JUMO LOGOSCREEN nt Paperless Recorder with TFT display and CompactFlash card

B 70.6580.6
Setup Program

08.06/00474098

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1.1 Preface

The setup program is used for the easy creation of configuration files, and to configure the instruments from a PC.

Please read these instructions before commissioning the software. Keep the instructions in a place which is accessible to all users at all times.

Please assist us to improve these instructions, where necessary.

Your comments will be appreciated.

However, if any difficulties should arise during start-up, please do not carry out any unauthorized manipulations. You could endanger your rights under the instrument warranty!

Please contact the nearest subsidiary or the head office in such a case.

1 Introduction

1.2 Typographical conventions

Warning signs

The signs for **Danger** and **Caution** are used in this manual under the following conditions:

Caution

This symbol is used when there may be **damage to equipment or data** if the instructions are ignored or not followed correctly!

Note signs

Note

This symbol is used when your **special attention** is drawn to a remark.

Reference

This symbol refers to **further information** in other manuals, chapters or sections.

Footnote

abc[1]

Footnotes are remarks that **refer to specific points** in the text. Footnotes consist of two parts:

A marker in the text, and the footnote text.

The markers in the text are arranged as continuous superscript numbers.

Action instruction

*

This symbol indicates that an **action to be performed** is described.

The individual steps are marked by this asterisk, e.g.

* Press the ▲ key

* Confirm with ENTER

Presentation modes

Keys

▲ + ENTER

Keys are **shown in a box**. Both **symbols and text** are possible. If a key has a multiple function, then the text shown is the one that corresponds to the function **that is active at the moment**.

Menu items

Edit ➔ Device data

Menu items in the software which are referred to in this manual are shown in italics. Menu name, menu item and submenu item are separated from each other by "➔".

1.3 Hardware and software requirements

The following hardware and software requirements have to be met for installing and operating the setup program:

Minimum configuration

- Intel Pentium[1] III or higher,
- Microsoft Windows[2] NT4.0 (SP6a), 2000 or XP,
- 128 Mbyte main memory,
- CD drive,
- mouse,
- one free serial interface or network connection, or CompactFlash memory cards (depending on the type of data transmission to the paperless recorder), and
- 120 Mbyte available on hard disk.

Recommended configuration

- Intel Pentium 4
- Windows XP or 2000
- 512 Mbyte main memory
- 2 Gbyte free space on hard disk for data

1. Intel and Pentium are registered trademarks of Intel Corporation
2. Microsoft and Windows are registered trademarks of Microsoft Corporation

1 Introduction

2.1 Starting the installation

Running the installation program

* Start Microsoft Windows

If Microsoft Windows has already been started, all Windows programs must be shut down before installing the setup program.

* Insert the CD into the drive, then close the drive.

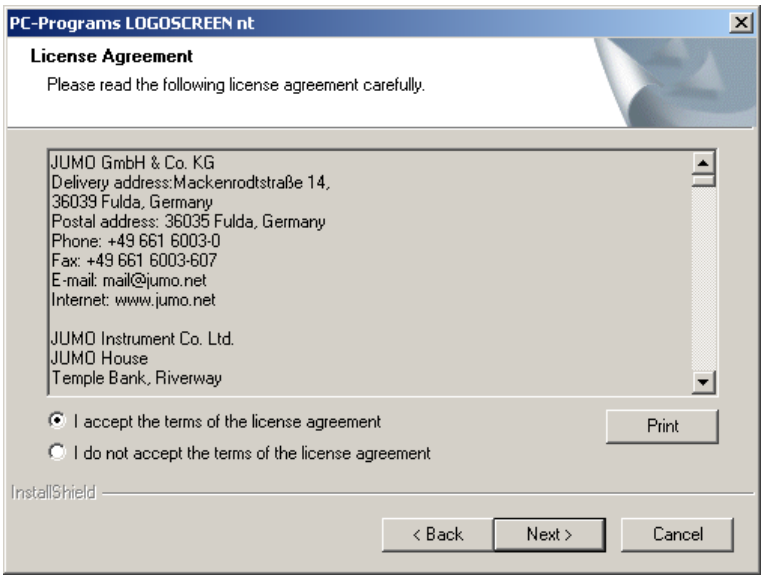
After the CD has been inserted, the installation program will start automatically. If not, proceed as follows:

* Start the file “Launch.exe” in the main directory of the CD.

Screen messages from the installation program will now lead you through the rest of the installation.

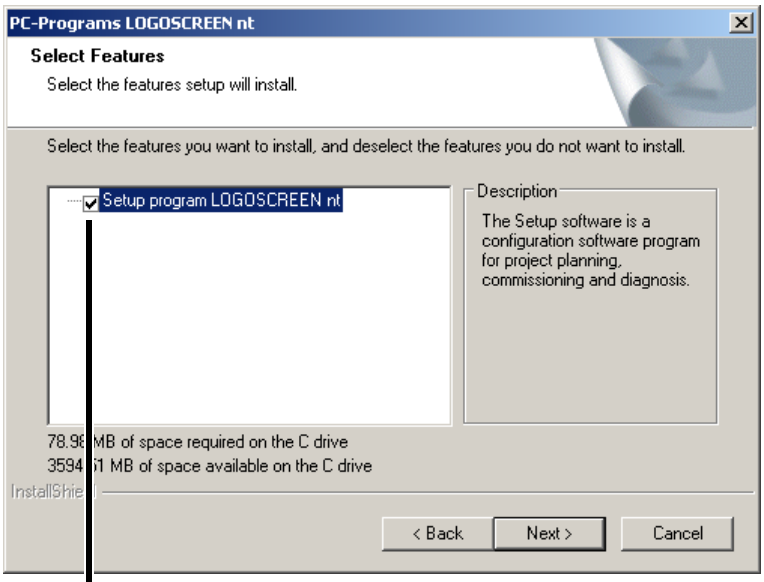
License agreement

* Read and confirm the license agreement. Accepting the agreement is the basic precondition to be able to install the software.



Available software

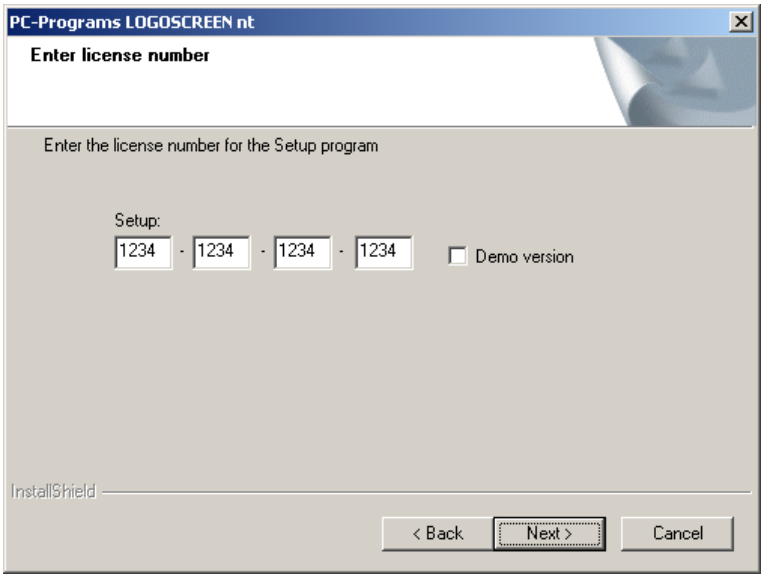
* Select the components that need to be installed.



Software that is to be installed must be marked by a tick (☑).

License number

* Now enter the required license numbers.
  You can find the numbers on the cover of the CD.



☞ If the “demo version” option has been set during installation, then some functions of this software (such as data transmission, saving data, printing out) will be disabled.

The software can be licensed at a later stage.

Program folder

* Define the program folder into which the icons for starting the software are to be copied. The directory for the program files is defined automatically.

Carry out installation

* The final action is to click on the Install button, to initiate the actual installation.

Program start

The selected software components will now be installed. When installation has been completed, start the setup program from the Windows start menu.

2 Installation

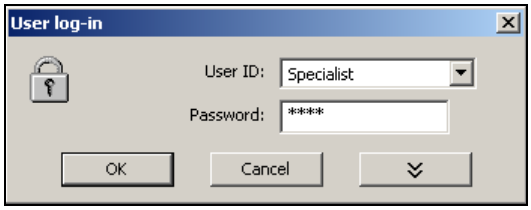
3.1 Log-in to the program

When the software has just been installed for the first time, there will not yet be a query of the user name and password. In the menu *Extras*, the query at the start of the program can be activated by the function *Renew log-in / Alter password*.
The activation of the log-in function can be used to distinguish between the user types “Specialist” and “Maintenance”. These two users have different access rights with regard to the functions in the setup program.

⇨ Chapter 8.10 “Renew log-in / alter password”

If the query is active, proceed as follows:

✱ Log in.



Please note that not all functions are available to all users.

⇨ Chapter 3.2 “Rights with regard to the setup program”

3 Log-in and rights

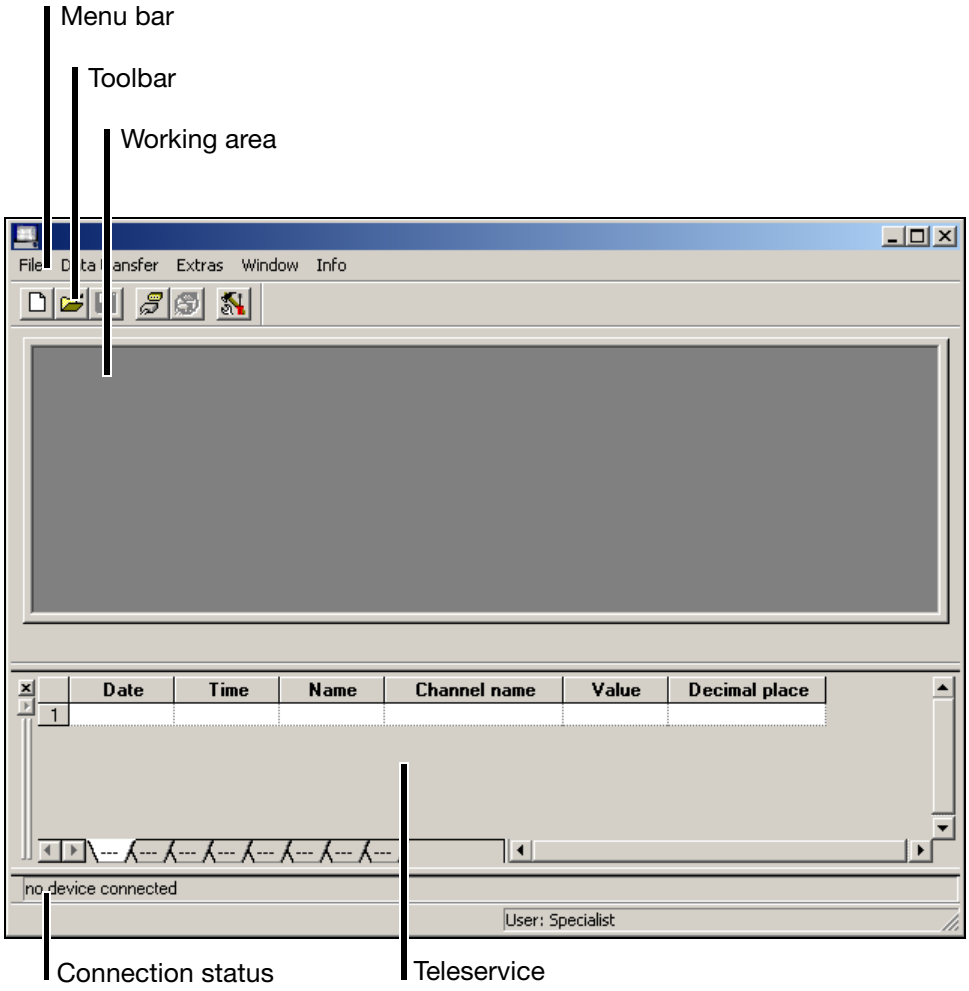
3.2 Rights with regard to the setup program

Depending on the installation and the log-in, individual users will have different rights within the setup program.

The differences are summarized in the table below:

Right	Demo installation	Maintenance	Specialist
Write interface texts	-	x	x
New	x	x	x
Open	x	x	x
Save, Save as, Delete	-	x	x
Configure undocumented parameters	-	-	x
Export to CF card	-	x	x
Import from CF card	-	x	x
Print	-	x	x
Enable program options	x	-	x
Enable extra codes	-	-	x
Edit interface settings	-	x	x
Edit device settings	x	x	x
Delete device	-	-	x
Create new device	x	-	x
x = right is available - = right is not available			

4.1 Elements of the user interface



Menu bar

The individual functions of the setup program can be started by using the menu bar.

⇨ Chapter 5 “File menu”

Toolbar (symbol bar)

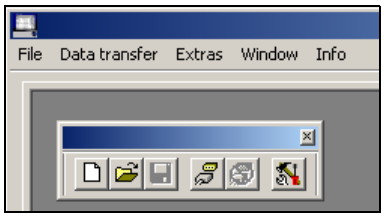
The toolbar contains selected functions from the menu bar. They can be started from the left mouse button. If you rest the mouse pointer on one of the icons (tool tips), you will see the function title after a short while.

Shifting the toolbar

The position of the toolbar can be changed, if desired.

* Please move the mouse pointer between two icon groups.

* Press the left mouse button.
* Keeping the left mouse button pressed, drag the symbol bar to the required position.
* Now release the mouse button.



Possible positions are:

- the left or right window border (vertical orientation),
- below the menu bar (horizontal orientation),
- at the bottom edge, above the user details (horizontal orientation) or
- any position (in own window - horizontal orientation).

Working area

Here you are provided with an overview of the current settings of a configuration file.

⇨ Chapter 4.2 “Configuration”

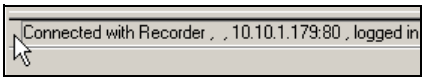
Connection status

In the “Connection status” line you can check whether a connection to a device has been established, and which interface data are being used. The line can be made visible or hidden through *Window* ➔ *Connection status*.

Example: No connection

Example: Connection to a device

The line can be moved (like the toolbar). In order for the shift to work, first position the mouse pointer on the symbol, then press the left mouse button.



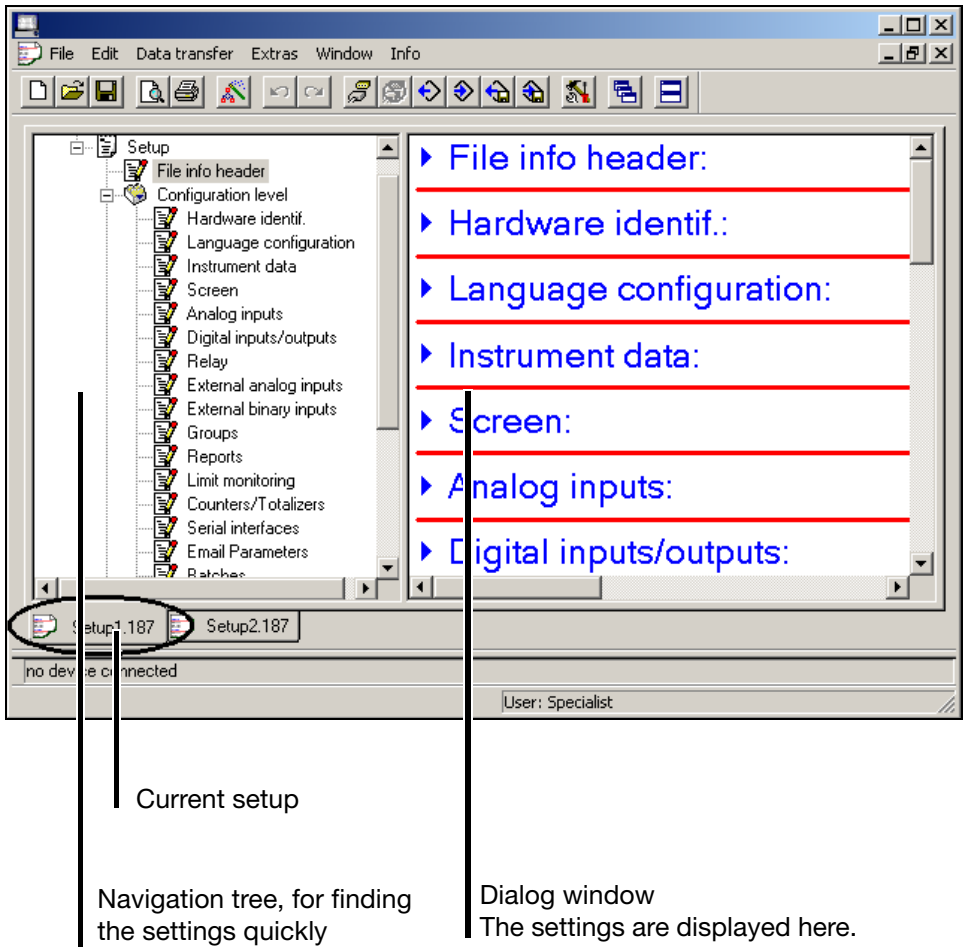
Teleservice

You can use Teleservice to look at the latest data from a paperless recorder. Teleservice can be made visible or hidden through the function *Window* ➔ *Teleservice*.

