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SOFTWARE VERSION: V1.6

71714960

Operating Manual **FDM Reporting Software**

Field Data Manager Software, MS20 / MS21 PC software for data management and visualization





Revision history

Manual version	Software version	Revisions	Date
13.10	Version V1.00.00.06 or higher		09.2010
01.11	Version V1.01.00.00 or higher	Software updates	02.2011
02.12	Version V1.01.01.xx or higher	Software updates	01.2012
03.13	Version V1.01.02.xx or higher	New devices supported; Essential/Professional version; bug fixes; optimized database performance	07.2013
04.13	Version V1.02.00.xx or higher	Possible to split graphic over several pages for print-out; bug fixes	12.2013
05.14	Version V1.02.00.17 or higher	Windows 8 support; bug fixes	09.2014
06.15	Version V1.02.00.24 or higher	Online connection to Liquiline platform; French operating language; bug fixes	05.2015
07.15	Version V1.03.00.xx or higher	Memograph M RSG45 support; Integrated instantaneous value display; optimized performance; bug fixes	09.2015
08.16	Version V1.03.01.00 or higher	Reporting functionality incorporated	04.2016
09.17	Version V1.4.0 or higher	Software License Management; E-mail notification	05.2017
10.19	Version V1.4.2 or higher Version V1.4.4 or higher Version V1.5 or higher	TrustSens Calibration Monitoring Bug fixes New import/export functions	10.2018 10.2018 10.2019
11.21	Version V1.6 or higher	Reporting function deleted; LDAP function supported	07.2021
12.21	Version V1.6 or higher	Settings license server changed	09.2021
13.25	Version V1.6.2 or higher	Microsoft Windows 11 + Windows 2022 server support, update database server versions and Postgre SQLTM	07.2025

Version comparison

The following table provides an overview of the different functions and features provided with the different versions of the software:

Function/feature	Essential version (Freeware)	Professional version (Trial period: 60 days + 30 on request
Supported databases:		
Postgre SQL TM	х	x
Microsoft SQL Server TM		X
Supported devices:		
Ecograph RSG20		Х
Ecograph A RSG22		Х
Ecograph C RSG24		Х
Ecograph T RSG30	Х	Х
Ecograph T RSG35	x	Х
Memograph RSG10		Х
Memograph S RSG12		Х
Memograph M RSG40	x	Х
Memograph M RSG45	Х	Х
EngyCal RH33		Х
EngyCal RS33		Х
RA33		Х
Liquiline CM44x		Х
Liquistation CSFxx		Х
Liquiline System CA80xx		Х
Supported functions:		
User administration; LDAP function		x
Multiple access to the database from different PCs at the same time		x
Data of multiple devices in one template		x
Automatic readout	х	х
Automatic deletion	х	х
Automatic binary export	х	x

Automatic XLS/CSV export		X
Automatic PDF export		x
Export ready for eSight (energy monitoring software)		x
Import of ReadWin 2000 data	X	x
Online visualization of instantaneous values ("Live Data")		Х
E-mail notification		x
Update search		Х
TrustSens calibration Automatic function	Х	x

Please note that in order to use the Demo version as a Professional or Essential version (freeware), it must be activated after the trial period has elapsed.

It is possible to switch from the Essential version (freeware) to a commercial version at any time by entering a software ID and then activating the product.

Switching from the Demo version to the Essential version (freeware) may result in certain functions no longer being available. For example, templates created with data from multiple devices will no longer work and neither will automatic exports. Devices that are included only in the Professional version can no longer be read out in the Essential version (freeware).

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1. Introduction

1.1 Preface

The Reporting Software offers central data management and visualization of recorded data.

This allows complete documentation of the data of a measuring point, e.g.:

- Measured values
- Diagnostic events
- Reports

The evaluation software stores data in a SQL database. The database can be operated either locally or in a network (client /server).

NOTICE

When using the Essential version, a database stored in the network cannot be accessed simultaneously by multiple PCs.

1.2 Notes on safety conventions and icons

NOTICE

Note: Failure to observe instructions can damage the device or lead to a device malfunction!



Tip: Indicates additional information.

1.3 Safety instructions

NOTICE

Observe the following points:

- The manufacturer accepts no liability for damages resulting from incorrect use or use other than that designated.
- Observe all safety instructions in the Operating Manuals for the devices connected to the system.

 Installation, commissioning, operation and maintenance of the measuring system must be carried out by trained, skilled personnel authorized to perform such work by the facility's owner-operator. The skilled personnel must have read and understood these Operating Instructions and follow the instructions they contain.

1.3.1 Liability disclaimer

This software and the corresponding documentation can be revised or updated by the manufacturer without prior notice. In case of a revision or update, the end user has no claim to automatic delivery free of charge of the revised or updated software or the corresponding documentation.

It is at the manufacturer's discretion to decide whether or not a revision or update of the software is carried out, and when.

The documentation includes the printable version of the Operating Manual and brief operating instructions. The printable version of the Operating Manual is valid for the version specified on the cover sheet. The version number of the currently installed version is provided in the "Help" menu item.

Likewise, there is no warranty that this software will function on all hardware platforms or in conjunction with other software. We exclude all further claims due to any damages that occur.

NOTICE

The complete end-user license agreement can be called up anytime after installation in the main menu under "Help -> License agreement".

1.3.2 Safety instructions for Memograph M RSG45 with FDA approval

NOTICE

The following information concerning FDA 21 CFR Part 11 compliance is the responsibility of the user:

- o Termination of the automatic system service must be regulated by Windows user rights.
- If a user does not log out of the software, a screensaver is automatically activated via Windows system settings.
- The software may only be operated via Windows login. The user must secure (lock) the computer when leaving the PC.
- If the administrator has forgotten the password, a time-limited master password is permitted. This is sent to the client on request and following authorization.
- It is possible to use and operate the software without identification and password protection. The client is responsible for the use of the software.
- Select "Enable user management " and "Password protection compliant to FDA21 CFR PART 11" in the software under "Extras -> Settings -> User administration".
- To prevent misuse of identity, the password must be changed when the user logs in for the first time (configurable).
- The period of password validity can be configured. This is the responsibility of the administrator.
- As the PC time is used for the PC software audit trail, it is possible to manipulate the time stamp. The operator is responsible for any changes to the PC time.
- User administration must be active in order to record the ID and user name in the audit trail.
- o The user must perform data backup and/or preventive maintenance regularly.
- After printing out data, the user must check that the printout content is correct by manually comparing the data displayed on the screen against the printout and, where necessary, confirm the integrity of the data by providing a separate "non-electronic" signature on the printout.

- If the printer settings are changed to a printer that is not available, there is no printout! The software cannot configure the device or set device parameters. Exception: The software can synchronize the device time; the PC time and the device time may only deviate from one another within a certain tolerance range. Otherwise the time is not accepted for the device. The operator is responsible for ensuring the PC time is correct.
- A regular review of the error list (log file) is recommended. The "WindowsServiceLog.txt" is generated under "Automatic -> Job Type: Event view".
- When printing out a visualization, it is possible to restrict the output of values, diagrams, events and audit trail entries. Changes to the standard configuration are the responsibility of the user and are recorded in the audit trail.

