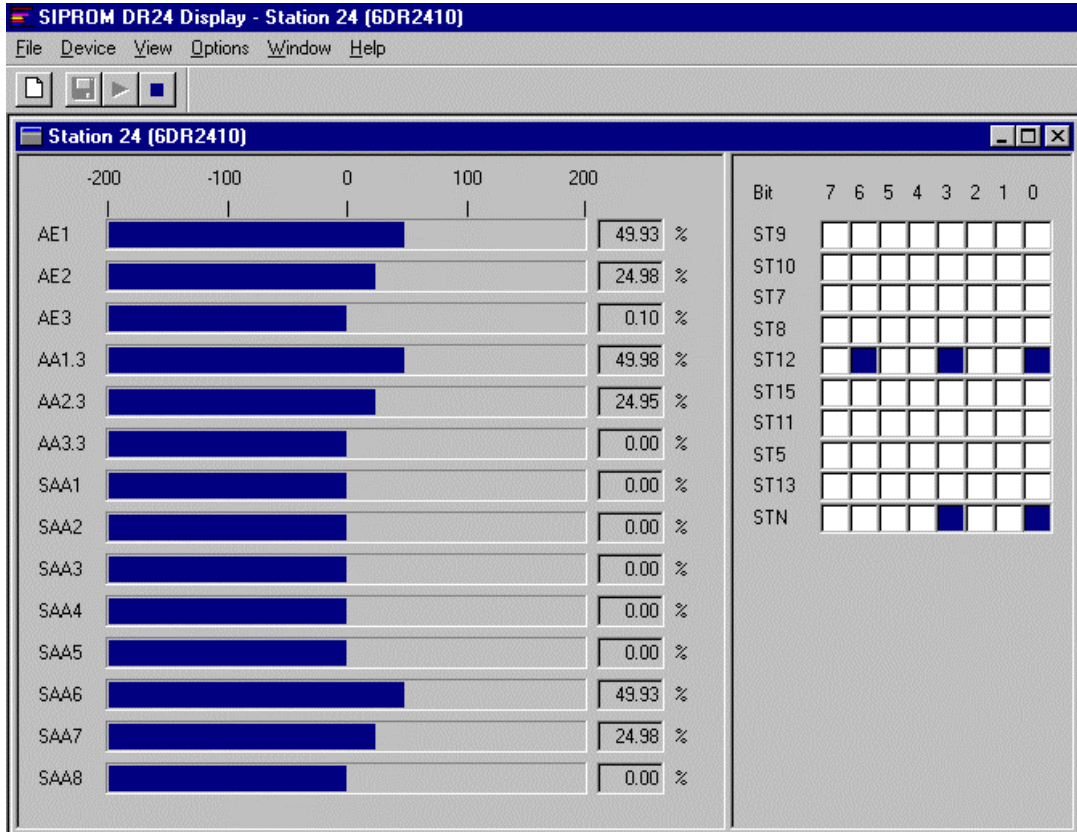
**10.3 Example Analog Input (AE1)**

Default factory settings for the coordinates of an analog input:

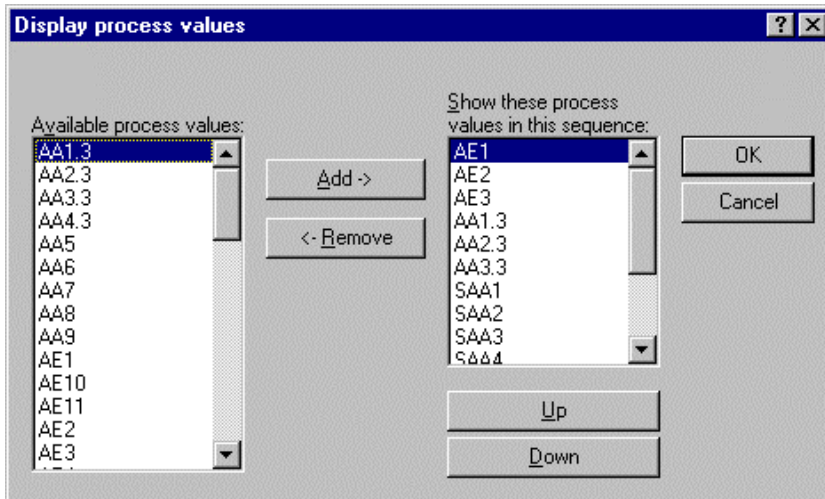


### 11 Display of Process values

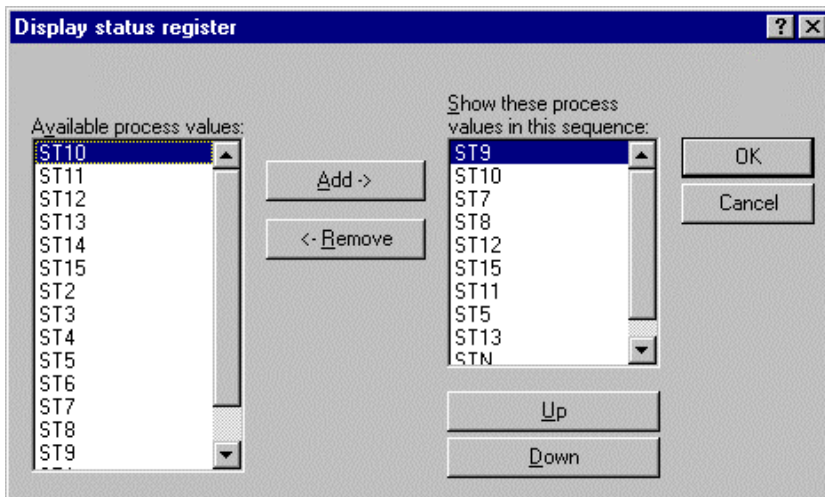
The program "SIPROM DR24 Display" shows all process variables and status bits, which could be found in the status registers STxx. The different variables can be selected from "View/Show process values" or "View/Show status register". The program is installed in "**C:/SIPROM/SIP\_DR24**" and is started via "START, Programs ...".



### 11.1 Process variables



### 11.2 Status registers



The meaning of the single bits, you will find in the manual "Serial interface of SIPART DR24" (C73000-B7476-C135): see CD-ROM under \Documentation.