⇨ Chapter 9.4 “Teleservice”

4.2 Configuration

By using the function *File* ➔ *New* (or *File* ➔ *Open*) you can create a new configuration file (setup) or open an already existing one. The working area will be filled with the corresponding settings.



Navigation tree

A single click with the left mouse button in the navigation tree will position the entry visibly in the dialog window.

Clicking on ⊟ will reduce the size of the display, one click on ⊞ will enlarge the display again.

A double-click on an entry (e.g. Instrument da) will start the change dialog. As an alternative, a change can be started via the menu bar (*Edit* ➔ *Device data*).

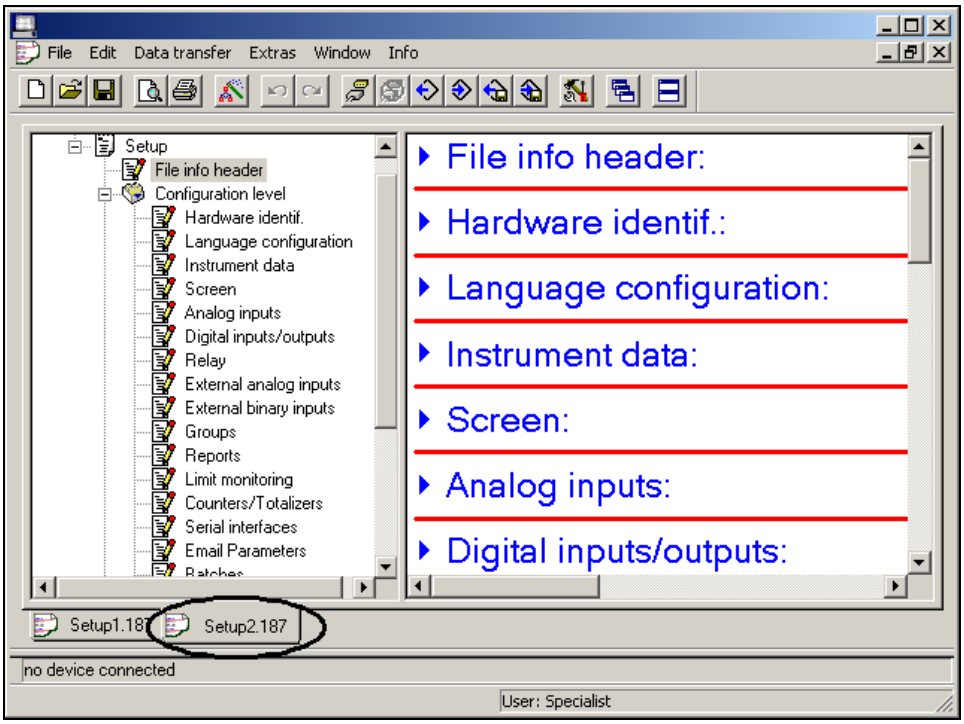
Dialog window

By double-clicking on an entry in the dialog window, you can initiate the change dialog. One click on “Arrow to right” (▶) before the entry will list the current setting in the dialog window, one click on “Arrow down” (▼) will hide the current setting again.

Current setup

If several setup settings are open at the same time, just one simple click on the name and ...

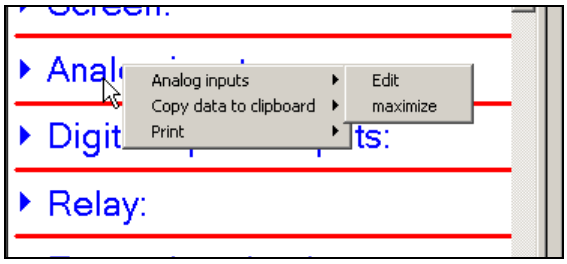
... the window becomes an active window.



Functions of the right mouse button

If you use the right mouse button in the dialog window, different functions will be available. These functions concern the submenu on which the mouse pointer was positioned when the right mouse button was pressed.

Example:
The right mouse button was pressed when it was on the entry “Analog inputs”.



Analog inputs ➔ Edit

This function starts the change dialog for configuring the analog inputs. Alternatively, configuring can also be started by a double-click with the left mouse button.

Analog inputs ➔ Maximize

This function prompts the display of the current configuration of the analog inputs. As an alternative, the current configuration can also be displayed by a click (left mouse button) on “Arrow to right” (▶).

Copy data to clipboard ➔ Analog inputs

This function copies the current configuration of the analog inputs to the Windows clipboard. The contents of the clipboard can, for instance, be imported into an editor or a text processing program.

Copy data to clipboard ➔ All data

This function copies the complete current configuration – not just that for the analog inputs – to the Windows clipboard. The contents of the clipboard can, for instance, be imported into an editor or a text processing program.

Print

This function enables the printout of the latest setting. You can select which parameter groups are printed out, and which are not. Alternatively, the printout can also be performed via the *File* menu.

4 User interface

5.1 New

This opens a new setup in the working area. The values will be preloaded with the factory (default) settings.

After calling up this function, the user must first enter the hardware information for the instrument. The operation corresponds to the menu function *Edit* ➔ *Hardware identifier* and is described in Chapter 6.4.

5.2 Open

Opens an existing setup from a file, and present the contents in the working area.

5.3 Save

Saves the setup that is shown in the working area to a file. It is only necessary to enter the file name once. If the file is saved again, no query is made about the file name.

5.4 Save as

Saves the setup that is shown in the working area to a file. Unlike the *Save* function, this always asks for a file name.

5.5 Close

Removes a complete setup from the working area. If changes have not yet been saved, this can still be done immediately after calling up the *Close* function.

5.6 Delete

Deletes a file from a hard disk or another data storage medium.

The deletion of files is irreversible.

5.7 Export as RTF text

The current setup can be saved as an RTF file on the PC.

5.8 Print

After calling up the function, the selection of what is to be printed is made next. Printing will start when the selection has been concluded.

5 File menu

5.9 Print preview

The printed result is displayed on the screen. You can let several pages be displayed, and alter the size of the pages on the screen.

5.10 Printer setup

Here you can make alterations to the settings for your printer. When the program is started, the Windows default printer will always be set as the active printer.

5.11 Default settings

Here you can make alterations to the default settings for the program. Many alterations will only take effect after a fresh start of the setup program.

5.12 Exit

This closes the setup program.

6.1 Undo ...

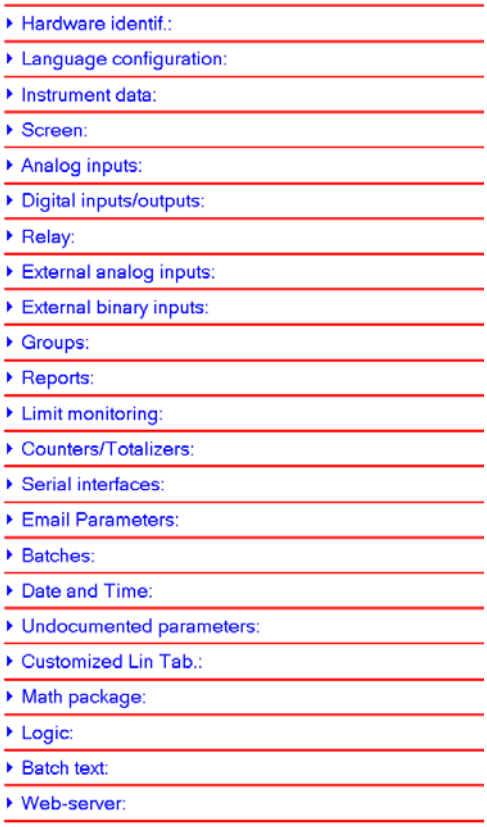
This undoes the last editing action. In the menu, the item *Undo* shows which setting will be undone.

6.2 Restore ...

The *Restore* function will only be available when the *Undo* function has been activated. This function repeats the setting that was previously canceled by the *Undo* function.

6.3 Hardware ID ... Web server

Each function has the same effect as a double-click with the left mouse button on the corresponding function in the dialog window.



These instructions describe just those parameters that can only be configured through the setup program, and not on the instrument.

The description of parameters that can also be configured on the instrument can be found in the operating manual B 70.6580.0.

The following table provides an overview of the parameters that can be altered by the user.

Parameter	Configurable through the setup program	Configurable on the instrument
Hardware ID	x	-
Country settings	x	-[1]
Device data	x	x[2]
Screen	x	x
Analog inputs	x	x
Binary inputs/outputs	x	x
Relay	x	x
External analog inputs	x	x
External binary inputs	x	x
Groups	x	x
Report	x	x
Limit monitoring	x	x
Counters/integrators	x	x
Serial interface	x	x
Ethernet e-mail parameters	x	-
Batches/plants	x	x
Date and time	x	x
Undocumented parameters	x	x
Customized linearization	x	-
Batch texts	x	-
Math	x	-
Logic	x	-
Web server	x	-
Setup data info	x	-
x = editable, - = not editable		

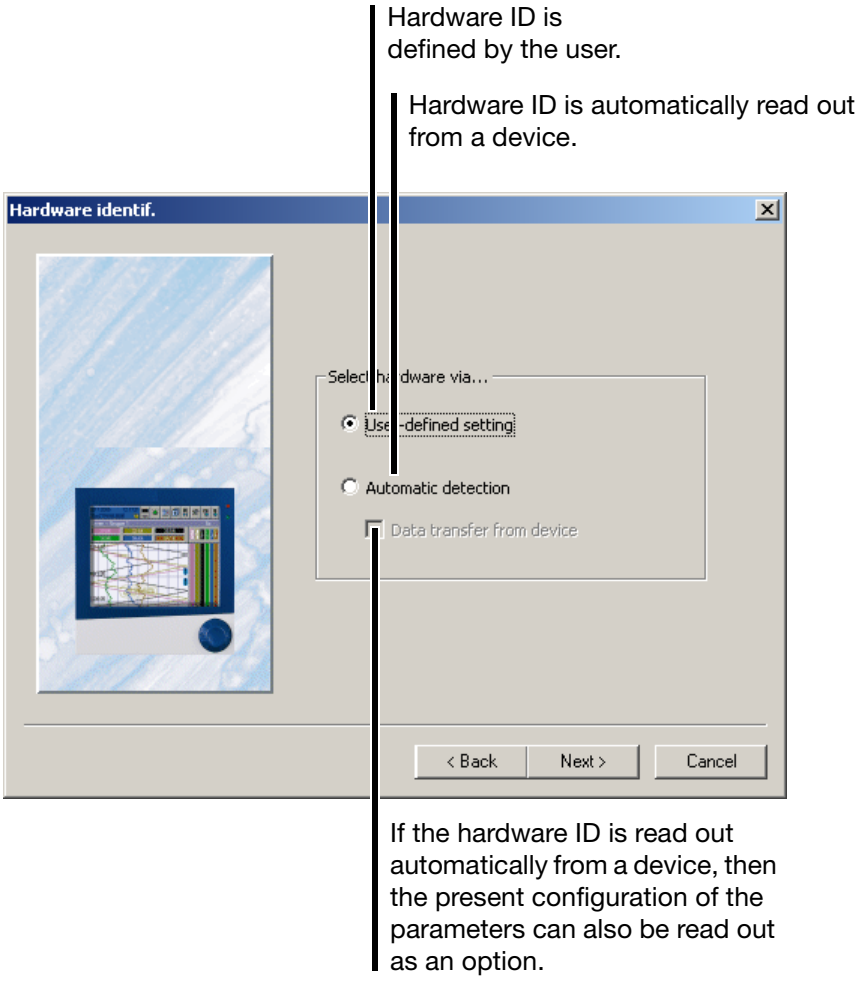
1. On the instrument, you can choose between two operating languages
2. The general device data can be configured on the instrument, but not the parameter Setup info (device info).

6.4 Hardware ID

This function performs the adaptation of the setup program to the hardware and extra codes in the instrument. The instrument has three plug-in module slots, which can have different assignments. The following are available:

- analog input card with 6 analog inputs
- combination i/o card with 3 analog inputs and 8 binary inputs/outputs
- relay card with 6 relays.

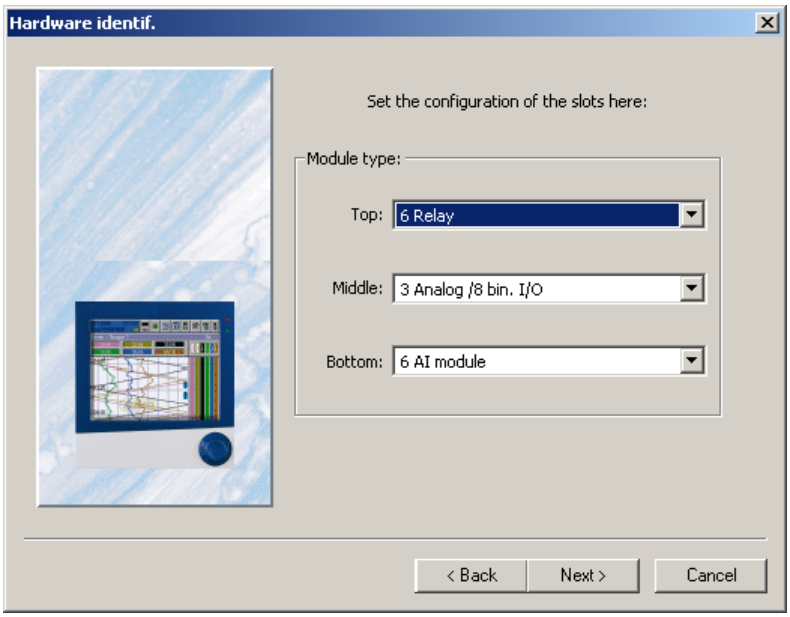
The exact assignment can be determined by comparing the nameplate (attached to the instrument) and the type designation (see the installation instructions).

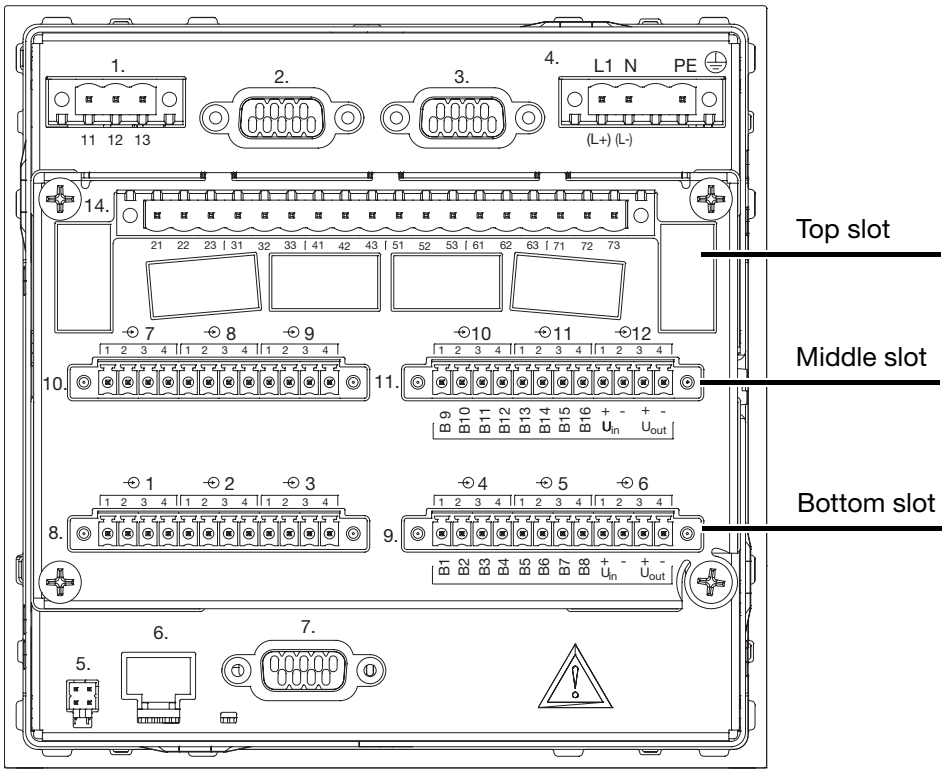


✱ Choose how the hardware ID is to be determined, and then activate the Next > button.