1.3.3 Register trademarks

Pentium[™]: Registered trademark of the Intel[™] Corporation

AMD[™]: Registered trademark of Advanced Micro Devices

WindowsTM, VistaTM, Microsoft SQL ServerTM, Active DirectoryTM: Registered trademarks of the MicrosoftTM Corporation

CodeMeter®: Registered trademark of WIBU SYSTEMS

1.4 Hardware and software requirements

The following requirements must be met before installing and operating the PC software:

1.4.1 Hardware:

1.4.1.1 Hardware requirements for the FDM software

- PC with Pentium 4 (≥2 GHz),
- PC with Pentium M (\geq 1 GHz),
- PC with AMD (≥1.6 GHz)
- Minimum 1 GB RAM cache
- Minimum 20 GB free disk space
- Screen resolution of at least 1024 x 800 pixels
- CD/DVD drive (For computers without a drive, the software can also be downloaded via the Endress+Hauser Software Portal (see chapter 1.5 Installation)).

1.4.2 Software:

1.4.2.1 Operating system/software for the FDM software

- Microsoft Windows Server 2019
- Microsoft Windows Server 2022
- Windows 10
- Windows 11
- Windows .NET 2.0/3.5

1.4.3 User rights for installation

- Logged in with Windows administrator user rights
- User Account Control (UAC) confirmation if enabled

1.4.4 Changes made during the installation:

- 1. Installation directory added
- 2. Files copied to installation directory
- 3. Application directory added
 - Windows: %system drive%\ProgramData\Endress+Hauser
- 4. Windows .NET 2.0/3.5
- 5. Field Data Manager Windows Service (FDM WS) installed (autorun, optional)
- 6. Field Data Manager Tray Icon Application (FDM TI App) installed (autorun, optional)
- 7. PostgreSQL server installation (optional)
- 8. Installation of the WIBU CodeMeter license server
- 9. Program shortcut created
- 10. Registry entries
- 11. Installation log file created (%tmp%)

1.4.5 Components

1.4.5.1 FDM TrayIcon Application

(Executed with the user rights of the logged-in user)

Read and write access to the following directories:

- Installation directory
- Application directory
- Allocated network drives (optional)

1.4.5.2 FDM Webservice

(Executed with the local system account)

Read and write access to the following directories:

- Installation directory
- Application directory
- Allocated network drives (optional)

1.4.5.3 FDM application

(Executed with the user rights of the logged-in user)

Read and write access to the following directories:

- Installation directory
- Application directory
- %tmp%

1.4.6 Firewall

- Communication port used for field devices (default: TCP port 8000, 8001, 8002 und 8007 incoming/outgoing)
- Microsoft SQL database server (default: TCP 1433, incoming/outgoing)
- PostgreSQL database server (default: TCP 5436, incoming/outgoing)
- LDAP network service (optional, default: TCP/UDP port 389, incoming/outgoing)

- Network printer (optional)
- Reporting server 2 FDM: (default: TCP port 8080)
- Reporting server database port (default: TCP port 1552)
- Reporting server AJP port (default: TCP port 8052)
- Reporting server Tomcat shutdown port (default: TCP port 8012)
- Wibu CodeMeter Lizenzserver (Standard: TCP-Port 22350)

1.4.7 User

See 1.4.5 Components

1.4.8 User Account Control (UAC)

No special authorization is required after installation (unless the FDM user will start/stop FMD WS).

1.5 Installation / Uninstalling

NOTICE

You can find a detailed description of the installation in the Brief Operating Instructions supplied.

- 1. Insert the DVD.
- 2. If autostart is enabled, the installation is started automatically; otherwise
- 3. Start the "Setup.exe" from the DVD.
- 4. Follow the instructions of the installation program.

If you confirm the installation of the automatic component, an additional Windows system service is set up. This system service enables you to trigger and control automatic actions through the Reporting Software. These include, for example, automatic device read-out, automatic printing of reports, and automatic report generation (see Section 4.4. "Automatic").

NOTICE

For computers without a CD/DVD-drive, FDM can also be downloaded from the Endress+Hauser Software Portal. To do this, you need an account on the Software Portal at: https://software-products.endress.com

- 1. Download ZIP file and save locally
- 2. Unzip the ZIP file
- 3. Start Setup.exe and follow the instructions of the installation program

The following databases are supported:

• PostgreSQL up to and including version 12.22 (for the Essential, Demo and Professional versions):

You can install and use the free PostgreSQL database provided on the installation DVD. No manual installation and configuration is necessary to do so. The database is configured automatically during the installation.

• Microsoft SQL Server (for the Demo and Professional version):

Up to and including version 2022. Please contact your database administrator to set up the Reporting Software with the Microsoft SQL Server. You can find a detailed description of the installation in the Brief Operating Instructions supplied.

1.5.1 Software license

1.5.1.1 License server

From version 1.4.0, the WIBU CodeMeter is installed as part of the setup. CodeMeter manages the licenses for this software as well as software tools from other manufacturers.

1.5.1.2 Replacing hardware

When replacing the hardware (computer on which FDM is installed) or making changes to the virtual environment (VM image), the FDM license must be returned in advance and reactivated once it has been reinstalled. See Section 1.7.2.

1.5.1.3 License violation / Blocked license

License abuse and/or hardware replacement will result in a license violation. In this case, the FDM can no longer be operated and no license operations are supported. Please take this into account in the case of maintenance and disaster recovery.

1.5.1.4 Replacement license

In the event that disaster recovery is performed on your client and you are unable to return the license, you will be able to re-activate the FDM independently and without having to contact Endress+Hauser.

1.5.1.5 Virtual environments

The FDM supports virtual environments on the same host if "moved". The copying (moving) of a VM image within the same host or to another host is not supported.

1.5.2 Software update/upgrade

You can find a detailed description of the installation in the Brief Operating Instructions supplied.

1.5.3 Uninstalling software

If you wish to uninstall the software, proceed according to the following steps:

- 1. Return the license (see section 1.7.2)
- 2. Deactivate Automatic Services, terminate Tray Icon application and analysis software
- 3. In the Control Panel, select the "Field Data Manager x.x.x." software under "Uninstall or change a program".
- 4. Select "Uninstall" and follow the instructions.

NOTICE

The WIBU CodeMeter remains on the system and is not uninstalled.

1.6 Starting the program, selecting the operating language

Under "Start -> Programs", you will find the newly installed "Field Data Manager Software" program. Start the program and, if necessary, change the operating language under "Extras -> Settings -> Language". The changed operating language is applied after the program is restarted.

1.7 License management and software activation

NOTICE

In order to use the Professional version, a valid software ID is required and the software must be activated.

If the software is not activated, you will be notified when the program starts:

Software Activation
Field Data Manager Software
C Activate Essential version
Activate Professional version
Enter the software ID you received with the purchased software.
Software ID
Ok Cancel

1.7.1 Activating software

To activate the software, proceed as follows:

1. Click the menu item "Help -> License information"

2. Click "License information".

Help	
Product Edition Version Serial number Licensee Usage period Field Data Mana	Field Data Manager Full version Check for update n.a. (please activate the software) n.a. (please activate the software) Grace period license - expires in 42 days! ger Software Help
Contact License Terms _(License Informat	
Product Version Serial number Licensee Usage period Product class User class License usage Single/Volume license Software ID Reporting	Field Data Manager
Copyright © Endress+Ha	user Ok

3. Click "Activate software".

NOTICE

To activate the software, you will need an account for the Endress+Hauser Software Portal at:

https://software-products.endress.com

The Software Portal allows you to manage licenses for Endress+Hauser products. If you do not know the details required to log in to the Software Portal, please contact the person responsible for licenses in your company, or click "Create account":

Software Activation	x
Please enter your user credentials of the Endress+Hauser software portal (www.software-products.endress.com). Please perform a registration if you do not have an account.	
E-mail address	
Password	
I have forgotten my password	
Activate now Create account Cancel	

4. Click "Activate now".

NOTICE

Manual activation (offline activation)

In the event that online activation is not possible, the program switches automatically to manual activation. A dialog box for manual activation opens. Follow the instructions.

oftware activation	- Manual	×
Step 1		
log in to the Endre software activation	Hauser license request file (*.EHR). Go to a computer with internet connectivi s+Hauser software portal (www.software-products.endress.com) and start the process by manual uploading the file. Save the Endress+Hauser license upda software portal afterwards.	
	Save	
Step 2		
	+Hauser license update file (*.EHU) in the application to be activated. The file n the Endress+Hauser software portal (www.software-products.endress.com). Browse Import	
Step 3		
Save the Endess+ connectivity, log in	Hauser license confirmation file (*.EHC). Go to a computer with internet to the Endress+Hauser software portal (www.software-products.endress.com oftware activation process by the manual upload of the file.)
	Save	
	Complete activation	

1.7.2 Returning the license

If you wish to install the software on a new computer, for example, you must return the already used license to the Endress+Hauser Software Portal.

NOTICE

Once the license has been returned, the software can no longer be used on this computer.

Once it is installed on a new computer, the license can be reactivated and used again.

To return the license, proceed as follows:

- 1. Click the menu item "Help -> License information"
- 2. Click "License Information".

łelp	
Product	Field Data Manager
Edition	Professional
Version	Check for update
Serial number	
Licensee	M4200ED-++CDD
Usage period	Perpetual
Field Data Mana	iger Software Help
Contact	
License Terms	Conditions
License Informat	lion
Product	Field Data Manager
Version	1.3.2.9073
Serial number	MC20001
Licensee	
Usage period	Perpetual
Product class	Payware (commercial)
User class	Industrial Customer Full version
License usage Single/Volume license	Single-Station license
Software ID	Change Software ID
Reporting	Yes
	Update license Return license
Copyright © Endress+Ha	user Ok

3. Click "Return license" to open the following dialog box:

Return license		×
	ruser credentials of the Endress+Hauser software portal roducts.endress.com) and select return license.	
E-mail address	1	
Password		
I have forgotten n	iv password	
	Return license Cancel	

4. Enter your login details and confirm your login information by clicking on "Return license" again.

You will receive confirmation that the license has been returned successfully.

NOTICE

Manual return of license (offline mode)

In the event that online license returns are not possible, the program switches automatically to manual license returns. A dialog box for manual license returns opens. Follow the instructions.

Return license manually		×
Step 1		
(*.EHR) by clicking the fo connected to the internet		
Step 2		
Please import the Endres saved in the Endress+Ha	s+Hauser license update fil user Software Portal.	e (*.EHU) created and
Import Browse	No file selected.	Upload
Step 3		
confirmation file (*.EHC) file to a computer connect	eturn, please save the End by clicking the following bi ted to the internet afterwa Portal (https://www.soft id upload the *.EHC file.	utton. Please transfer this rds. Please log in in the
	Complete license return	

1.7.3 Upgrading and updating license

1.7.3.1 Upgrading license

If you require additional functions, modules or additional users (multi-user license), your license can be upgraded accordingly.

- 1. Please contact your Endress+Hauser sales office.
- 2. Order the license upgrade suited to your needs. Endress+Hauser upgrades your license and sends you confirmation of the license upgrade.
- 3. Update your license when you receive confirmation of the license upgrade.
- 4. Check your license under "Help -> License Information -> License Information"

1.7.3.2 Updating license

A license update means that you have updated your contract with the Endress+Hauser sales office and purchased new functions or additional licenses. In order to activate the new components of the contract, the license must simply be updated.

NOTICE

Updating the license does not require that the software be re-installed.

To update the software with the license upgrade, proceed as follows:

- 1. Click the menu item "Help -> License Information"
- 2. Click "License Information".

Help	
Product Edition Version Serial number Licensee Usage period	Field Data Manager Confessional Professional Check for update Perpetual
🕖 Field Data Man	ager Software Help
Contact	
License Terms	Conditions
	ation
Product Version Serial number Licensee Usage period Product class User class License usage Single/Volume license Software ID Reporting	Field Data Manager IEE Professional
Copyright © Endress+H	auser Ok

3. Click "Update license".

NOTICE

To update the license, you will need the login details for your account with the Endress+Hauser Software Portal at:

https://software-products.endress.com.

If you do not know the details required to log in to the Software Portal, please contact the person responsible for licenses in your company:

License Update		-X
	r user credentials of the Endress+Hauser software portal roducts.endress.com) and select license update.	
E-mail address	1	
Password		
<u>I have forgotten n</u>	ny password	
	Update license Cancel	

4. Click "Update license".

You will receive confirmation that the update was successful.

NOTICE

Manual license update (offline mode)

In the event that online updates are not possible, the program switches automatically to manual license updates. A dialog box for manual license updates opens. Follow the instructions.

Manual license update 🗙
Step 1
To update your license please save the Endress+Hauser license request file (*.EHR) by clicking the following button. Please transfer this file to a computer connected to the internet afterwards. Please log in or create an account in the Endress+Hauser Software Portal (https://www.software- products.endress.com) and activate the software.
Step 2
Please import the Endress+Hauser license update file (*.EHU) created and saved in the Endress+Hauser Software Portal.
Import Browse No file selected. Upload
Step 3
To complete the license update, please save the Endress+Hauser license confirmation file (*.EHC) by clicking the following button. Please transfer this file to a computer connected to the internet afterwards. Please log in in the Endress+Hauser Software Portal (https://www.software-products.endress.com) and upload the *.EHC file.
save 📩
Complete license update

1.7.4 Searching for updates The software provides the option to search for updates.

NOTICE

This function is available exclusively in the Professional version.

If an update is available and you wish to update your version, please contact your Endress+Hauser sales office.

1. Click "Help -> License information". The following screen appears:

Help		
Product Edition Version Serial number Licensee Usage period		
Copyright © Endress+Ha	user	Ok

- 2. Click "Check for update".
- 3. A connection to the Endress+Hauser server is established and a web browser window opens. A message appears in this window informing you whether or not updates are available.

1.8 Getting started, switchover from ReadWin 2000

NOTICE

In contrast to ReadWin 2000, the Reporting Software does not support device configuration.

All the readout functions of ReadWin 2000 have been merged into the "Data Readout" task in the Reporting Software. Here, the data can be read out via an interface - i.e. connected to the device online - or via a data storage medium.

In addition, the functions for displaying the read-out data have been merged into one "Visualization" task in the Reporting Software. It is possible to select the display mode (bar graph – histogram, line chart or table) and visualize the data directly via the chart settings or channel settings (as users will know from Excel for example). This means that individual channels can be displayed differently in a single chart.

Functions in ReadWin 2000 compared to the new Reporting Software:



In the Reporting Software, the device settings (communication, automatic functions) are configured via the plant tree structure by right-clicking the device or directly in the individual visualization steps or when reading out the device data.

As with ReadWin 2000, the settings for configuring the automatic function are grouped in one point under "Data Management -> Automatic".

The automatic function is set up as a system service and runs in the background. The Reporting Software does not necessarily have to be started to run an automatic task.

1.9 Applying the Plant View from FieldCare

To apply the Plant View from FieldCare, you have to first export the view from FieldCare or save it as a CSV file. For this purpose, FieldCare enables you to export the Plant View in CSV format via "File -> Import/Export -> Export as CSV" and to store it at a location to be defined. This device tree can then be adopted in the Reporting Software.

The Reporting Software enables you to apply an existing, saved device tree or an existing Plant View from another program (e.g. FieldCare). This functionality is provided in the "Data Management -> Plant View" task.