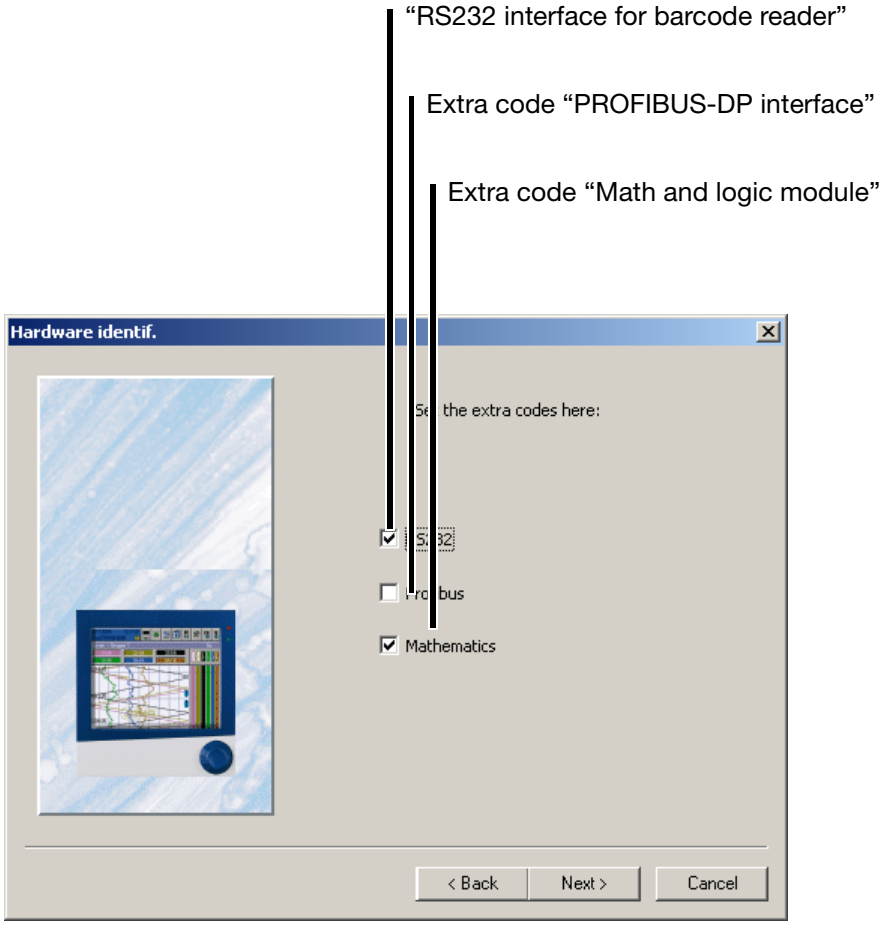
User-defined settings

With user-defined settings, the user determines the hardware ID.

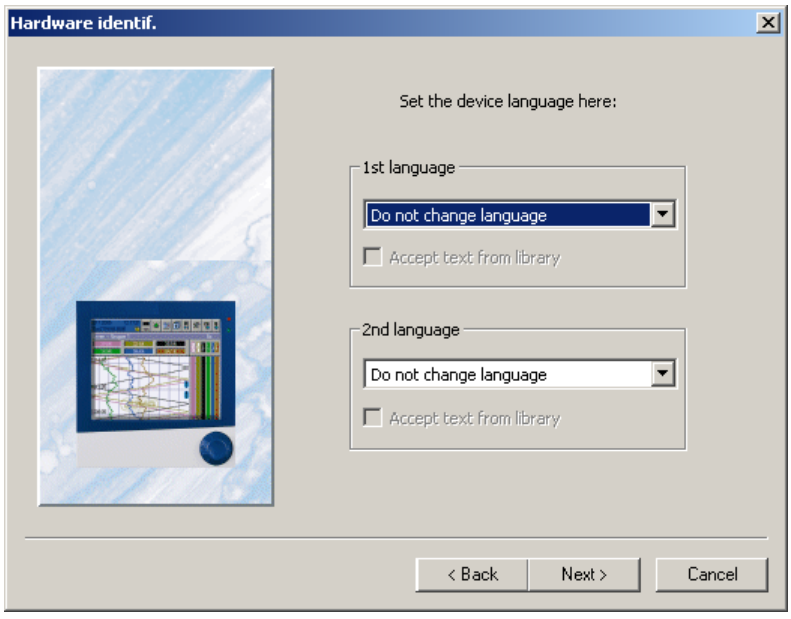




✱ Select the slot assignments, and then activate the Next > button.



* Select the extra codes that have been fitted, and activate the Next > button. The interface “RS232” (= RS232 for barcode reader) is provided as standard in the paperless recorder, and is thus not an extra (code). Please make sure that you select the interface.



* Choose the two languages that are to be sent to the instrument as “Language 1” and “Language 2”, and activate the Next > button.

A setup file can include more than two languages on the PC side, but only two will be sent to the instrument. These languages must be placed in the first and second positions in the language list. The choice that is made here can be revised at a later date.

⇨ Chapter 6.5 “Country settings”

On the instrument, *Parameter* ➔ *Configuration* ➔ *Device data* ➔ *Language* can be used to select the language.

The setting “Do not change language” means that Language 1 and 2 will depend on the installation of the PC program.

Language 1: The language used for installing the PC program.

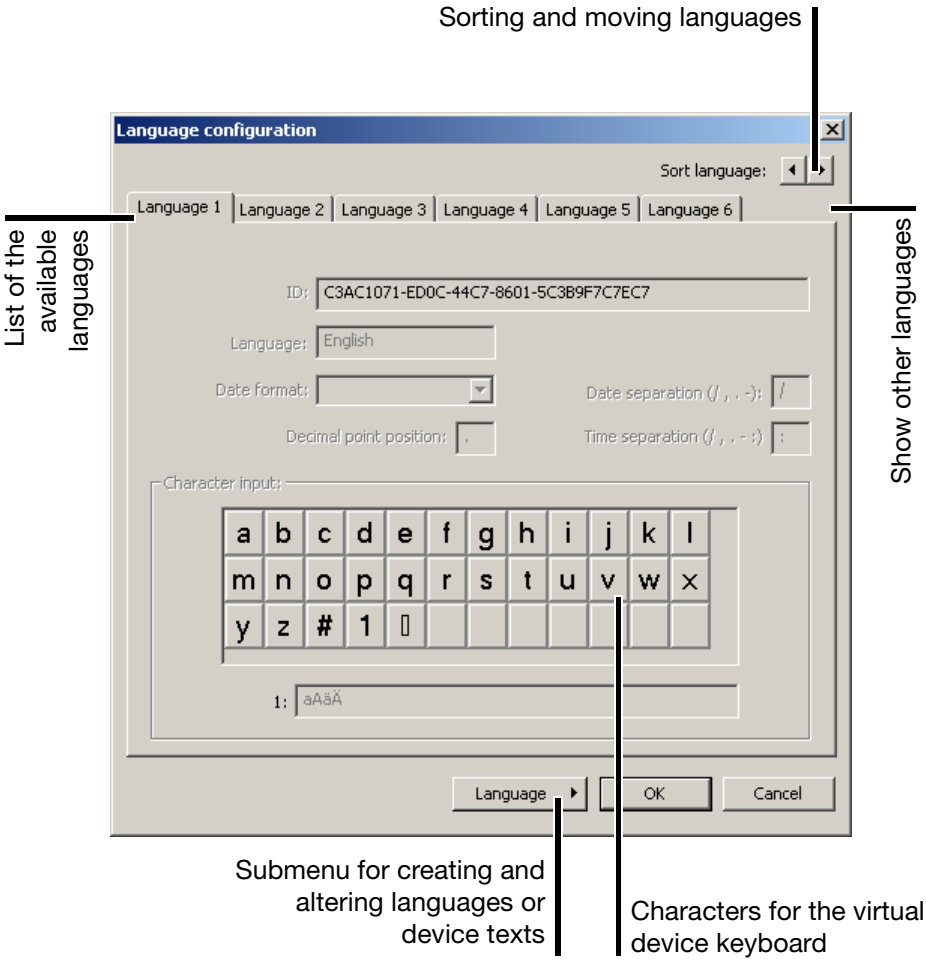
Language 2: English (or German if Language 1 is English).

Automatic detection

With automatic detection, the hardware read out from a connected device. As an option, the current settings for the setup configuration can also be read out (Data transfer from devic).

6.5 Country settings

After calling up the function, the languages that are available in the setup file will be shown. If you click on a language with the left mouse button (Language 3 Lar), then its properties will be shown, and they can be moved to a different position in the list (Sort language: ◄ ►). The first two languages in the list will be sent to the device (Language 1 and Language 2).



Language editing

All the available languages can be copied and edited. In this way, the user can also create new languages.

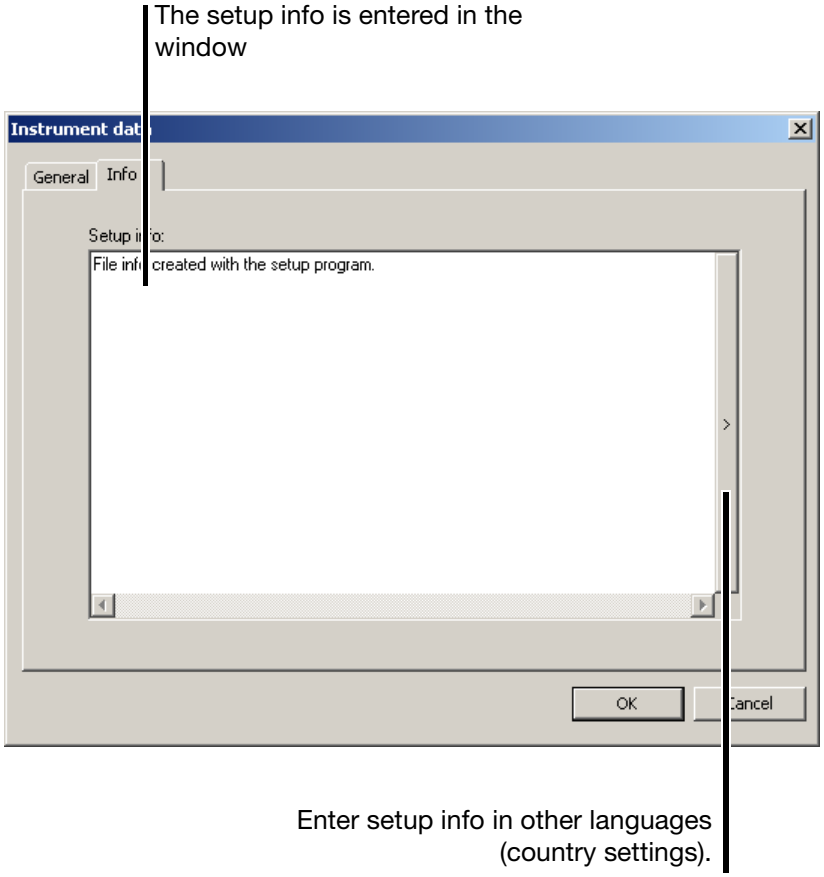
☞ The creating and editing of new and existing languages is described in Chapter 11 “Languages”.

6 Edit menu

6.6 Device data

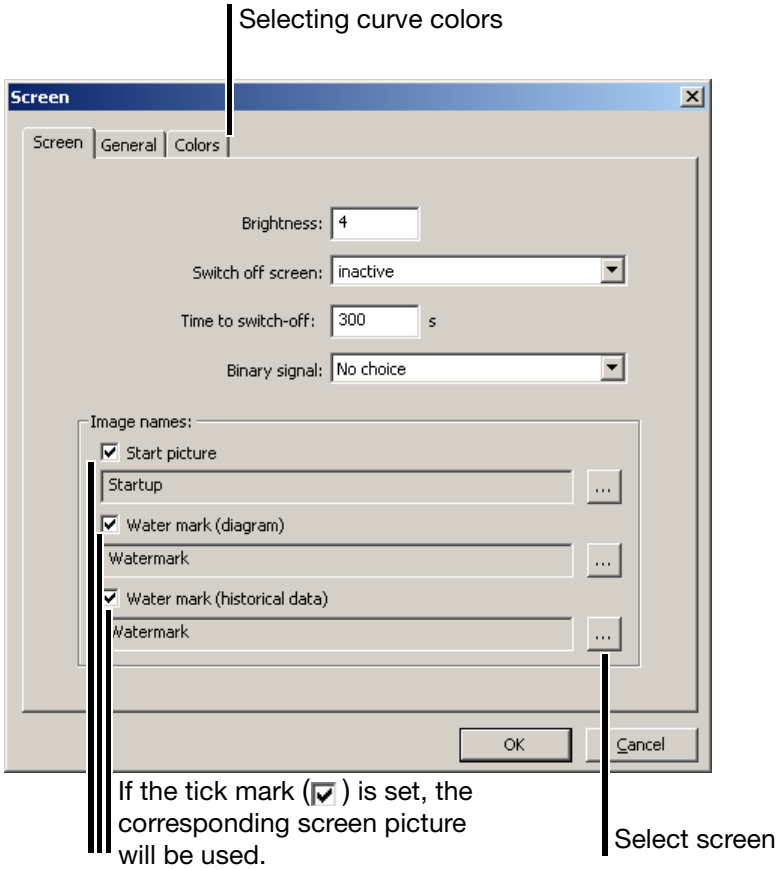
The device data consist of two sections:

- general device data (also configurable on the instrument) and
- setup info (can only be configured with the setup program).



The setup info can be viewed in the PC evaluation software PCA3000 before being read in or on opening the data, and can be viewed and expanded in the menu item *Edit➔ Supplementary description*.

6.7 Screen



Start screen

The start screen is displayed when the supply voltage is switched on (Power On). It must have a size of 320 x 240 pixels, with a maximum of 256 colors.

Watermarks (curves)

The watermark is shown as a background to the measurement curves when using curve presentation for the analog inputs. It can have a maximum size of 200 x 100 pixels, with a maximum of 256 colors.

The color white is used as a transparent color!

Watermark (History)

The watermark is shown as a background to the measurement curves when using memory presentation for the analog inputs. It can have a maximum size of 200 x 100 pixels, with a maximum of 256 colors.

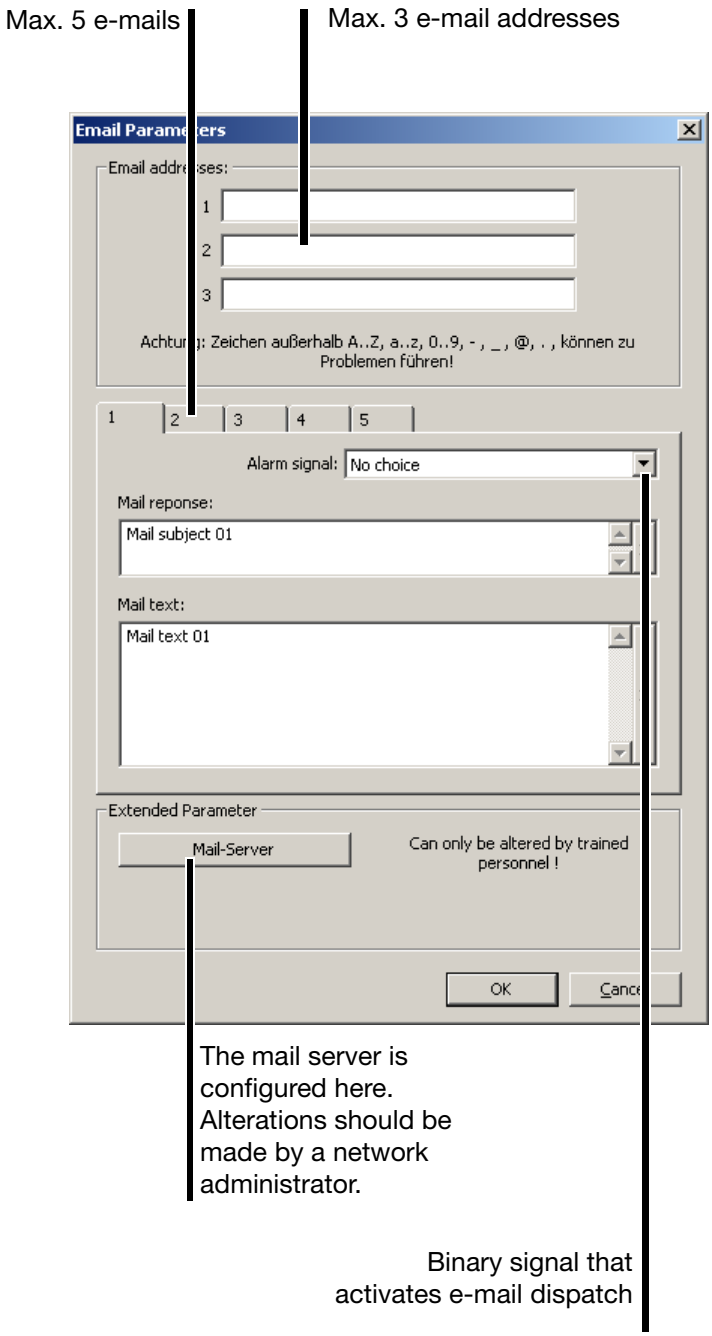
The color white is used as a transparent color!

6 Edit menu

6.8 Ethernet e-mail parameters

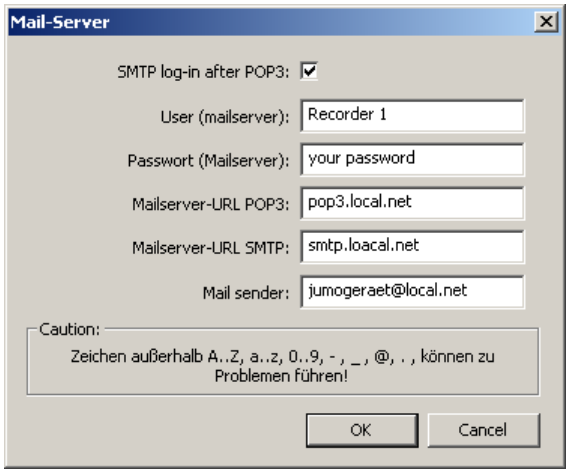
Five e-mails can be sent to up to three users. The precondition is that the instrument is connected to a network via the Ethernet interface, and the Ethernet parameters (*Extras* ➔ *Ethernet interface*) are correctly configured.