Pressing the "Box with arrow" icon opens the menu structure of the computer. Select the storage location and the corresponding CSV file of the Plant View. Then, the tree structure is read into the database and stored there. The same functionality is provided by selecting the enterprise, then right-clicking and selecting "Import Plant View" (see Section 4.1 Data management -> Plant view).

NOTICE

As the Essential version does not support all devices, only data from supported devices can be imported in this version!

1.10 Importing data from ReadWin 2000

To import data from ReadWin 2000 to the SQL database of the Reporting Software in a tamperproof manner, the process begins with the secure data export from ReadWin 2000. For this purpose, the data for the corresponding devices are exported to a storage medium or drive (Extras -> Store/Save Measured Values):

Mode		<u>B</u> ase time axis	
Save only (=	сору)	🔽 Same as unit graphic	
◯ Store (=mov	e)	Meas. period values	
O Delete		Daily values	
File size		Monthly values	
 unlimited 		Tearly values	
🔿 1,4 MB - disk	ette	Events	
Time scale —			
<u>T</u> ime scale	Presetable		•
from:	12.03.2009	T 13:47:00	<u>.</u>
to:	20.03.2009	▼ 00:01:00	÷
	,		
Add unit set-u	0		
		OK Cance	

Store/save m	easured values		? ×
Spe <u>i</u> chern	😂 exchange	▼ 🖛 🗈 🛉 💌	
Data_Mana	ger_20090312_134700_20090315_000100.rsd		
Datei <u>n</u> ame:	Data_Manager_20090312_134700_20090320_000100.rsd	S	peichern
Datei <u>t</u> yp:	Stored measured data (*.rsd)	▼ At	obrechen

Subsequently, the data of the individual devices are imported into the SQL database via the import function of the Reporting Software. For this purpose, select the "rsd" data format. See the description of the import function in Section 4.3 on page 76.

1.11 The main window

The general layout of the Reporting Software user interface is illustrated in the gr	raphic below:
--	---------------

				Main	Window
<u>File View Extras H</u> elp	Main Menu				
Task Pane ×	Plant View 🗙		Main Toolbar		
Read out data	🕂 - 🗶 🔸 🖹 🖉 🗆 🕹 🦴	20	Main 10010ai		
k Pane	Plant View				
	Name 🗡	Device Type	Begin	End	
	😑 🌪 Enterprise	Momograph			
Online Connection	Device 1 C Configuration 1		able window	16.04.2010 14:36:36	9A000604267
- VISGOIZ CEON	EH_CSF48_	DOCK		26.05.2010 15:09:54	B113FE05D00
2	Imported Configuration	Imported	15.06.2011 00:00:00	15.06.2011 00:00:00	
New	Memograph M C Configuration 1	Memograph	03.09.2009 14:53:06	03.09.2009 15:17:45	A9007704267
	Scharsche	Memograph	40 44 0000 45 00 00	40.44.0000.45.40.45	A9000904267
	C Scharsche C Scharsche Site 1		19.11.2009 15:08:00 19.11.2009 14:25:58	19.11.2009 15:40:45 19.11.2009 15:02:29	
Edit	🕀 🖉 TemperaturRZ	Memograph			A9007704267
Data Management	Galactical Site 2 Galactical Area 2 Galactical Process cell Galactical Optimization Galactical Optimization Galacti	Imported			
	C Confi		15.06.2011 00:00:00	15.06.2011 00:00:00	
A 19	🗆 🗷 Unit 1	EngyCal			SCHNALKE002
Export	C Confi	Ecograph T	01.01.2010 00:00:00	01.01.2011 19:32:00	AA01C004268
Import					
Control					
Automatic			Status Dar		
			Status Bar		
					Automatic Service: Activ

1.11.1 Main menu

The main menu at the top contains the menu bar with function groups for software settings.

File -> End program

View -> View settings

Extras -> Settings for the database, language, user administration, audit trail

Help -> Start online help, software information, change/activate license

1.11.2 Toolbar

The toolbar in the dockable window allows quick access to functions such as printing, saving or the online help.

1.11.3 Task pane

The task pane is located on the left. The task pane can be displayed and hidden via the "View" function in the main menu. Click on a task to open the task. The functions contained are displayed:

Read out data -> read out data via mass storage or online connection to the device

Visualization -> open, edit, delete or create a new visualization template

Data management -> plant view, device data export and import

1.11.4 Main window

The main window contains the dockable windows. Tabs are displayed when more than one dockable window is present.

1.11.5 Dockable window

A dockable window can be docked in the main window or can "hover" outside the window. It is possible to position the window without blocking other windows. There is a button for closing the window (X) on the right.

Every dockable window has a title bar (at the top of the window) with the name of the subelement

and the associated icon on the left-hand side. A toolbar containing window-specific icons, quick information and functionalities is located below the title bar. The main area of the dockable window starts below the toolbar.

1.11.6 Status bar

The status bar shows the login status and other information.

1.11.7 Splitter

The splitter separates the task pane from the main window. The splitter can only be moved if the task pane and main window are visible. Change the position of the splitter to change the size of the task pane and main window.

2. Task pane -> Read out data

Read out data and store them to the database - "Read Out Data"

By selecting the "Read Out Data" task from the task pane, you can carry out the configuration, read out measurement data or other data stored in the device and simultaneously store the data to a database so that they are tamper-protected.

The free PostgreSQL database supplied with the Reporting Software or existing SQL databases (Microsoft SQL server) can be used as the target database. For the settings for selecting the database, refer to Section 5.1.2.

NOTICE The Essential version only supports the free PostgreSQL database provided.

In the "Read Out Data" task, the two types of readout, "Mass Storage" or "Online Connection", are available.

Clicking the corresponding icon opens an additional working window in the right half of the screen. This window guides you step-by-step through the items to be defined.

Icons in the upper area help you navigate through the individual steps:

- Green arrow pointing left: Corresponds to the "Back" button; jump to the previous definition step.
- Green arrow pointing right: Corresponds to the "Next" button; jump to the next definition step.
- Question mark: Help; call up the help function for the corresponding definition step.

2.1 Read out data -> Mass storage

In this task, you can read out and store data (binary *.dat) from storage media such as SD cards, USB sticks or a drive.

2.1.1 Step 1 of 3: Select data source

Where are the data to be read out stored?

Select the data source.

The "..." button opens the folder and interface structure of Explorer and the workstation.

The drop-down menu suggests storage locations and storage media that were already used earlier:

<u>File View Extras H</u> elp	
Task Pane X	Mass Storage X
Read out data	(+ + @)
Mass Storage	Step 1 of 3: Select Data Source
Online Connection	Z\ProductCurrent\FieldDataManagementSoftware\Development\Software\Releases\Data\Configurations\Eco T II
• Visualization	Z\ProductCurrentFieldDataManagementSoftware\DevelopmentlSoftware\Releases\Data\Configurations\Eco T II
Data Management	Z-ProductCurrentFieldDataManagementSoftwareIDevelopmentSoftwareIReleases/Data/testdaten für feldtests Z-ProductCurrentFieldDataManagementSoftwareIDevelopment/SoftwareIReleases/Data/DataManagerCompact AA CA DA EA GA HA NA UA XA SA CA DA EA FA GA HA NA UA XA YA ZA
	Automatic Service: Inactive 🔞

After selecting the data source or storage location of the data to be read out, you can jump to the next step using "Next".

Clicking "Cancel" terminates this action, closes the window and stops the process.

2.1.2 Step 2 of 3: Select device

From which device are the data to be read out?