Ethernet e-mail parameters

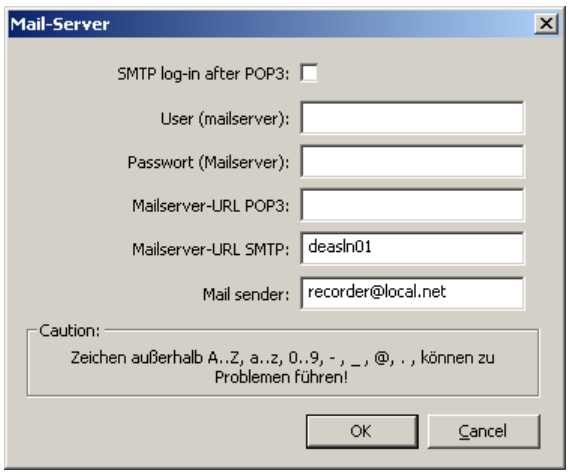


⇨ Further information and flow diagrams can be found in the Interface Description B 70.6580.2.0, Chapter 6.4, and a summary of the error codes is provided in Chapter 4.9.3.

Mail server



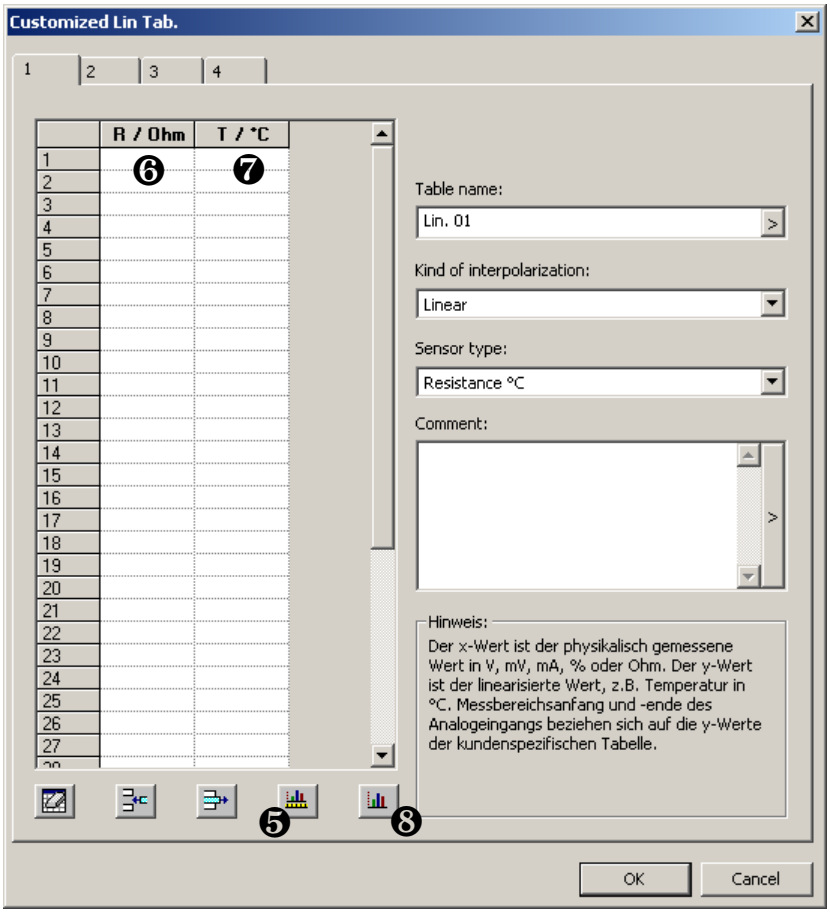
In simple company networks it is often sufficient to specify e-mail transmission via SMTP (Simple Mail Transfer Protocol):



6.9 Customized linearization

The customer-specific linearizations (max. 40 interpolation points) make it possible to connect up sensors that are not defined by the linearizations which are provided ex-factory.

In the menu *Customized linearization* you can define the interpolation points that will be used for setting up the analog channels (*Edit* ➔ *Analog inputs* ➔ *Linearization* ➔ *Customized 1 — 4*).



The following procedure has proven to be advantageous for entering a customer-specific linearization.

* Select Linearization 1 — 4 (❶).
* Assign a name (❷).
* Choose the type of interpolation (❸).
* Select the sensor type (❸).
* Let the X values be calculated automatically (❺). The values are entered in the left-hand column of the interpolation table (❻).
* Enter the Y values in the right-hand column of the interpolation table (❼).
* Use the function (❽) to check the linearization table.

6.10 Math

The math and logic module is available as an extra (code). It must be ordered with the instrument, or subsequently enabled through the function *Extras* ➔ *Enable extra codes*.

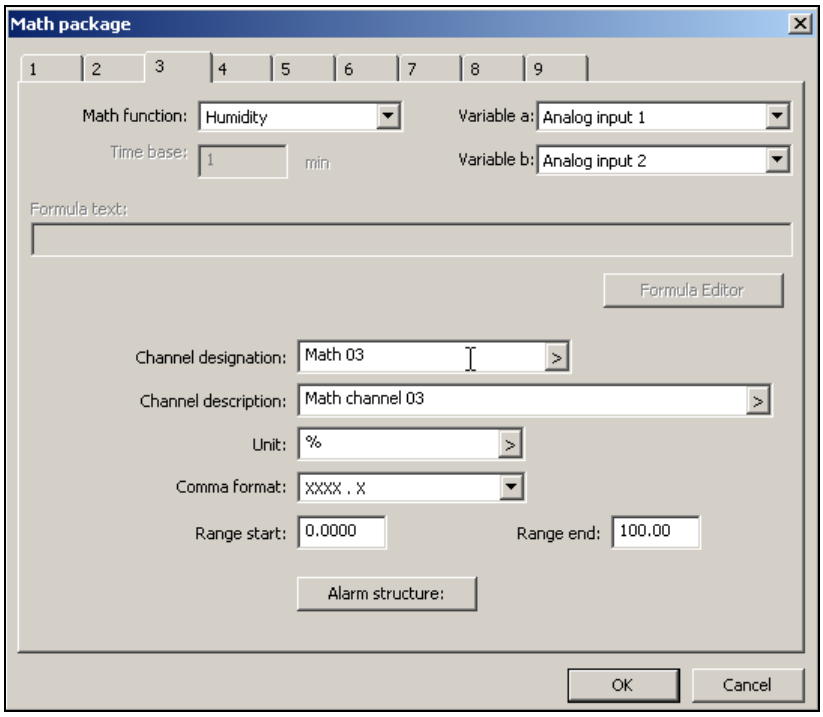
⇨ Chapter 8.2 “Enable extra codes”

The math and logic module are channels that are not available as hardware but are calculated by the instrument software.

Math channels

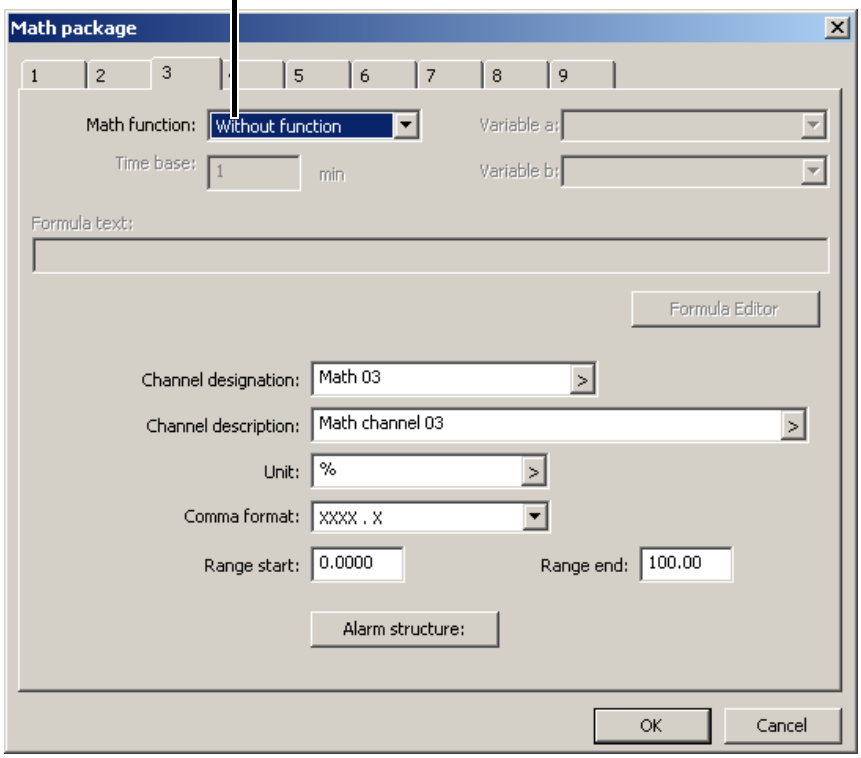
You can configure the math channels in the “Math” section of the setup program, or through the menu *Edit* ➔ *Math*.

In the following example, math channel 3 will be configured:



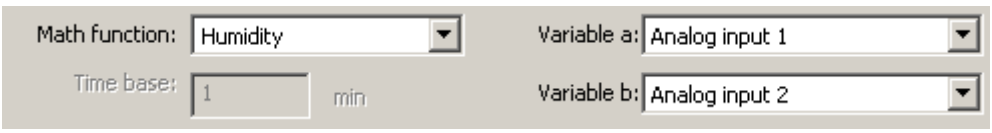
Function selection

The function is selected here. All other fields can subsequently be edited according to the function.



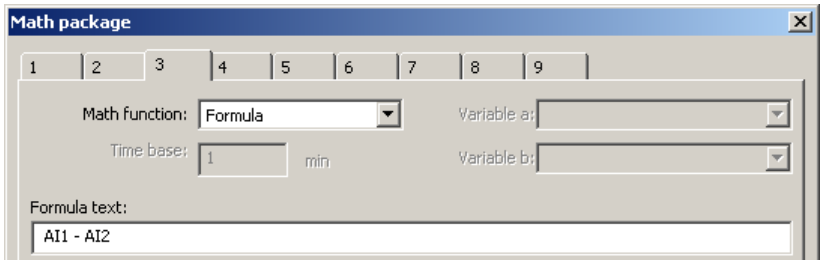
You must edit the input fields “Variable a”, “Variable b” or “Timebase” if one of the standard functions (difference, ratio, humidity, moving average) has been set. If you have set the “Formula” function, then the input field “Formula” must be edited. Entry can either be direct or via a dialog (Formula Editor).

Example: humidity



☞ With humidity measurement, the channel for dry bulb temperature has to be specified as variable A, and the channel for the wet bulb temperature as variable B.

Example: formula

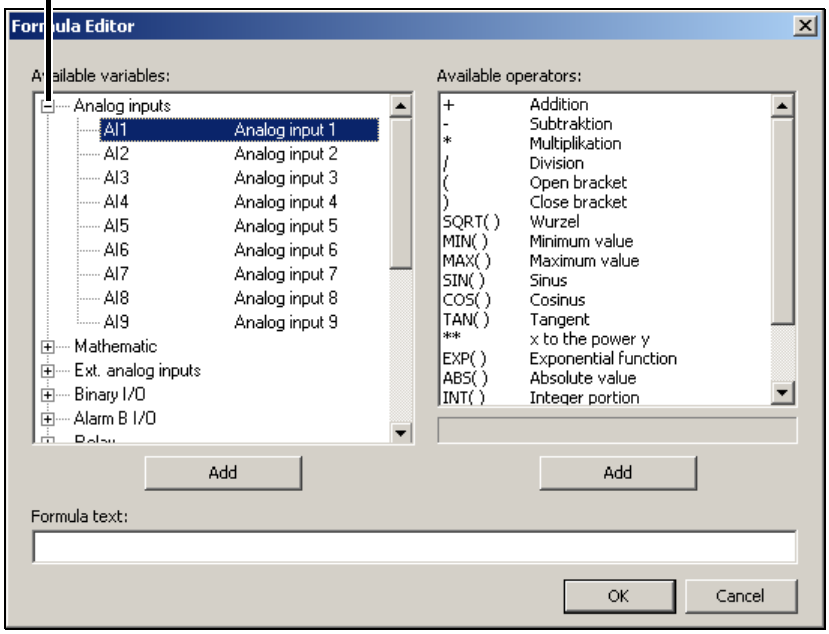


The formula can be entered directly from the PC keys or by calling up the Formula Editor function.

Formula Editor

After calling up the function, the following dialog box will appear:

Click here with the left mouse button to expand or reduce the view.



In the left-hand window you can select the required signal, in the right window the required operator, and then insert them into the formula by activating the corresponding button (Add). Instead of using Add , you can also make a selection by a double-click with the left mouse button.

For functions ending with ( ), you will have to add the closing bracket yourself.

Example: 1) insert SQRT() --> **SQRT(**
2) insert AE1 --> SQRT(**AE1**
3) insert) --> SQRT(AE1**)**

6 Edit menu

Operator overview

Operator	Explanation	Example
+	addition	AE1 + AE2
-	subtraction	AE1 - AE2
*	multiplication	AE1 * AE2
/	division	AE1 / AE2
(	opening bracket	(
)	closing bracket	)
SQRT()	root	SQRT (AE1)
MIN()	minimum value (of several variables)	MIN (AE1, AE2)
MAX()	maximum value (of several variables)	MAX (AE1, AE2, AE3)
SIN()	sine (angle of 360° circle)	SIN (AE1)
COS()	cosine (angle of 360° circle)	COS (AE1)
TAN()	tangent (angle of 360° circle)	TAN (AE1)
**	x to the power y	AE1 ** AE2
EXP()	exponential function	EXP (AE1)
ABS()	absolute value	ABS (AE1)
INT()	integer portion	INT (AE1)
FRC()	decimal portion	FRC (AE1)
LOG()	logarithm	LOG (AE1)
LN()	natural logarithm	LN (AE1)

Operator priorities

Priority	Math sign / function	Comment
high	( )	brackets
	SQRT, MIN, MAX, LOG, LN, SIN, COS, TAN, ABS, EXP, INT, FRC	functions
	**	exponent (x^y)
	+, -	sign
	*, /	multiplication, division
low	+, -	addition, subtraction

6.11 Logic

The math and logic module is available as an extra (code). It has to be ordered with the instrument, or subsequently enabled through the function *Extras* ➔ *Enable extra codes*.

⇨ Chapter 8.2 “Enable extra codes”

The math / logic module is composed of channels that are not available as hardware but are calculated by the instrument software.

Logic channels

Activate the “Logic” section in the setup program, or use the menu *Edit* ➔ *Logic.*

Editing a logic channels is just the same as entering a formula for a math channel (Chapter 6.10 “Math”), the difference lies merely in the variables and operators that are available.

Operator overview

Operator	Explanation	Example
!	NOT	! BE9
&	AND	BE9 & BE10
|	OR	BE9 | BE10
^	XOR	BE9 ^ BE10
/	rising edge	/ BE9
\	falling edge	\ BE9
(	opening bracket	(
)	closing bracket	)

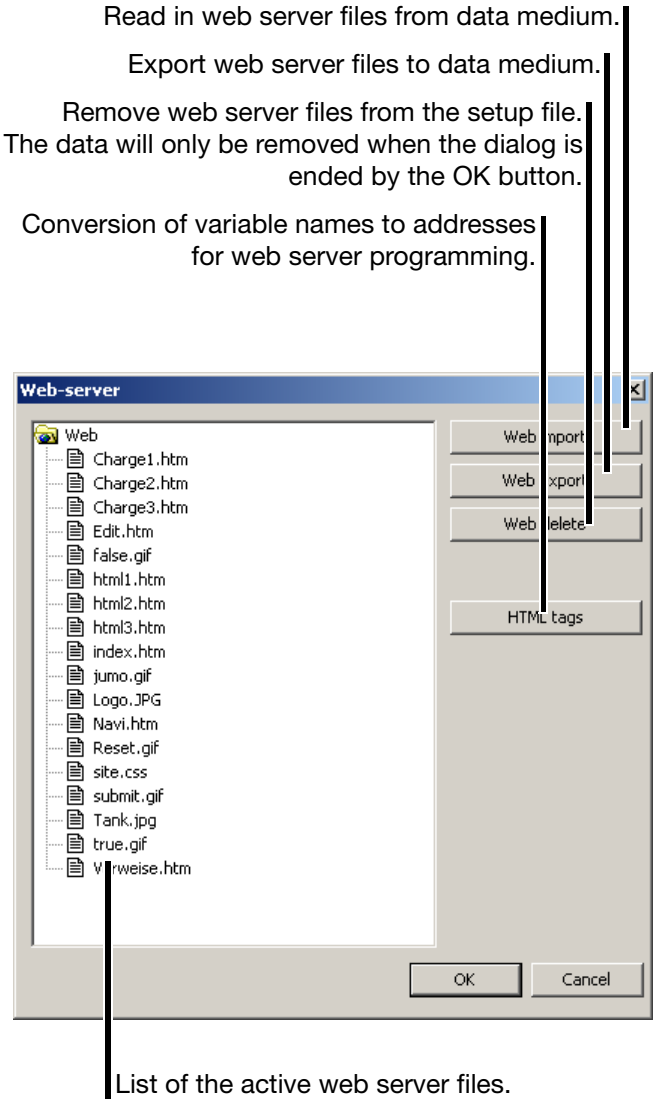
Operator priorities

Priority	Operator	Comment
high	( )	brackets
▼	NOT, !	negation
	AND, &	AND linkage
	XOR, ^	exclusive-OR linkage
low	OR, |	OR linkage

6 Edit menu

6.12 Web server

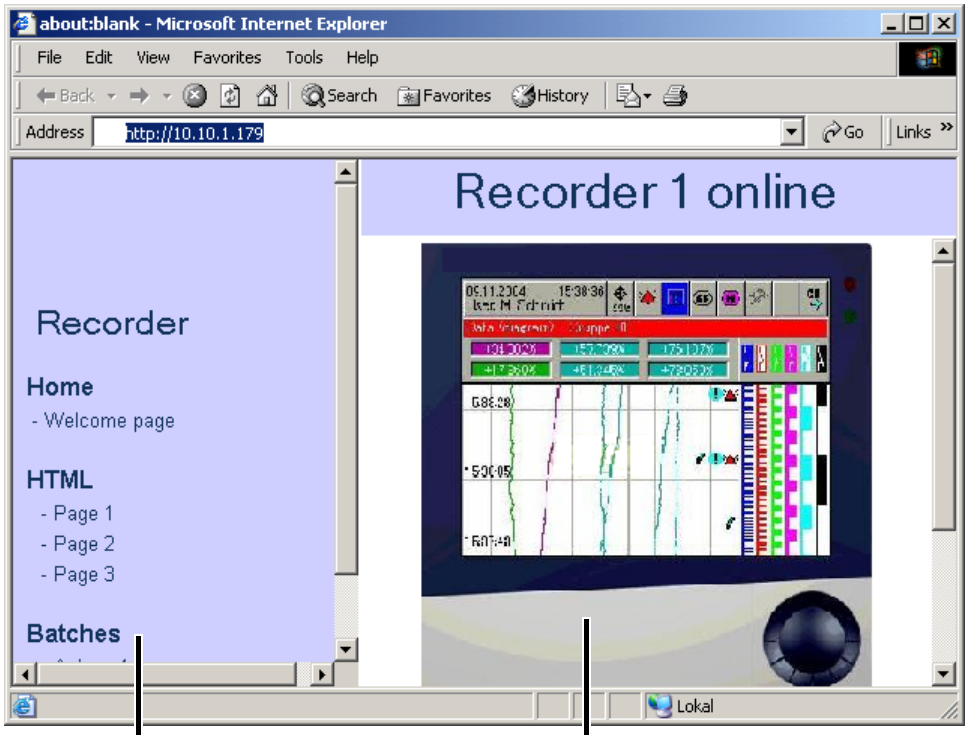
The integrated web server provides the user with the possibility of checking the analog and binary inputs to a paperless recorder via the Ethernet as well as setting the batch data in the instrument.



Depending on the Ethernet configuration (*Extras* ➔ *Ethernet interface*), the web server for the paperless recorder can be called up from the PC through a browser (e.g.Internet Explorer) in one of two ways:

- by entering the IP address (e.g.http://10.10.1.179), or
- (for active DNS device names) by entering the name (e.g. http://lsntssc).

Browser example



Navigation area.
Click with the left mouse button to start the page.

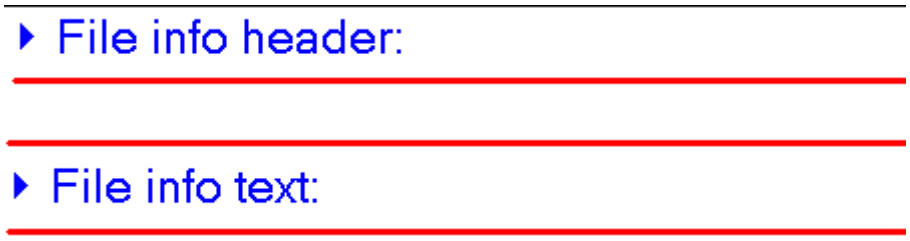
Window contents.
Here you can find the latest data

SVG pictures (SVG = Scalable Vector Graphics) are used within the web server. For the correct presentation of SVG, Internet explorer requires a plug-in such as the SVG Viewer from Adobe (http://www.adobe.com/svg).

New, specially adapted web server files can be created by the manufacturer, if required. Quotation and prices on request.

6.13 Setup data info

This function has the same effect as a double-click with the left mouse button on one of the following functions in the dialog window.



The *File info header* and *File info text* can be used for a description of the setup file.

This information is stored only within the setup files, and is not transferred to the instrument.

In this chapter, before explaining (from Page 49 on) the function of the data transfer, it is necessary to provide some general explanation on the topic of data transfer.

7.1 General

There are two ways of transferring the setup data to or from a recorder:

– transfer via interface, or

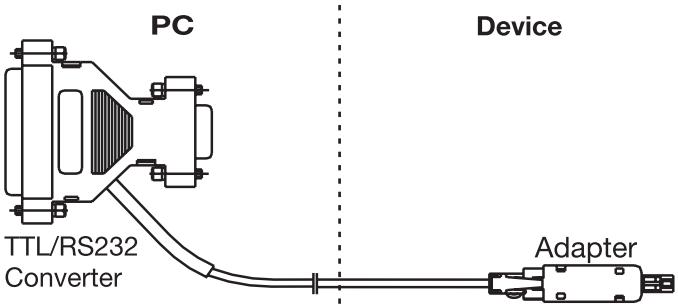
– transfer via CompactFlash memory card

7.1.1 Transfer via interface

Data transfer is possible via one of the following interfaces:

PC	**Paperless recorder**
RS232 (with TTL/RS232 converter)	Setup interface
USB (with USB/TTL converter)	Setup interface
RS232	RS232
RS485 (plug-in card or converter)	RS485
Ethernet	Ethernet

Setup via RS232 You will need the interface cable (including adapter) in this case. It is available as an accessory for the recorder.



7 Data transfer menu

Setup via USB

You will need the interface cable (including adapter) in this case. It is available as an accessory for the recorder.

⇨ See Installation Instructions B70.9720.3.

RS232

⇨ For the pin assignments, please refer to the Interface Description B 70.6580.2.0.

RS485

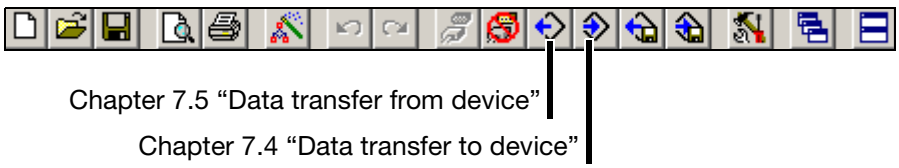
⇨ For the pin assignments, please refer to the Interface Description B 70.6580.2.0.

Ethernet

The paperless recorder or a PC can be connected to the network using normal, commercially available network cables (with RJ45 connector). If the recorder and a PC are to be connected directly together, please use a crossover cable.

Starting the transfer

Use the toolbar or the *Data transfer* menu with its functions "*"Data transfer to device"*and "*"Data transfer from device""* in order to transfer the setup data.



This can be configured either on the recorder or through the setup program. If, forexample, the *Configuration* menu is open on the instrument, then the instrument cannot be accessed through the setup program.

7.1.2 Transfer via CompactFlash memory card

Setup program

Use the toolbar or the *Data transfer* menu with its functions *"Data export to CF card"* and*"Data import from CF card"* to transfer the setup data.

Do **not** use the menu function "*File* ➔ *Save as ...*"

It cannot be used to create a valid CF card for the paperless recorder.

Paperless recorder

You can use the paperless recorder to write setup data to the CompactFlash memory card, or to read from it.

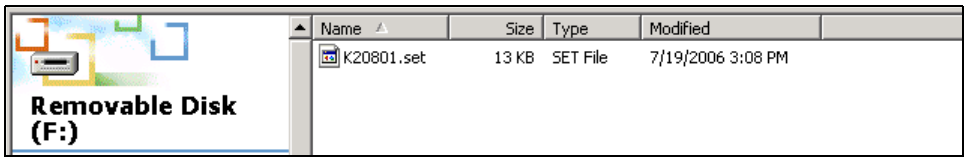
Import/export errors

If an error occurs on the paperless recorder side during transfer from or to a CF card, it will be indicated in the CompactFlash card menu and will remain until the error has been eliminated or is overwritten by a fresh error message.

Notes on the CF card

In order to be able to read or write to CompactFlash memory cards from a PC, you will need a card reader/writer.

When you have installed the card reader/writer, and inserted a CompactFlash memory card, you will automatically have a new drive under Windows. You can access this new drive just like a normal hard disk, using Windows Explorer.



CompactFlash memory cards must only be removed from the card reader/writer when the function "Eject removable medium" or "Safe removal of hardware" (functions in the PC operating system) has been activated first.

Only one configuration file can be saved to the CF card at any time, since there is no file name as a variable.

Measurement data from several instruments can be on the same CF card, since they have unambiguous IDs.

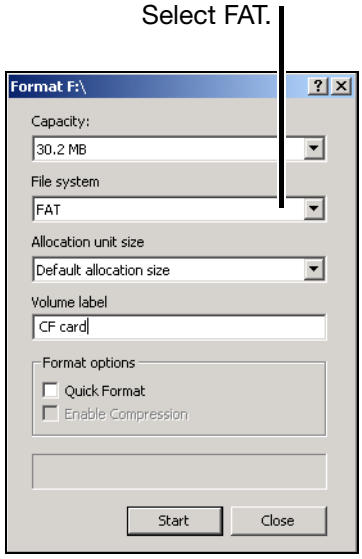
Formatting a CF card

A CompactFlash memory card, (CF card) must be formatted for FAT (**not** FAT32 or NTFS).

If you format a CF card yourself, you must **not** use fast-formatting (quick format). If this is disregarded, a fault free exchange of data cannot be ensured.

To format a CF card using the Windows workplace (e. g. Windows XP):

* Make a double-click on the workplace symbol in the “Desktop” area for the PC, using the left mouse button.
* Click with the right mouse button on the drive letter for the CF card.
* Select the *Format* function.



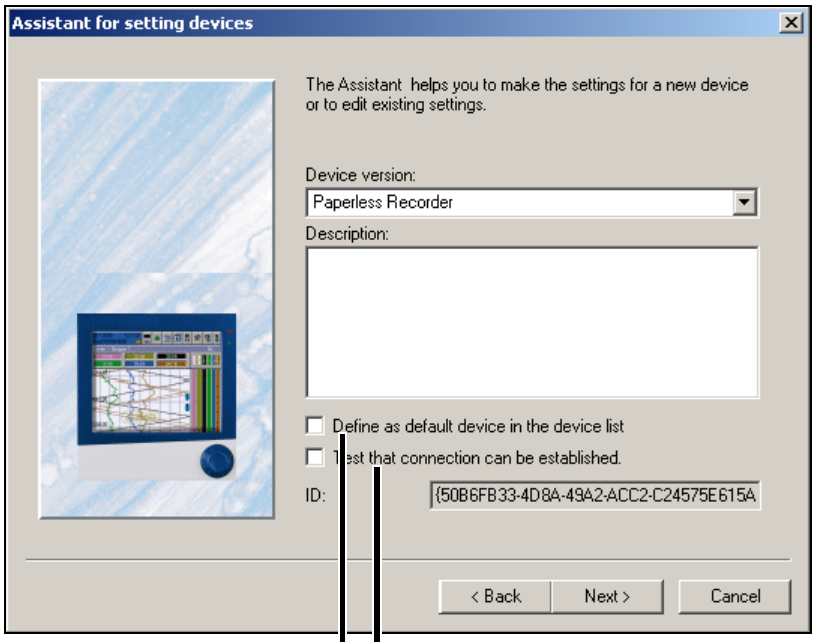
* Select FAT file system.
* Click on the “Start” button.

7.2 Make connection

This function establishes a connection ( ) to a device. A connection to a device is a precondition for transferring a setup to or from a device via an interface (serial or Ethernet).

7.2.1 Assistant for device settings

If there has never been any previous communication with an instrument, the “Assistant for Device Settings” will automatically be started when the first attempt is made to access the instrument. This helps you to set up a device list.



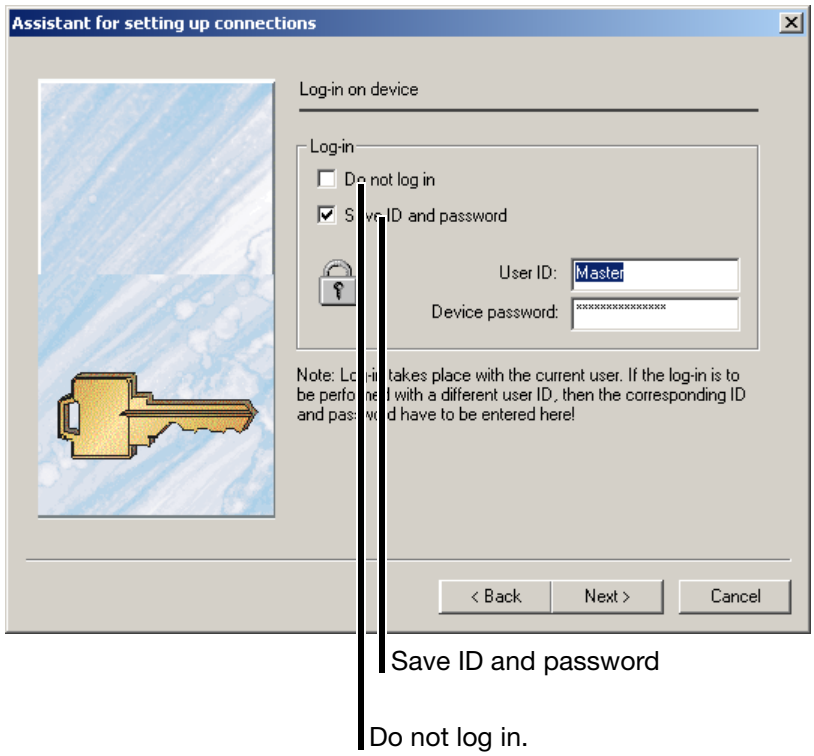
Here you can choose whether the device should be defined as the default device ( ). The system will automatically access a default device, other devices must be linked through the device list.

If the option is active ( ), a check is made at the end whether the chosen device can be accessed via the selected interface.

* First select the device version.
* Enter an additional description, if appropriate.
* Set one of the option fields, if appropriate.
* Press the Next > button.

7 Data transfer menu

Log-in to device



No log-in

The default setting of the program is such that the “Master” user is automatically logged in to a device that is found with the user’s name and password, and can thus communicate with this device.

Set the option (☑) if you do not want to log in. Please note that it is possible that some functions will not be operable if you are not logged in. The decisive factor is the current user list and the access rights that are defined in this list.

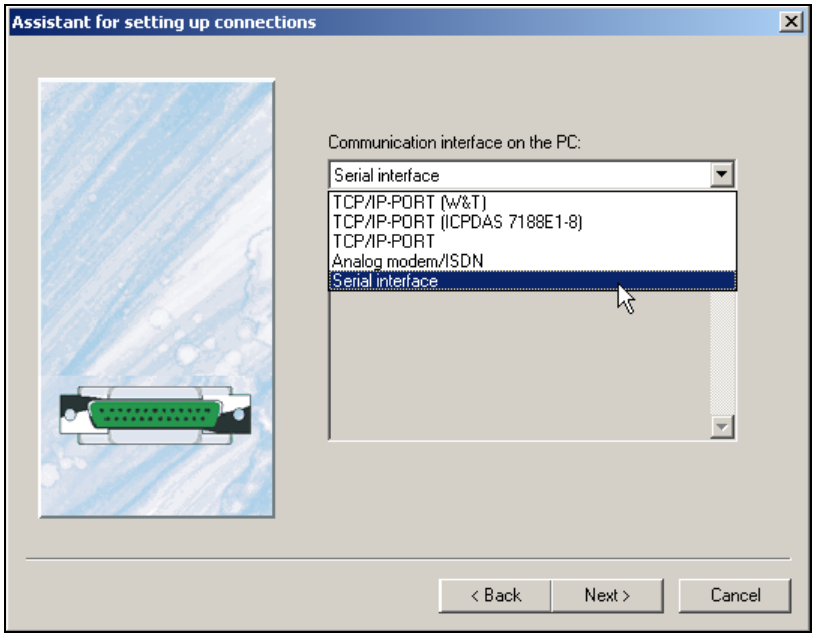
Saving ID and password

If the “Save ID and password” field is active, the log-in is made to the device with the data that are stored under the “User ID” and “Device password” that are entered. The default settings are “Master” for the user ID, and “8200” for the device password.

If the “Save ID and password” field is inactive, then the log-in is made with the “User ID” and “Device password” that were used to start the setup program.

✱ Make your selection, and activate the Next > button.

Interface selection



✱ Select the interface which you want to use to access the device.

The next steps depend on the interface or type of connection that has been selected.

TCP/IP PORT

The following parameters must be selected:

IP address / HOST name	xxx.xxx.xxx.xxx (Example: 192.168.0.10)	Enter the IP address for your instrument. If you enter the name, the IP address can be determined by clicking on the button “Convert HOST name to IP address”.
Port number, port name	80	The port used for communication.
Communications protocol	HTTP protocol	This has a fixed setting, and cannot be altered.