In this second step, the corresponding devices and the data time range are selected:

Read out data Wass Storage Wass Storage Online Connection Visualization Data Management Unit 1 Ecograph T 15 06 2011 05:02 15 00 2011 05:02 16 00 2016 000 16 000 2016 000 2 Unit 1 Ecograph T 15 06 2011 05:02 15 06 2011 05:02 2 Unit 1 Ecograph T 15 06 2011 05:02 15 06 2011 05:05 15 06 2011 05:05 16 02 00 00 2 Unit 1 Ecograph T 15 06 2011 05:02 15 06 2011 05:02 15 06 2011 05:02 15 06 2011 05:02 2 Unit 1 Ecograph T 15 06 2011 05:02 15 06 2011 05:02 2 Unit 1 Ecograph T 15 06 2011 05:02 3 Unit 1 Ecograph T 15 06 2011 05:02 3 Unit 1 Ecograph T 15 06 2011 05:02 3 Unit 1 Ecograph T	Task Pane	×	y Mass	s Storag	e X							
Press 2.01 gyc Comparison Devices Doline Connection Status Tag Device Type Begin End File size Version Serial Number 2 Visualization V Unit 1 Ecograph T 15 06 2011 05:02 15 06 2011 05:02 64.80 02.02.05 AA01C004268 2 Visualization V Unit 1 Ecograph T 15 06 2011 05:05 15 06 2011 05:07 15 08 02.02.05 AA01C004268 V Unit 1 Ecograph T 15 06 2011 05:05 15 06 2011 05:07 1 kB 02.02.05 AA01C004268 V Unit 1 Ecograph T 15 06 2011 05:05 15 06 2011 05:07 1 kB 02.02.05 AA01C004268 V Unit 1 Ecograph T 15 06 2011 05:02 15 06 2011 05:03 1 kB 02.02.05 AA01C004268 V Unit 1 Ecograph T 15 06 2011 04:58 15 06 2011 04:02 3 kB 02.02.05 AA01C004268 V Unit 1 Ecograph T 15 06 2011 04:58 15 06 2011 04:54 1 kB 02.02.05 AA01C004268 V Unit 1 Ecograph T 15 06 2011 04:53 </th <th>Read out data</th> <th>-</th> <th>•</th> <th>0</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	Read out data	-	•	0								
Status Tag Device Type Begin End File size Version Serial Number E Visualization Unit Ecograph T 15 06 2011 05:52 15 06 2011 06:52 31 kB 02.02 05 AA01C004268 V Unit Ecograph T 15 06 2011 05:04 15 06 2011 05:05 15 80 2010 6:05 4401 C004268 V Unit Ecograph T 15 06 2011 05:04 15 06 2011 05:05 1 kB 02.02 05 AA01C004268 V Unit Ecograph T 15 06 2011 05:04 15 06 2011 05:05 1 kB 02.02 05 AA01C004268 V Unit Ecograph T 15 06 2011 05:03 15 06 2011 05:05 1 kB 02.02 05 AA01C004268 V Unit Ecograph T 15 06 2011 05:03 15 06 2011 05:05 1 kB 02.02 05 AA01C004268 V Unit Ecograph T 15 06 2011 05:05 1 kB 02.02 05 AA01C004268 V Unit Ecograph T 15 06 2011 04:55 15 06 2011 04:58 1 kB 02.02 05 AA0	Mass Storage			Ste	p 2 of 3:	Select Devi	ces					
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Select All Unselect All				~	Unit 1njn	Ecograph T	29.05.2011 01:18	15.06.2011 04:10	1 MB	02.02.05	AA01C004268	
Delete files after import					(
				oroto ini	oo anor ing							

The "Devices" area lists the devices found on the storage medium.

There, you can select a device or devices by checking them. This means that you do not have to read out the entire data volume of the storage medium.

You can select them all using the "Select All" button. "Unselect All" removes the selection.

By checking the box for "Delete Files after Import", the selected data are deleted from the data storage medium as soon as these data have been stored successfully to the database.

NOTICE Once data are deleted from the storage medium, this cannot be undone!

When you have finished selecting the devices to be read out, define the volume of data to be stored. This data is then read out in the next step.

Finish your selection by pressing "Next".

You can return to the previous view by selecting "Back".

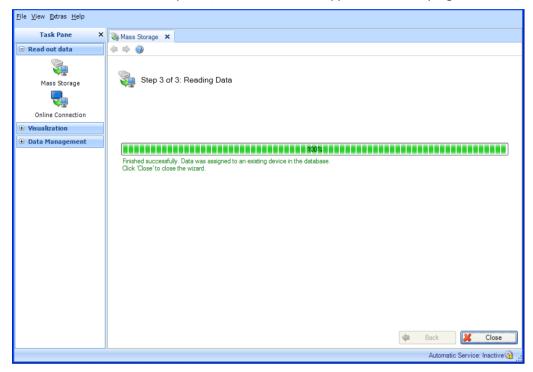
Clicking "Cancel" terminates this action, closes the window and stops the process.

2.1.3 Step 3 of 3: Reading data

The defined data are read out and stored to the database.

A progress bar shows the progress in % and displays the estimated time remaining. The duration of the read-out process depends on the data volume and the storage medium used. You can stop the action during this procedure by pressing the "Cancel" button. You can return to the previous view by selecting "Back".

Once the action has been completed, a confirmation text appears below the progress bar:



The data defined in steps 1 and 2 have now been read in from the storage medium successfully and stored to the database.

If, in step 2, the "Delete Files after Import" check box was ticked, the stored data will also have been successfully deleted from the storage medium.

Select "Close" to end the process. The window closes.

2.2 Read out data -> Online connection

2.2.1 Read data from a device which has already been created

2.2.1.1 Step 1 of 5: Select device

From which device do you want to read out?

NOTICE Not all devices are supported in the Essential version. Unsupported devices which have already been installed are displayed along with their configuration. However, the available functionality cannot be applied to them.

The device to be read out is selected in step 1. The view shows the Plant View already created. This view can be restructured and expanded (see 4.1 Data management -> Plant view)"".

<u>F</u> ile <u>V</u> iew <u>E</u> xtras <u>H</u> elp	
Task Pane X	State Connection X
🖻 Read out data	(+ + @)
	Step 1 of 5: Select Device
Mass Storage	
5	Plant View
Online Connection	Name / Device Type Serial Number
Visualization	
🗄 Data Management	
	E
	🍇 Memory card in device 📫 Device memory 🧩 Cancel
	Automatic Service: Active 🧐

The "Memory card in device" and "Device memory" buttons are used to select the device data to be read out.

"Memory card in device": The data on the memory card of the selected device are read out. "Device memory": The data in the internal memory of the selected device are read out.

As soon as the selected data have been stored successfully to the database they are deleted from the device memory or from the memory card in the device.

NOTICE

Once data are deleted, this cannot be undone!

You can activate an immediate readout by right-clicking and then selecting "Read Out Data" or by selecting "Next". Then, step 5, "Read Out Data", opens.

Reading out via a communication interface requires a defined communication with the device. Communication can be configured or modified via data management, when creating devices in the Plant View, or in this step. Selecting the device and right-clicking, then selecting "Configure Interface..." opens the Communication Settings:

✤ Device 1V: Settings			
Communication Settings	Select Source	Serial interface	~
	Device <u>T</u> ype:	Aemograph M	~
Database Information	Serial interface		
(G)	Setup:	Automatically Manually	<u>^</u>
Automatic - Data read out	Device Address		
	Device <u>A</u> ddress: Port:	COM1 V	
Automatic - Data elimination	-		
 3 	<u>B</u> audrate: Data bits:	115200 V 8 V	
Automatic - Time synchronize	Parity:	None	
3	Stop bits:	One 💌	
Automatic - Data backup	Connection timeout	t: 2.0 seconds	
	The device is re	ead out by more than one Reporting Software	~
(2) Help		<mark>✓ o</mark> k 🕅	<u>C</u> ancel

Clicking "Cancel" terminates this action, closes the window and stops the process.

2.2.1.2 Step 2 of 5: Configure device settings

Step 2 is skipped automatically, as the device settings are already stored in the saved device.

2.2.1.3 Step 3 of 5: Configure automatic

Step 3 is skipped automatically, as the automatic configuration is already stored in the saved device.

2.2.1.4 Step 4 of 5: Device information

If "Readout memory card in device" is selected in step 1:

The software tests the connection to the device and loads the specific device information. The screen displays the data on the memory card. These data can be individually selected for readout:

Task Pane >	< 🌏 Online Cor	nnection X				
Read out data						
Mass Storage Colline Connection Visualization Data Management	Device Tag: Device Type:	HKC 1 Graphic Data Recorder T: D1007D04267				
	Memory Card		1	(
		Filename	Date/time	File size	ID	
			Date/time	File size	ID 0071	
		Filename rec_data D1007D04267 0071 2012-07-05 08-12-20.dat rec_data D1007D04267 0071 2012-07-09 10-43-00 dat				
		rec_data D1007D04267 0071 2012-07-05 08-12-20.dat	05.07.2012 08:12:20	483 kB	0071	
		rec_data D1007D04267 0071 2012-07-05 08-12-20.dat rec_data D1007D04267 0071 2012-07-09 10-43-00.dat	05.07.2012 08:12:20 09.07.2012 10:43:00	483 kB 484 kB	0071 0071	
		rec_data D1007D04267 0071 2012-07-05 08-12-20.dat rec_data D1007D04267 0071 2012-07-09 10-43-00 dat rec_data D1007D04267 0071 2012-07-09 14-31-00.dat rec_data D1007D04267 0071 2012-07-09 15-47-44.dat rec_data D1007D04267 0072 2012-09-03 12-45-54.dat	05.07.2012 08:12:20 09.07.2012 10:43:00 09.07.2012 14:31:00 09.07.2012 15:47:44 03.09.2012 12:45:54	483 kB 484 kB 486 kB	0071 0071 0071	
		rec_data D1007D04267 0071 2012-07-05 08-12-20 dat rec_data D1007D04267 0071 2012-07-09 10-43-00 dat rec_data D1007D04267 0071 2012-07-09 14-31-00 dat rec_data D1007D04267 0071 2012-07-09 15-47-44. dat rec_data D1007D04267 0072 2012-09-03 12-45-54 dat rec_data D1007D04267 0072 2012-09-03 14-02-42 dat	05.07.2012 08:12:20 09.07.2012 10:43:00 09.07.2012 14:31:00 09.07.2012 15:47:44	483 kB 484 kB 486 kB 451 kB 486 kB 486 kB 484 kB	0071 0071 0071 0071 0072 0072	
		rec_data D1007D04267 0071 2012-07-05 08-12-20 dat rec_data D1007D04267 0071 2012-07-09 10-43-00 dat rec_data D1007D04267 0071 2012-07-09 14-31-00 dat rec_data D1007D04267 0071 2012-07-09 15-47-44 dat rec_data D1007D04267 0072 2012-09-03 12-45-54 dat rec_data D1007D04267 0072 2012-09-03 14-02-42 dat rec_data D1007D04267 0072 2012-09-03 15-18-52 dat	05 07 2012 08:12:20 09 07 2012 10:43:00 09 07 2012 14:31:00 09 07 2012 15:47:44 03 09 2012 12:45:54 03 09 2012 14:02:42 03 09 2012 15:18:52	483 kB 484 kB 486 kB 451 kB 486 kB 486 kB 484 kB 483 kB	0071 0071 0071 0071 0072 0072 0072	
		rec_data D1007D04267 0071 2012-07-05 08-12-20 dat rec_data D1007D04267 0071 2012-07-09 10-43-00 dat rec_data D1007D04267 0071 2012-07-09 15-47-44 dat rec_data D1007D04267 0072 2012-09-03 12-45-54 dat rec_data D1007D04267 0072 2012-09-03 12-45-54 dat rec_data D1007D04267 0072 2012-09-03 15-18-52 dat rec_data D1007D04267 0072 2012-09-04 09-45-37 dat	05.07.2012 08:12:20 09.07.2012 10:43:00 09.07.2012 14:31:00 09.07.2012 15:47:44 03.09.2012 12:45:54 03.09.2012 15:45:24 03.09.2012 15:18:52 04.09.2012 09:45:37	483 kB 486 kB 486 kB 451 kB 486 kB 486 kB 484 kB 483 kB 483 kB	0071 0071 0071 0071 0072 0072 0072 0072	
		rec_data D1007D04267 0071 2012-07-05 08-12-20 dat rec_data D1007D04267 0071 2012-07-09 10-43-00 dat rec_data D1007D04267 0071 2012-07-09 15-47-44 dat rec_data D1007D04267 0072 2012-09-03 12-45-54 dat rec_data D1007D04267 0072 2012-09-03 14-02-42 dat rec_data D1007D04267 0072 2012-09-03 14-02-42 dat rec_data D1007D04267 0072 2012-09-03 14-02-42 dat rec_data D1007D04267 0072 2012-09-03 14-05-2 dat rec_data D1007D04267 0072 2012-09-04 49-45-37 dat rec_data D1007D04267 0072 2012-09-04 14-49-59 dat	05.07.2012 08:12:20 09.07.2012 10:43:00 09.07.2012 15:47:44 03.09.2012 12:45:54 03.09.2012 14:02:42 03.09.2012 19:45:73 04.09.2012 09:45:37 04.09.2012 14:49:59	483 kB 484 kB 486 kB 451 kB 486 kB 486 kB 484 kB 483 kB 483 kB 59 kB	0071 0071 0071 0071 0072 0072 0072 0072	
		rec_data D1007D04267 0071 2012-07-05 08-12-20 dat rec_data D1007D04267 0071 2012-07-09 10-43-00 dat rec_data D1007D04267 0071 2012-07-09 14-31-00 dat rec_data D1007D04267 0071 2012-07-09 15-47-44, dat rec_data D1007D04267 0072 2012-09-03 12-45-54 dat rec_data D1007D04267 0072 2012-09-03 14-02-42 dat rec_data D1007D04267 0072 2012-09-03 15-18-52 dat rec_data D1007D04267 0072 2012-09-04 15-37. dat rec_data D1007D04267 0072 2012-09-04 15-37. dat	05.07.2012 08:12:20 09.07.2012 10:43:00 09.07.2012 14:31:00 09.07.2012 15:47:44 03.09.2012 14:245:54 03.09.2012 14:02:42 03.09.2012 15:18:52 04.09.2012 14:49:59 05.09.2012 17:14:38	483 kB 484 kB 486 kB 451 kB 486 kB 486 kB 484 kB 483 kB 483 kB 59 kB 483 kB	0071 0071 0071 0072 0072 0072 0072 0072	
		rec_data D1007D04267 0071 2012-07-05 08-12-20 dat rec_data D1007D04267 0071 2012-07-09 10-43-00 dat rec_data D1007D04267 0071 2012-07-09 15-47-44. dat rec_data D1007D04267 0072 2012-09-03 12-45-54 dat rec_data D1007D04267 0072 2012-09-03 12-45-54 dat rec_data D1007D04267 0072 2012-09-03 15-18-52. dat rec_data D1007D04267 0072 2012-09-04 09-45-37. dat rec_data D1007D04267 0072 2012-09-04 09-45-37. dat rec_data D1007D04267 0072 2012-09-04 09-45-37. dat rec_data D1007D04267 0072 2012-09-06 14-49-59 dat rec_data D1007D04267 0072 2012-09-06 15-114-38. dat rec_data D1007D04267 0072 2012-09-06 16-05-06 dat	05.07.2012 08:12:20 09.07.2012 10:43:00 09.07.2012 14:31:00 09.07.2012 14:31:00 09.07.2012 15:47:44 03.09.2012 14:02:42 03.09.2012 15:18:52 04.09.2012 09:45:37 04.09.2012 17:14:38 06.09.2012 16:05:06	483 kB 484 kB 486 kB 451 kB 486 kB 486 kB 488 kB 483 kB 59 kB 483 kB 299 kB	0071 0071 0071 0072 0072 0072 0072 0072	
		rec_data D1007D04267 0071 2012-07-05 08-12-20 dat rec_data D1007D04267 0071 2012-07-09 10-43-00 dat rec_data D1007D04267 0071 2012-07-09 14-31-00 dat rec_data D1007D04267 0071 2012-07-09 15-47-44, dat rec_data D1007D04267 0072 2012-09-03 12-45-54 dat rec_data D1007D04267 0072 2012-09-03 14-02-42 dat rec_data D1007D04267 0072 2012-09-03 15-18-52 dat rec_data D1007D04267 0072 2012-09-04 15-37. dat rec_data D1007D04267 0072 2012-09-04 15-37. dat	05.07.2012 08:12:20 09.07.2012 10:43:00 09.07.2012 14:31:00 09.07.2012 15:47:44 03.09.2012 14:245:54 03.09.2012 14:02:42 03.09.2012 15:18:52 04.09.2012 14:49:59 05.09.2012 17:14:38	483 kB 484 kB 486 kB 451 kB 486 kB 486 kB 484 kB 483 kB 483 kB 59 kB 483 kB	0071 0071 0071 0072 0072 0072 0072 0072	