Analog modem, ISDN

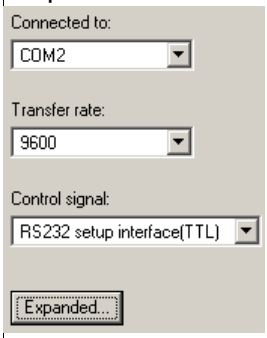
The following parameters must be selected:

Telephone number		Enter the telephone number for connecting to the required device.
Connect via		Select which modem is to be used to make the connection.
Communications protocol	Modbus protocol	This has a fixed setting, and cannot be altered.
Device address	1 — 254	Device address for the Modbus protocol.
If modems are applied, they must be preconfigured before they can be used.		

7 Data transfer menu

Serial interface

The following parameters must be selected:

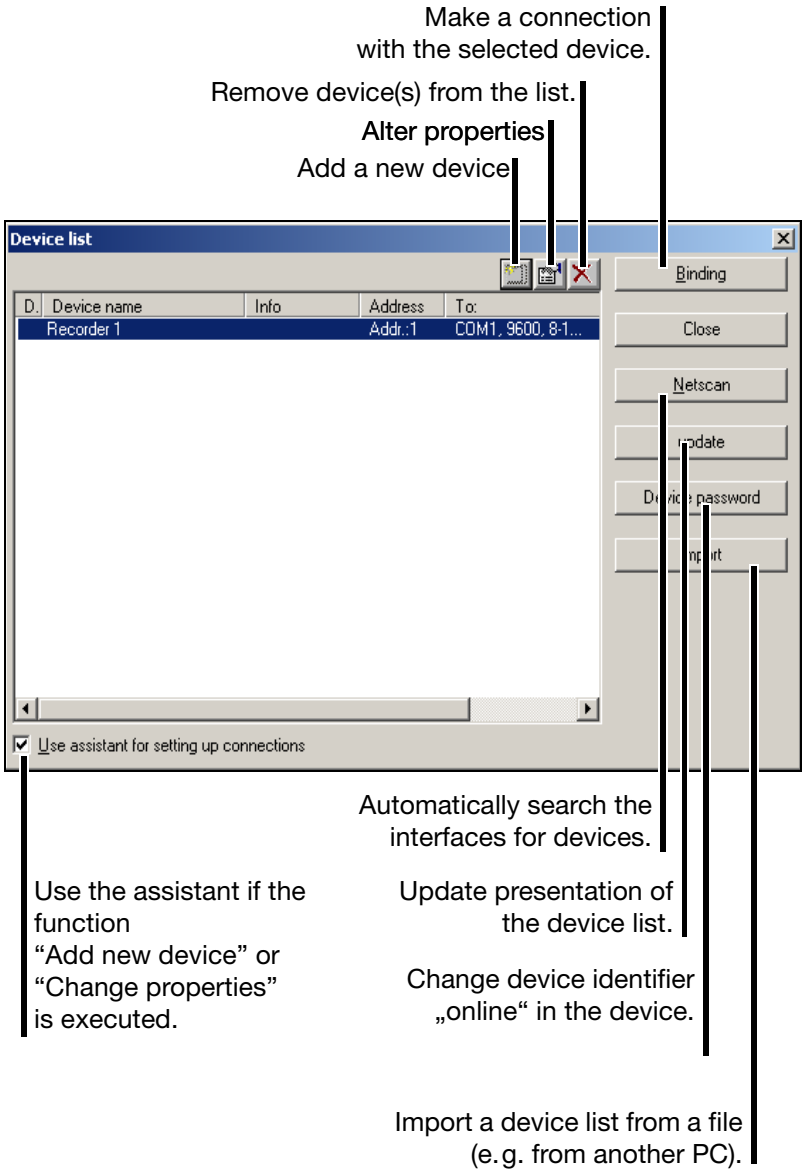
Connected to	COM1, COM2	The PC interface to which the paperless recorder is connected.
Transmission rate	9600, 19200, 38400	The transmission rate must match the one that has been set in the device. 9600 must be set if “RS232 setup interface (TTL)” is selected as the control signal.
Control signal	RS232	If the RS232 interface on the device is used.
	RS232 setup interface (TTL)	If the setup interface on the device is used.
	RS422-RTS	If the RS422/485 interface on the device is used.
	RS422-DTR	
	RS485-RTS	
	RS485-DTR	
Expanded 	Stop bit and parity	The parameters under the “Expanded” button must also match the corresponding device parameters. Standard and obligatory settings for the control signal “RS232 setup interface (TTL)” are: Stop bit = 1 Parity = none
Communications protocol	Modbus protocol	This has a fixed setting, and cannot be altered.
Device address	1 — 254	Device address for the Modbus protocol. If the “RS232 setup interface” is used as the control signal, then the device address will be ignored – it does not have to match the address in the device.

Device list

When all settings have been made, the device is entered in the device list.

7.2.2 Device list

All devices that have been defined are shown in a device list. The interface parameters are also administered here, and new, additional devices can also be defined in the device list.



Use the Binding button to make a connection to a device.

When deleting entries, you can use the Ctrl key on the PC keyboard and the left mouse button to select several devices at the same time and delete them.

A successful connection produces a change in the toolbar.

7 Data transfer menu

Not connected

Connected

7.3 Disconnect

This breaks an existing connection between the PC and a device.

7.4 Data transfer to device

Transmits a setup to a device.

7.5 Data transfer from device

Read in a setup from a device. If there is no connection, the program will automatically attempt to access the default device.

7.6 Data export to CF card

The setup will be saved on a CompactFlash card. The CompactFlash card can be read in to the instrument, using the *Memory manager* menu.

7.7 Data import from CF card

This reads a setup from a CompactFlash card, and displays it in the working area.

☞ In order to use a function in the *Extras* menu, there must be an existing connection to an instrument.
If there is no connection, the setup program will try to access the default device from the device list. If no default device has been defined, then the device list will appear on the screen and the user must set up a connection by hand.

8.1 Enable program options

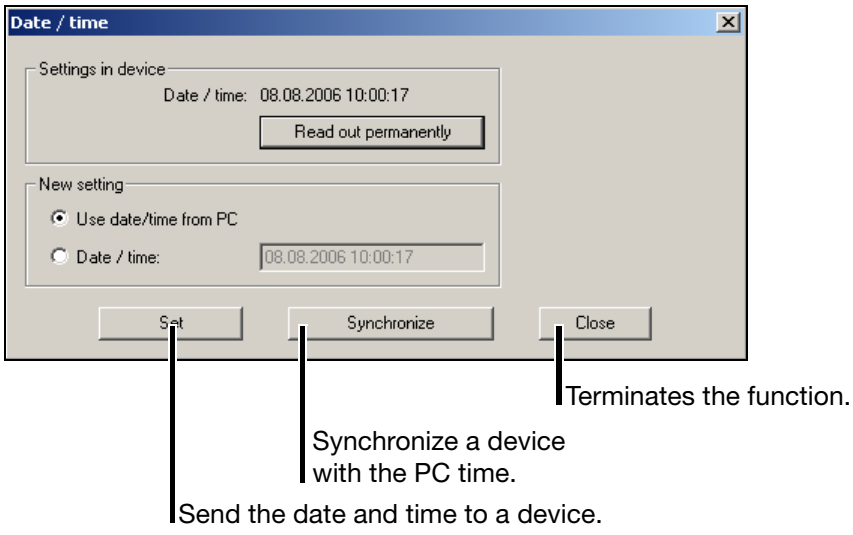
If no valid serial number was entered during the installation of a program, then it will only run in demo mode. You can use this function to register a program at a later date and to convert it into a 30-day test or full version.

8.2 Enable extra codes

This function is intended for later extensions within the paperless recorder (e. g. enabling the extra code for “Math and logic module”).
After starting up the function, the Generate code number function must be used to read out a code number from the instrument, which is then passed on to the manufacturer. The manufacturer will then generate a “release number”. The Enter enable code function is used to transmit this release number to the instrument, which will then enable the new device functions.

8.3 Date and time

This function is used to match the date and time for an instrument to the PC time.



The Set and Synchronize buttons are used to make a new setting of date and time for a device. Both functions use the details in the “New setting” selection as the basis for adjustment.

The Set button is used to make date and time settings for a device. The “Set” function generates a **new** configuration in the instrument.

The Synchronize function only sets the time. If there is a discrepancy of more than 30 seconds, then the function will not be carried out. The “Synchronize” function does **not** generate a new configuration.

Read out permanently ensures that the device clock is read out continually (cyclically). The continual read-out can be ended by activating Cancel. The clock cannot be adjusted while it is is being continually read out.

8.4 Create screenshot

This function provides you with another option for documenting settings or events.
Start the function and operate the “Create” button. A screen printout (screenshot) will be created for the device that is connected. You can save the screenshot as a bitmap, or print it out directly.

8.5 Ethernet interface

It is possible to look at and alter the active settings for an instrument if it is connected to the PC via an Ethernet interface.

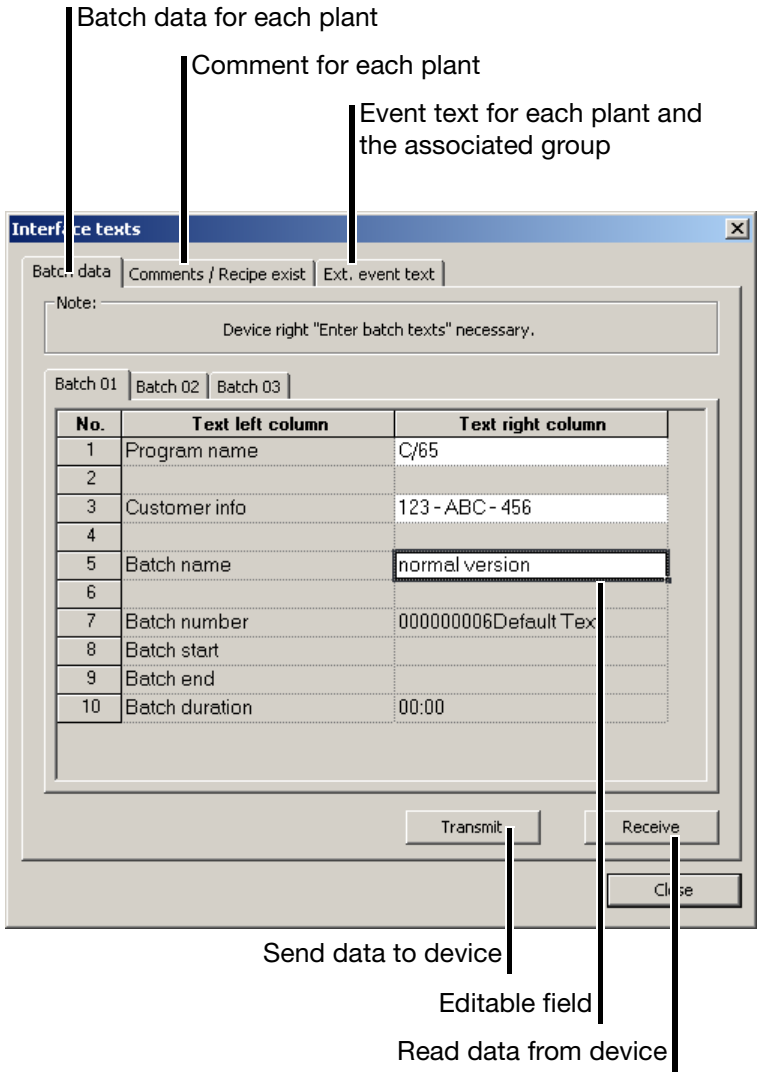
If the dialog is terminated by pressing the OK button, then the attached device will carry out a restart (reset). If you just want to look at the settings, then leave the dialog by pressing the cancel button.

8.6 Write interface texts

With this function you can:

- read and write batch texts for the current batch,
- read and write an additional batch text (e.g. a recipe),
- write event texts.

The function is independent of the present setting in the dialog window (setup file). The data can be transmitted to a device, without causing a new configuration.



Batch data

All the editable fields can be altered and sent to the attached device. If a batch report is terminated at the instrument, then the instrument (= device) will continue to use the configuration data.

Comment

A text (e.g. a recipe) up to 400 characters long can be sent to the attached device and so saved in the course of a batch report. The text can be called up on the instrument in the visualization of a finished batch report.

If a batch report is terminated at the instrument, then the comment will be deleted from the instrument. Since the data are retained in the dialog window of the setup program until new data are received, it is possible for edited data to be sent to an instrument more than once.

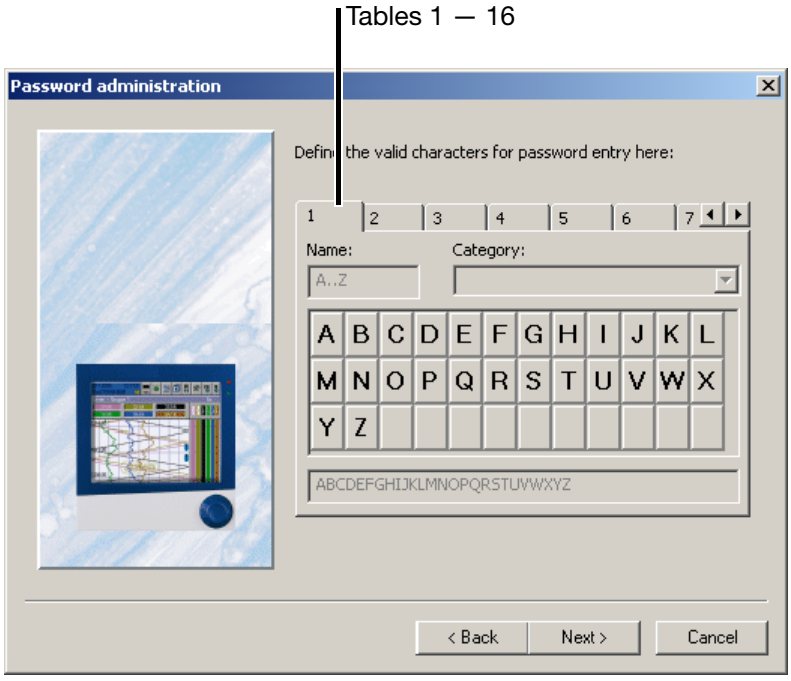
External event text

This function can be used to write a group-specific event text in the event list of the recorder. It must be taken into account that the groups are, in their turn, assigned to the plants.

Plant number	Group	Plant (batch)
1	1 — 9	1
2	1 — 3 4 — 6 7 — 9	1 2 not assigned
3	1 — 3 4 — 6 7 — 9	1 2 3

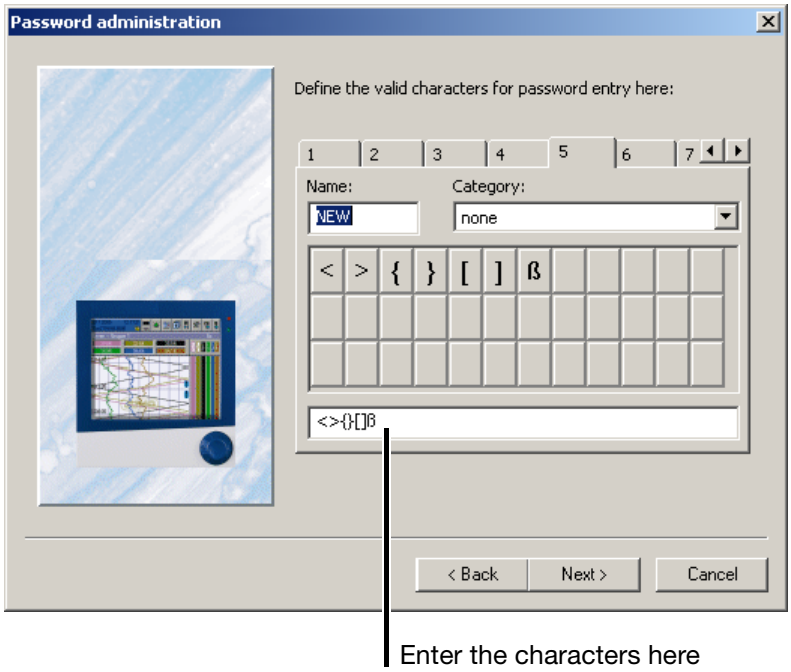
8.7 Password management

The password management function can be used to alter the passwords for the users and their rights, as well as the standard rights (applied when no user is logged in to the device).



All the characters that are listed can be used for allocating passwords.

* Scroll through the individual tables and check whether the character selection is adequate for your requirements.
* If not, look for the first available table, and then define additional characters.



* When you have finished defining the characters, activate the Next > button.

In the following dialog, the passwords can be allocated for the users, and the user rights and standard rights can be viewed and altered by using the Expanded... button.

8.8 Reset user list

This function resets the device user list to the standard settings (user: “Master”, password: “9200” and user: “User”, password: “0”). This function will only be available if the user who is logged in to the setup program has the corresponding access rights (e.g. logged in as Specialist).

⇨ Chapter 3 “Log-in and rights”

8.9 Delete internal memory

This function deletes the device-internal memory. The function will only be available if the user who is logged in to the setup program has the corresponding access rights.

⇨ Chapter 3 “Log-in and rights”

You should only use this function after the installation of the instrument, or after setting up a new plant.

The deletion of the memory contents is irreversible. All the data that were recorded up to this moment will be deleted, and only the active configuration will be retained.

When this function has been performed, the attached device will carry out a restart (reset).

8.10 Renew log-in / alter password

The function *Renew log-in* / *Alter password* is used to

- activate the user and password query at the program start, and
- alter the current password.

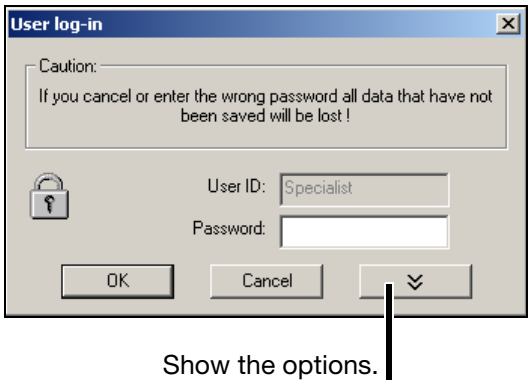
This function only has an effect on the operation of the setup program, not the recorder.

Activation of the user and password query at the program start

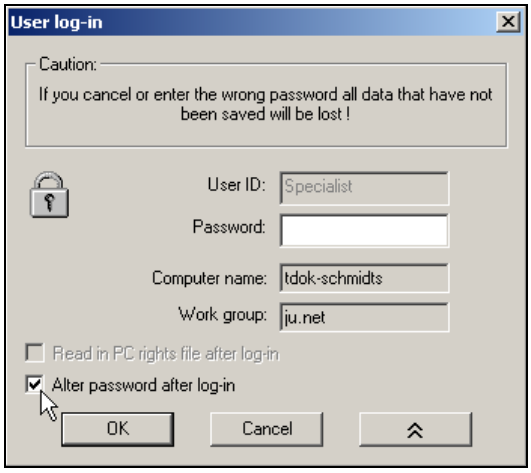
When the setup program is installed for the first time, there will not yet be a query of the user name and password when the program starts. You will automatically be logged in as “Specialist”, with a blank password.

Proceed as follows:

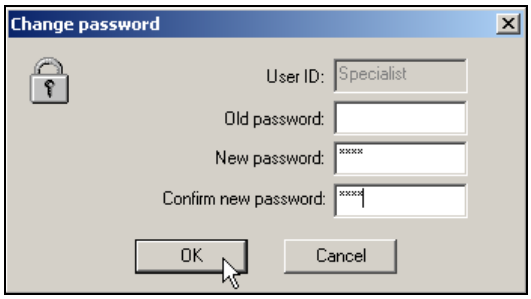
* Start the function “Renew log-in / Alter password”.
* Show the options.



* Activate the option “After log-in – alter password” and click on the OK button.



✱ Enter the password – the “Old password” field remains empty.



When the entry has been concluded, the new password is activated by clicking OK. From now on, the user name and the password will be requested at the program start.

Initially, no start password is assigned to the “Maintenance” user either. At program start, log in with the “Maintenance” user name and enter a password as described above.

Password alteration

Altering a password is very similar to activating the password query. The only difference is that, in this case, the “Old password” field must not remain empty.

8 Extras menu

8.11 Text library

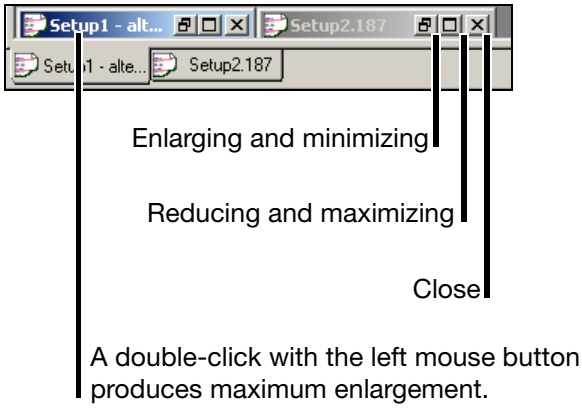
The text library contains the various operator languages. When a new setup file is created, the languages will be copied to the setup file, if requested. The first two languages (Language 1 and Language 2) are transferred to the instrument, and can be selected there.

The operation of the text library is identical to the menu item *Edit* ➔ *Country setting*.

⇨ Chapter 6.5 “Country settings”

⇨ Chapter 11 “Languages”

The usual Windows options are available for the positioning of the dialog windows.



9.1 Cascade

If several dialog windows are open at the same time, this function has the effect that all windows are shown with a small offset to one another. A double-click with the left mouse button brings a window into the foreground.

9.2 Tile horizontally

If several dialog windows are open at the same time, this function has the effect that the various windows are shown one above another. A double-click with the left mouse button in a window makes that window active.

9.3 Arrange symbols

All the open windows are minimized – they disappear from the screen, but are not closed.

9 Window menu

9.4 Teleservice

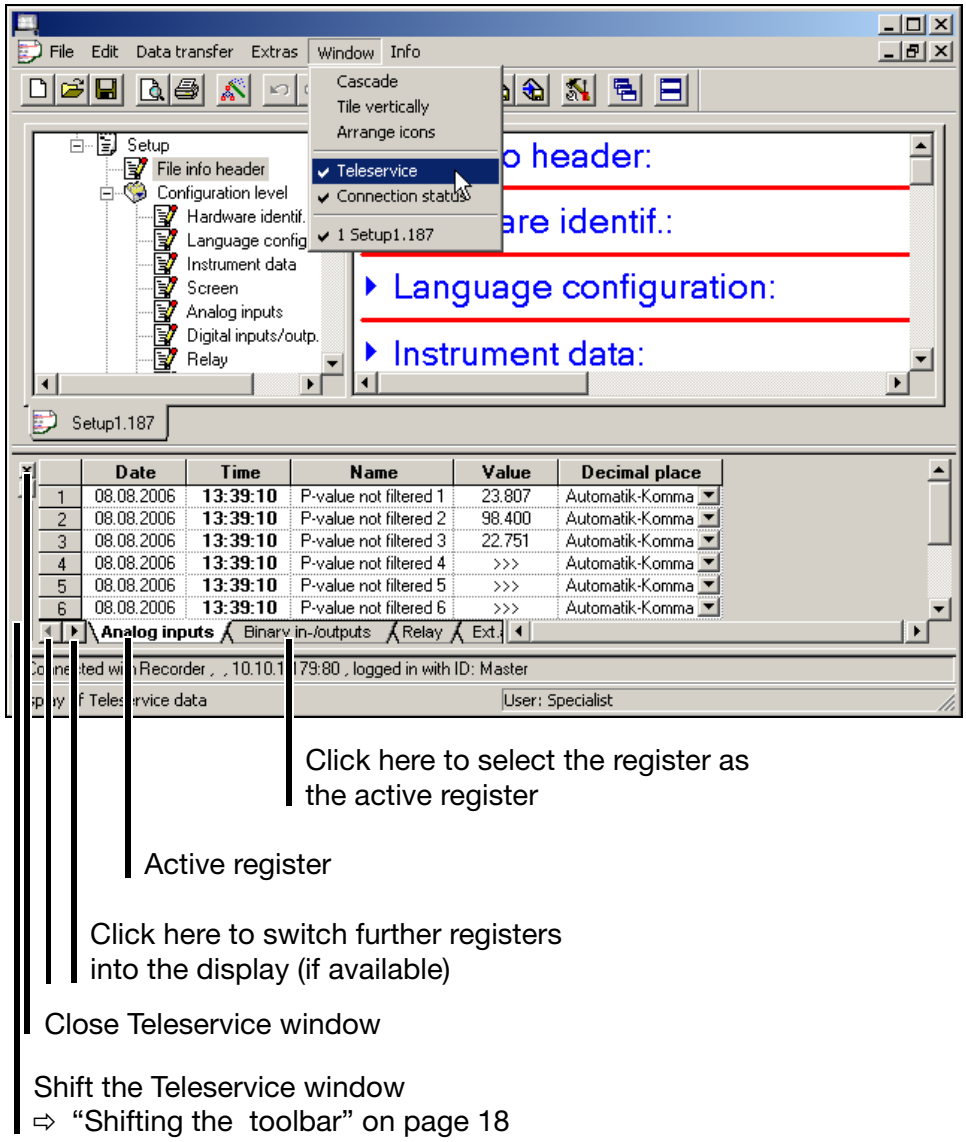
You can use this function to switch the Teleservice window in or out of display. The position is independent of the position of the dialog window.

You can use Teleservice to request the latest data from a paperless recorder.

In order to use Teleservice, there must be an existing connection to an instrument.

⇨ Chapter 7.2 “Make connection”

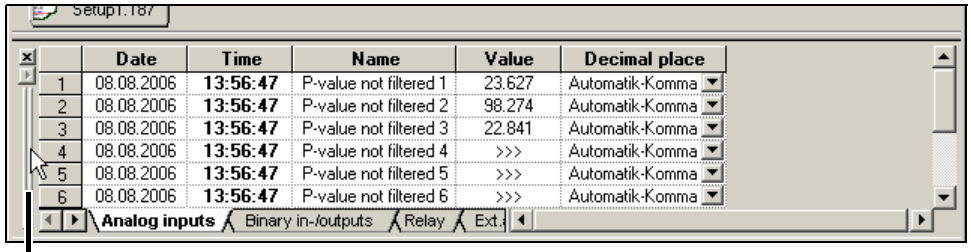
You can switch Teleservice into or out of display via the *Window* menu.



Shifting the Teleservice window

The Teleservice window, too, can be shifted. The same possibilities apply as for shifting the toolbar.

⇨ “Shifting the toolbar” on page 18



Position the mouse pointer here, and, holding the left mouse button down, shift the Teleservice window to a different position.

9.5 Connection status

You can use this function to switch the connection status window in or out of display. The position is independent of the position of the dialog window.

⇨ See “Connection status” on page 18.

9 Window menu

10.1 Info on setup

Here you can find out the version number of the setup program. Please have the version number available if you contact the service hotline.

10.2 Software documentation

This function calls up the available instrument and software documentation in PDF format.

10.3 Registered license numbers

Here you can find out the license number of the setup program. Please have the license number available if you contact the service hotline.

10.4 Program folder

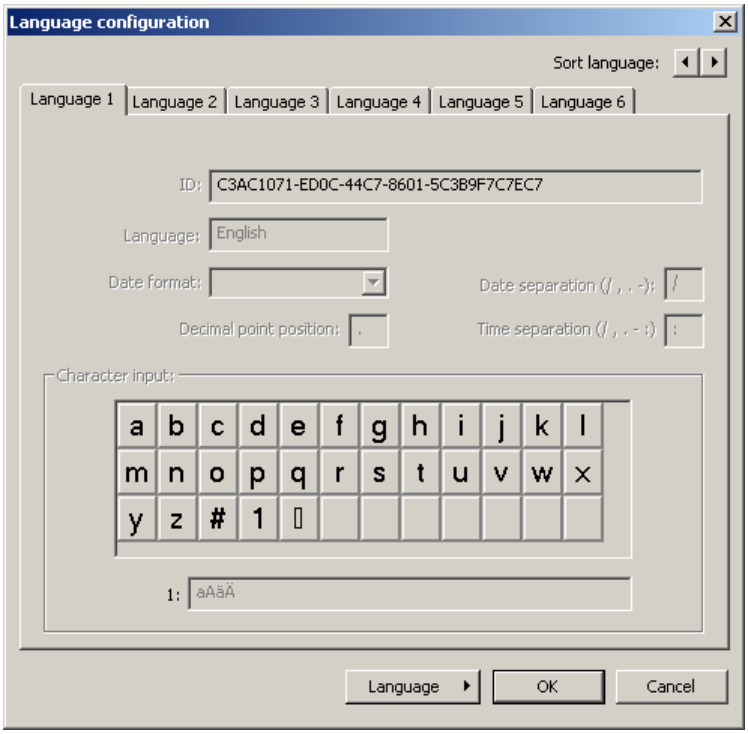
Here you can obtain information as to which folders (directories) on the hard disk or in the network are used by the setup program. If you operate the ▶ button, the contents of the folder will be displayed.

10 Info menu

For the languages, a distinction is made between:

- the languages for a setup file
  (*Edit* ➔ *Country settings*) and
- the languages in the text library of the setup program
  (*Extras* ➔ *Text library*).

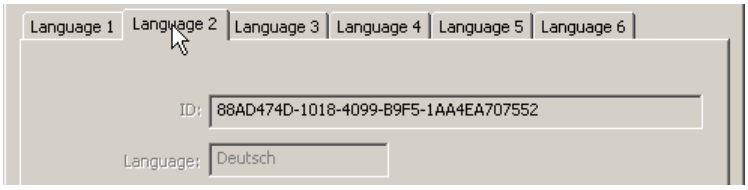
It does not matter where a language is added or changed, it can be copied between these sections in both directions.



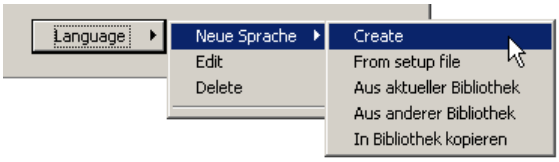
It is not possible to edit a standard language. A standard language can be recognized by the fact that there are no editable fields in the dialog window. If a standard language has to be altered, then it will have to be recreated.

11.1 Adding a language

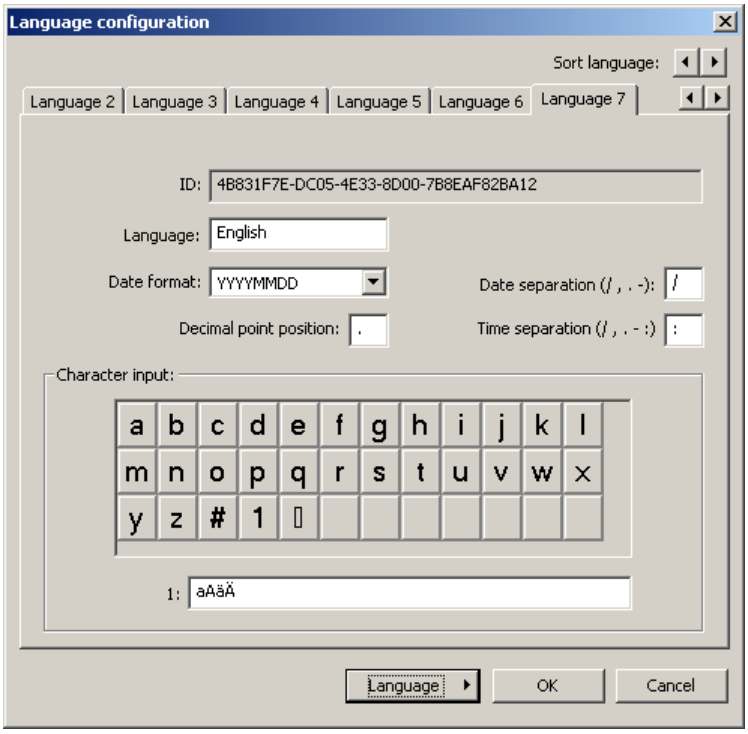
✱ Choose the language that is to be used as a basis in the dialog window, by clicking on it with the left mouse button.



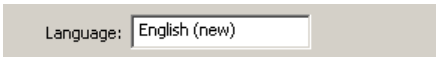
* Select the function *Language* ➔ *New language* ➔ *Create*.



A copy of the language will be created, and the corresponding summary data will be displayed. The presence of white fields instantly shows you that this language can be edited.

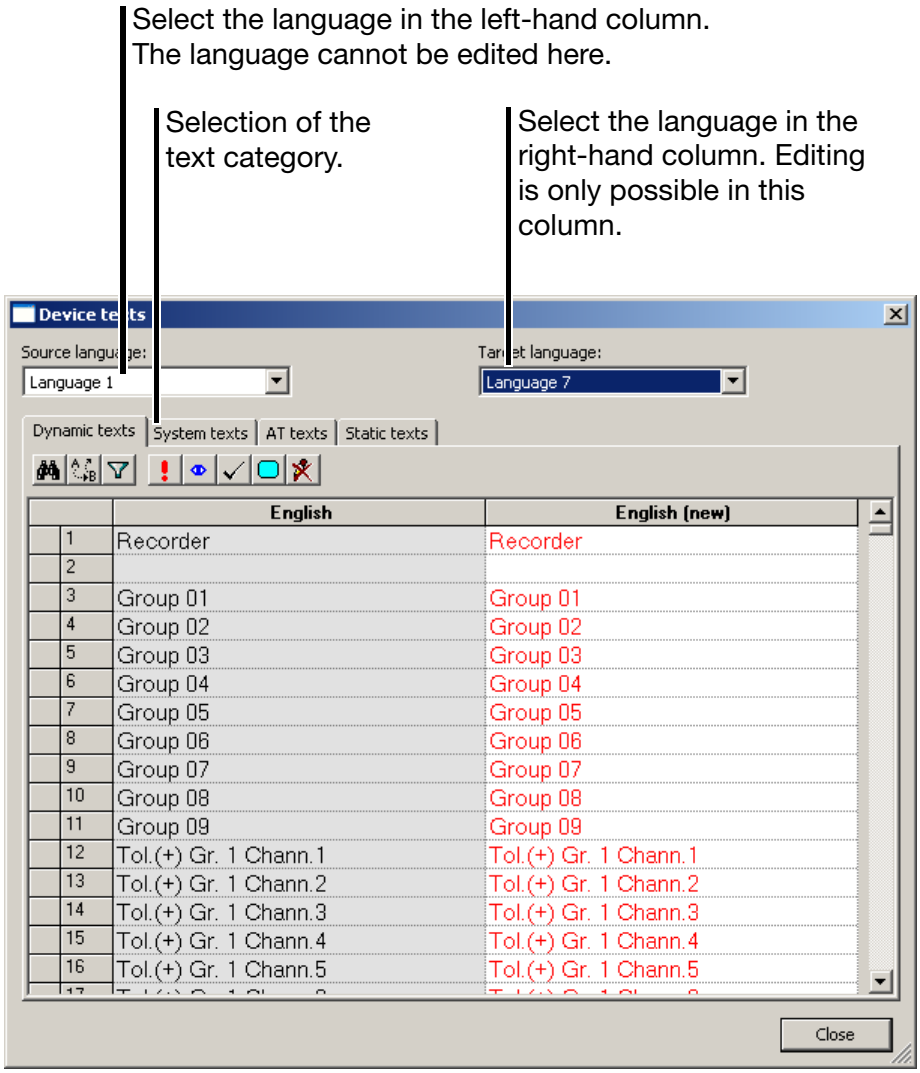


* First of all, give the new language a new name, so that it can be identified later.