To modify the selected device or the communication specifications, you can return to the previous steps via "Back".

Clicking the "Next" button activates reading out of data from the device.

Clicking "Cancel" terminates this action, closes the window and stops the process.

If "Readout device memory" is selected in step 1:

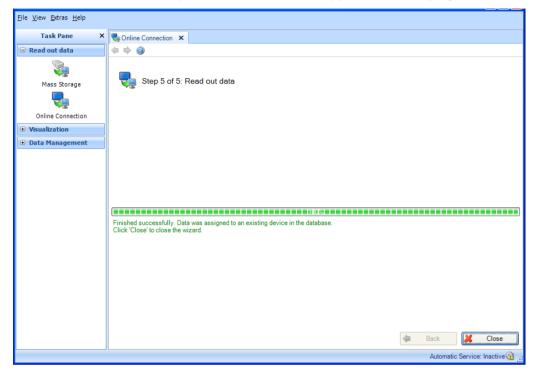
Step 4 is skipped automatically, and all the data are read out of the device memory.

2.2.1.5 Step 5 of 5: Read out data

The defined data are read out and stored to the database.

A progress bar shows the progress in % and displays the estimated time remaining. The duration of the read-out process depends on the data volume and the storage medium used. You can stop the action during this procedure by pressing the "Cancel" button. You can return to the previous view by selecting "Back".

Once the action has been completed, a confirmation text appears below the progress bar:



The defined data have now been read out of the device successfully and stored to the database. The stored data have also been successfully deleted from the device memory.

Select "Close" to end the process. The window closes.

2.2.2 Reading out a new device not yet created

2.2.2.1 Step 1 of 5: Select device or create new device

The view shows the Plant View already created. This view can be restructured and expanded (see 4.1 Data management -> Plant view)"".

If the device to be read out is not yet created, you can create a new device using the "New Device" button. Pressing this button jumps to step 2.

<u>File View Extras H</u> elp	
Task Pane X	Conline Connection ×
Read out data	4 🖨 🔞
Mass Storage	Step 1 of 5: Select Device
Online Connection	Name 🕢 Device Type Serial Number
Visualization Data Management	
	Process cell
	Importiert Imported
	New Device Cancel
	Automatic Service: Inactive 🚱

Clicking "Cancel" terminates this action, closes the window and stops the process.

2.2.2.2 Step 2 of 5: Configure device settings

In step 2, the new device to be created and read out is defined.

To so do, define the interface to the device, the device type and the memory to be read out (device memory, mass storage) in the "Select Source" area.

Automatic device detection: In the case of automatic device detection, the device type is automatically detected when the required interface parameters are specified. Automatic detection is enabled as standard. If automatic device detection is disabled, a drop-down list of all supported device types appears once the interface is specified.

Then, in the lower area, define the communication/interface in greater detail.

<u>File View Extras H</u> elp		
Task Pane ×	Conline Connection ×	
🖻 Read out data	4 4 0	
Mass Storage	Step 2 of 5: Configure Online Interface	
	Select source	
Online Connection	Interface: USB	
 • Visualization • Data Management 	Memory: Device memory]
	Automatic device detection	
	Device type: Multi Channel Recorder	
	USB	5
	Device address: 1	
	Port:	
	The device is read out by more than one Reporting Software	
	Read out PC: 1	
	Repeat readout periodical	
	🗢 Back 📫 Next 🎉 Cancel	
	Automatic Service: Active) .::

By checking the box for "The device is read out by more than one Reporting Software", it is possible to read out up to 4 PCs.

Checking the box for "Repeat readout periodical" enables regular automatic readout. You can define the automatic function for the corresponding device in the next step or via the automatic configuration 6.3). The automatic readout requires a continuous connection to the device.

Pressing the "Next" button or the green arrow in the Main Toolbar jumps to the next step.

2.2.2.3 Step 3 of 5: Configure automatic

NOTICE

This is possible only if "Repeat readout periodical" has been selected in the previous step.

<u>F</u> ile <u>V</u> iew <u>E</u> xtras <u>H</u> elp	
Task Pane X	Conline Connection X
Read out data	(4 ⇒ Ø)
Mass Storage	Step 3 of 5: Configure Automatic Data read out ✓ Active
Data Management	Interval: Daily
	Start time: 09:00:00
	Interval:
	Start time: 09:00:00
	Tolerance: 0 Day 00:01:00
	Back Dext Cancel

Data read out:

The regularity of the automatic function is defined here. For this purpose, the "Active" check box must be selected.

Interval: How often does the export take place?

Depending on the selected interval, define the repetition, start day and start time (see Section 6.3).

Time synchronize:

Here, you can synchronize the device time with the system time of the computer. To define the regularity of the synchronization, the "Active" check box must be selected (see Section 6.5).

Pressing the "Next" button or the green arrow in the Main Toolbar jumps to the next step.

2.2.2.4 Step 4 of 5: Device information

This tests the communication defined for the device.

The software tests the connection to the device and loads the specific device information.