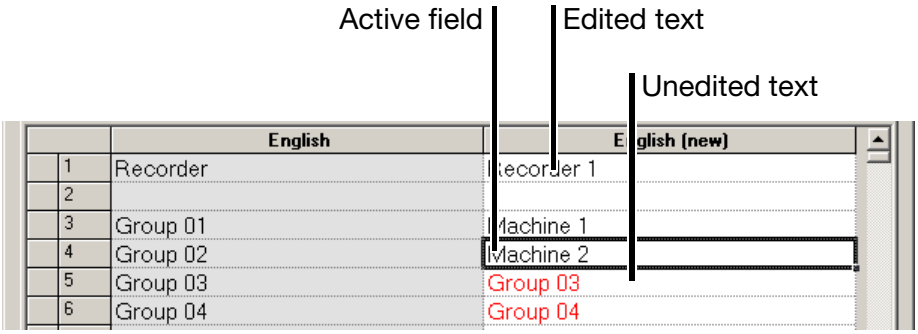
* The function *Language* ➔ *Edit* can now be used to make alterations to the new language.

11.2 Language editing



When a new language has been created, the texts are shown as red text on a white background. This indicates that these texts have not yet been edited (or translated).

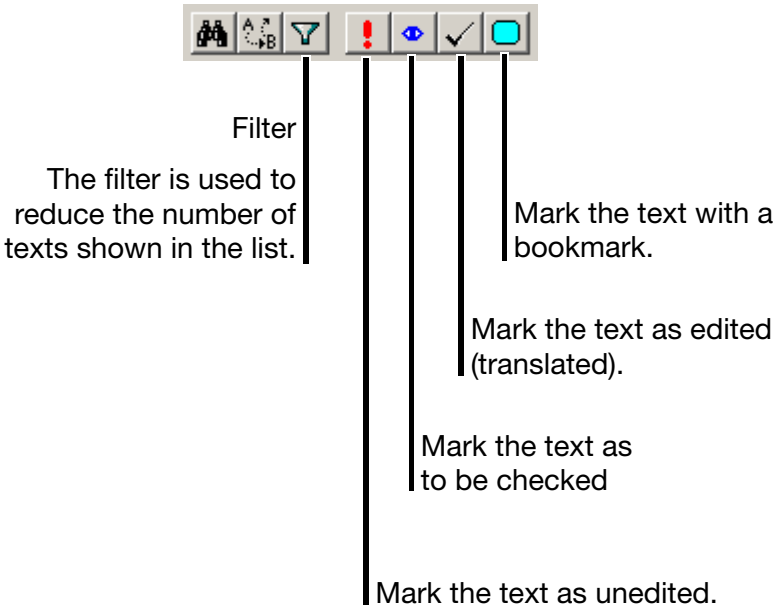
Use the left mouse button to click in a text field, and then it can be edited. If you leave the field, the entry for this field is finished. It will be shown as black text on a white background. This indicates that the text has been edited (or translated).



11 Languages

Toolbar

The toolbar can be used to alter the status of a text and activate a filter.



Errors

The following errors may occur during text entry, and are indicated by a colored background:

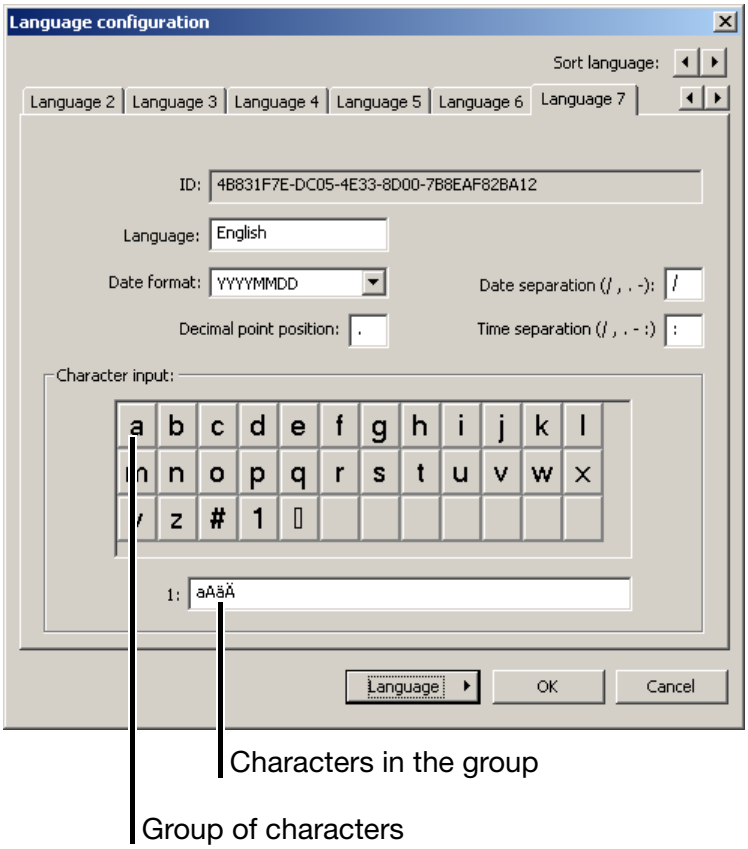
Background	Explanation
blue	Not enough memory available. The total number of texts is too high, and will have to be reduced.
yellow	The text that was entered is too long – it does not fit into the intended window.
mauve	The text that was entered contains characters that the instrument cannot display.
brown	Error when editing a wildcard (#). The # symbol is used as a wildcard. The instrument software automatically generates text to take the place of the wildcard. Example: “Device ID #1,100”. “Device ID” can be changed, but **not** “#1,100”.

If errors occur, they must be removed.
A setup file that contains errors must not be transferred to an instrument.

11.3 Device character set

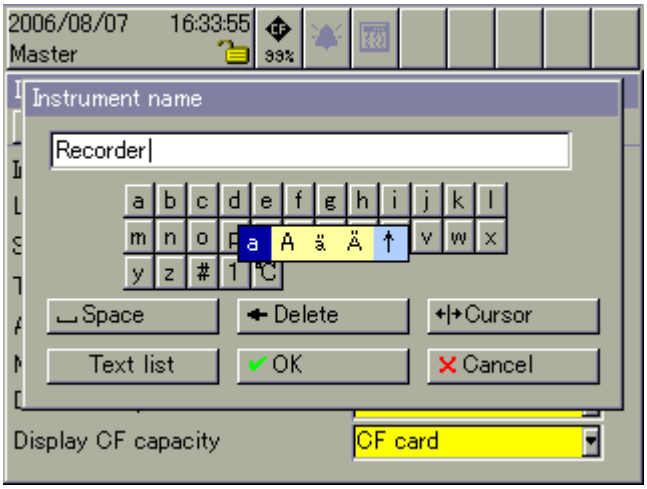
For new languages, you can define the characters that may be used in entering text for the paperless recorder.

⇨ Chapter 11.1 “Adding a language”



* Left-click on a group.
* Then edit the characters that are available in the group.

The characters that are defined here will be visible for text entry to the paperless recorder.

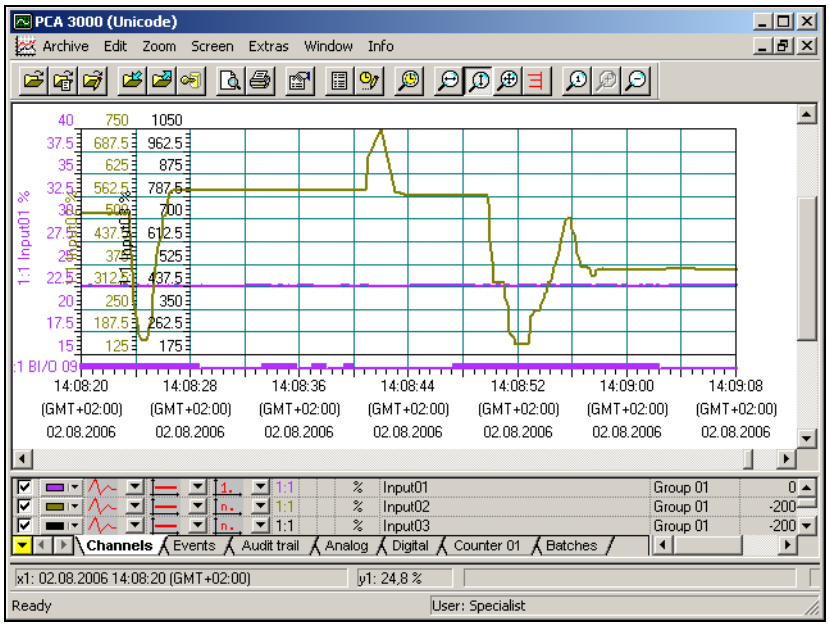


11 Languages

12.1 PC Evaluation Software PCA3000

PCA3000 is described in the Operating Instructions B 70.9701.0 in detail.

PCA3000 is the professional evaluation software for data analysis of the archived instrument process data.



PCA3000 is the ideal software for the best-quality graphic and alphanumeric display of electronically stored measurement data. The software supports multi-user functionality, so that different users can access the same data. PCA3000 runs under Windows NT, Windows 2000 and Windows XP.

Data storage The life-cycle archive data structure enables on-demand saving and archiving of all process data, clearly and simply, in a single file.

Data archive Archive data can be read out and visualized directly from a CD-ROM or DVD (a transfer to the hard disk is not necessary).

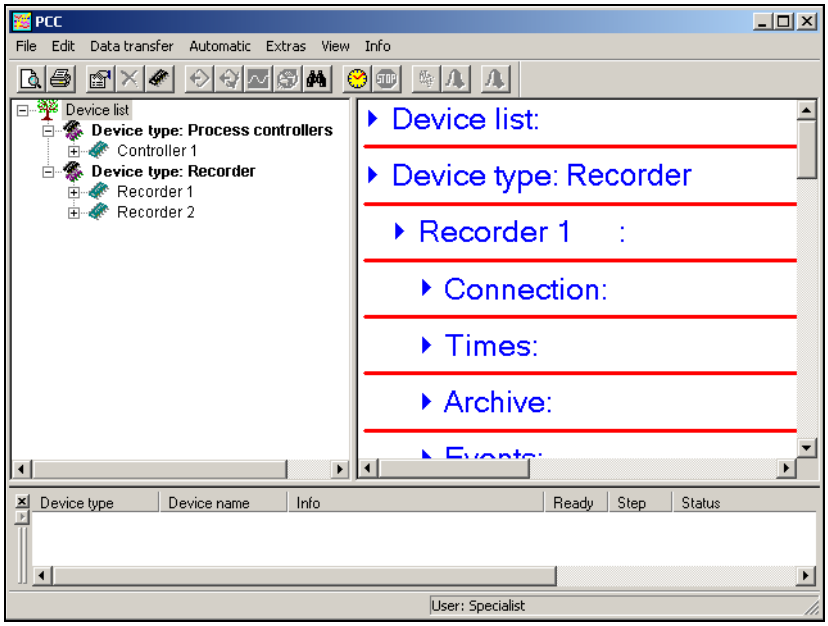
Data export Data export at the HTML level, or as an ASCII text file (for evaluation in Excel).

Communication The data transfer program PCC (Communication Server software) is perfectly matched to PCA3000, and enables the comfortable read-out of data through the interface, using RS232/ RS422, Ethernet, a modem, or through the setup interface.

12.2 PCA Communications Software (PCC)

PCC is described in detail in the Operating Instructions B 70.9702.0.

PCC is the professional archive software: it transfers the data (setup, serial or Ethernet) from the recorder (or several recorders and controllers) via an interface, and deposits them on a PC or a network.



Entering special characters

Any (special) characters in the setup program that cannot be input directly from the keyboard of the PC can be entered with the help of the Alt key and a corresponding numerical combination.

Example

The special character © has to be entered:

- Position the cursor with the mouse, or by using the cursor keys, on the point where the character is to be inserted.
- Press the Alt key **and hold it down**
- Enter the number combination 0169 in the number block (on the right-hand side of the keypad) – the leading zero **must** be entered as well.
- Release the Alt key.

The character © is inserted at the cursor position.

Cyrillic characters

The character set depends on the language of the operating system that is used, and may be different from the example.

If “Russian” has been selected as the language for the instrument, then the characters 0192 … 0255 will be replaced by Cyrillic letters in the instrument.

Example of a character code

Number	Char.	Number	Char.	Number	Char.	Number	Char.
032		080	P	0161	¡	0209	Ñ
033	!	081	Q	0162	¢	0210	Ò
034	"	082	R	0163	£	0211	Ó
035	#	083	S	0164	¤	0212	Ô
036	$	084	T	0165	¥	0213	Õ
037	%	085	U	0166	¦	0214	Ö
038	&	086	V	0167	§	0215	×
039	’	087	W	0168	¨	0216	Ø
040	(	088	X	0169	©	0217	Ù
041	)	089	Y	0170	ª	0218	Ú
042	*	090	Z	0171	«	0219	Û
043	+	091	[	0172	¬	0220	Ü
044	,	092	\	0173	-	0221	Ý
045	-	093	]	0174	®	0222	Þ
046	.	094	^	0175	¯	0223	ß
047	/	095	_	0176	°	0224	à
048	0	096	‘	0177	±	0225	á
049	1	097	a	0178	²	0226	â
050	2	098	b	0179	³	0227	ã
051	3	099	c	0180	´	0228	ä
052	4	0100	d	0181	µ	0229	å
053	5	0101	e	0182	¶	0230	æ
054	6	0102	f	0183	·	0231	ç
055	7	0103	g	0184	¸	0232	è

13 Character set

Number	Char.	Number	Char.	Number	Char.	Number	Char.
056	8	0104	h	0185	¹	0233	é
057	9	0105	i	0186	º	0234	ê
058	:	0106	j	0187	»	0235	ë
059	;	0107	k	0188	¼	0236	ì
060	<	0108	l	0189	½	0237	í
061	=	0109	m	0190	¾	0238	î
062	>	0110	n	0191	¿	0239	ï
063	?	0111	o	0192	À	0240	ð
064	@	0112	p	0193	Á	0241	ñ
065	A	0113	q	0194	Â	0242	ò
066	B	0114	r	0195	Ã	0243	ó
067	C	0115	s	0196	Ä	0244	ô
068	D	0116	t	0197	Å	0245	õ
069	E	0117	u	0198	Æ	0246	ö
070	F	0118	v	0199	Ç	0247	÷
071	G	0119	w	0200	È	0248	ø
072	H	0120	x	0201	É	0249	ù
073	I	0121	y	0202	Ê	0250	ú
074	J	0122	z	0203	Ë	0251	û
075	K	0123	{	0204	Ì	0252	ü
076	L	0124	|	0205	Í	0253	ý
077	M	0125	}	0206	Î	0254	þ
078	N	0126	~	0207	Ï	0255	ÿ
079	O	0128	€	0208	Ð		

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JUMO GmbH & Co. KG

Street address:
Moltkestraße 13 - 31
36039 Fulda, Germany
Delivery address:
Mackenrodtstraße 14
36039 Fulda, Germany
Postal address:
36035 Fulda, Germany
Phone: +49 661 6003-0
Fax: +49 661 6003-607
e-mail: mail@jumo.net
Internet: www.jumo.net

JUMO Instrument Co. Ltd.

JUMO House
Temple Bank, Riverway
Harlow, Essex CM20 2TT, UK
Phone: +44 1279 635533
Fax: +44 1279 635262
e-mail: sales@jumo.co.uk
Internet: www.jumo.co.uk

JUMO Process Control, Inc.

8 Technology Boulevard
Canastota, NY 13032, USA
Phone: 315-697-JUMO
1-800-554-JUMO
Fax: 315-697-5867
e-mail: info@jumo.us
Internet: www.jumo.us