In addition, if "Readout memory card in device" is selected (in step 2), the data which are contained on the memory card and which can be individually selected for readout are displayed:

<u>File View Extras H</u> elp				
Task Pane ×	Second Se			
🖻 Read out data	4 🕈 🔞			
Mass Storage	Step 4 of 5: Device Information			
Online Connection	Device Tag: HKC 1 Device Type: Graphic Data Recorder			
Visualization Data Management	Serial Number: D1007D04267			
	Memory Card			
	Filename	Date/time	File size	ID 🔺
	rec_data D1007D04267 0071 2012-07-05 08-12-20.dat rec_data D1007D04267 0071 2012-07-09 14-31-00.dat rec_data D1007D04267 0071 2012-07-09 14-31-00.dat rec_data D1007D04267 0071 2012-07-09 14-31-00.dat rec_data D1007D04267 0071 2012-07-09 15-47-44.dat rec_data D1007D04267 0072 2012-09-03 12-45-54.dat rec_data D1007D04267 0072 2012-09-03 14-02-42.dat rec_data D1007D04267 0072 2012-09-03 15-18-52.dat rec_data D1007D04267 0072 2012-09-09 -37.dat rec_data D1007D04267 0072 2012-09-09 -40 -94-53.7.dat rec_data D1007D04267 0072 2012-09-09 -51.7-14-38.dat rec_data D1007D04267 0072 2012-09-09 -11-27-39.dat	05.07.2012 08:12:20 09.07.2012 10:43:00 09.07.2012 14:31:00 09.07.2012 15:47:44 03.09.2012 12:45:54 03.09.2012 12:45:54 03.09.2012 15:18:52 04.09.2012 14:49:59 05.09.2012 14:49:59 05.09.2012 14:49:59 05.09.2012 16:05:06 07.09.2012 11:27:39	484 kB 00 486 kB 00 484 kB 00 483 kB 00 483 kB 00 483 kB 00 483 kB 00 299 kB 00	071 071 071 072 072 072 072 072 072 072 072 072 072
	\$	Back 🔷 Nex	t 🔀 Ca	ancel

To modify the selected device or the communication specifications, you can return to the previous steps via "Back".

Clicking the "Next" button activates reading out of data from the device.

As soon as the selected data have been stored successfully to the database they are deleted from the device memory or from the memory card in the device.

NOTICE

Once data are deleted, this cannot be undone!

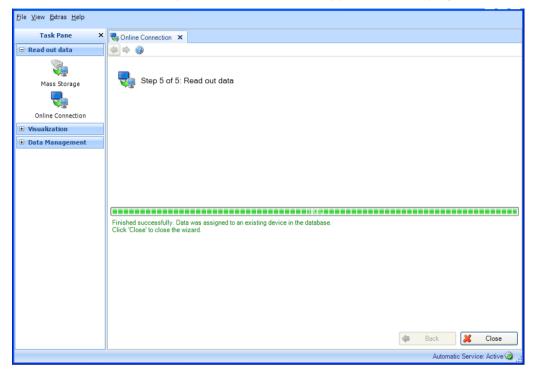
Clicking "Cancel" terminates this action, closes the window and stops the process.

2.2.2.5 Step 5 of 5: Read out data

The defined data are read out and stored to the database.

A progress bar shows the progress in % and displays the estimated time remaining. The duration of the read-out process depends on the data volume and the storage medium used. You can stop the action during this procedure by pressing the "Cancel" button. You can return to the previous view by selecting "Back".

Once the action has been completed, a confirmation text appears below the progress bar:



The defined data have now been read out of the device successfully and stored to the database. The stored data have also been successfully deleted from the device memory or the memory card in the device.

Select "Close" to end the process. The window closes.

3. Task pane -> Visualization

In the Task pane, the "Visualization" task includes all items that pertain to displaying the stored or current data.

Basically, the three functions "New", "Open" or "Edit" are available.

The "New" function creates a new visualization. By clicking "Open", visualizations (templates) that have been defined earlier and stored are available. By clicking "Edit", templates that have been defined earlier can be changed (e.g. select additional channels, delete templates etc.).

Clicking the corresponding icon opens a working window in the right half of the screen. This window takes you step-by-step through the process for displaying the stored data in the desired variant.

Icons in the upper area help you navigate through the individual steps: Icons in the working window that are grayed out are not available for the corresponding work step.

- Green arrow pointing left: Corresponds to the "Back" button; jump to the previous definition step.
- Green arrow pointing right: Corresponds to the "Next" button; jump to the next definition step.
- Question mark: Help; call up the help function for the corresponding definition step.

NOTICE

In the Essential version, templates can be created, displayed and edited only if they contain data from devices supported by this software version! Only one device can be assigned in each case to the templates!

3.1 Visualization of saved data

3.1.1 Visualization -> New

3.1.1.1 Step 1 of 4: Select device

In step 1, the source devices are selected. On the left side of the working window, you can see the Plant View (see 4.1 Data management -> Plant view). This view lists all devices for which you can visualize the data.

NOTICE

Only supported devices can be selected in the Essential version! No more than one device can be selected!

The right side of the working window shows the summary of the selected devices:

💷 Field Data Manager Softwa	are - Professional								- • •
<u>File View Extras H</u> elp									
Task Pane ×									
🖭 Read out data	**	000000000000000	2 < < < @ @	8 🗹 😗					
Visualization									
	Step 1 of 4	Select devices						Endr	ess+Hauser 🖾
New	Display								
	Saved Data	Current Measurement	ts						
Open	Plant View					Selected Devices			
	Name	A Device Type	Begin	End		Name	Devic	Begin	End
Edit	Enterprise	Memograph M				Unit 1	Mem	30.03.2015 09:	30.03.2015 11:46:
🗉 Data Management	C Unit		30.03.2015 09:30:29	30.03.2015 11:46:07					
					*				
					4				
	•	III		Þ					
								Next 🖒	Cancel
								Auto	matic Service: Active 🔞 🔐

You can select a device for the visualization by checking the device in the Plant View and clicking or double-clicking the blue arrow that appears.

If you later want to remove a device from the list of selected devices, select it in the right-hand list, then double-click the selected device or click the blue arrow that points towards the left to remove it from the list.

If at least one device has been selected, the "Next" button appears. Click this button to jump to the next step.

Clicking "Cancel" terminates this action, closes the window and stops the process.

3.1.1.2 Step 2 of 4: Select channel

In step 2, select the reports and channels:

Task Pane X	Visualization ×						
E Read out data		< 6 6 Ø	6)			
Visualization							
<u>~</u>	Step 2 of 4: Select channels						
New	CTrend Reports						
~	Measurement values Day Month Yea	r OBilling date	⊖Mea	suring Periods			
Open	Channels						
<u>~</u>		1	[[
Edit	Tag	Device Type Imported	Min	Max Average	Status	Instantaneous	
Data Management	Channels	imported					
	Channel 1						
	Channel 2 Channel 3						
	Channel 3 Channel 4						
	Channel 5						
	Channel 6						
	Channel 7						
	Channel 8						
	Channel 9 Channel 10						
	Channel 10 Channel 11						
	Channel 12						
	Device 1	Memograph M					
	Channels						
	Analog 1						
	Analog 2						
	Analog 3						
	Analog 4						1

Functions:

Trend:

Measurement values: Instantaneous values (analog values) of the selected device can be selected.

Reports:

Reports can be selected for the selected device, e.g. day, week, month, external (selection only possible if these reports are stored in the device).

Channels:

Device designation/TAG, device type: This shows information about the selected device. Min, max, average, instantaneous: Selection of the analog values of the device. Status: Selection of the digital values of the device.

After selecting the analyses and channels for the data to be visualized, you can jump to the next step using "Next".

Clicking "Cancel" terminates this action, closes the window and stops the process.

You can return to the previous view by selecting "Back".

3.1.1.3 Step 3 of 4: Select time slot or batch

In step 3, select the time slot (or the batch, if available) of the data to be visualized:

<u>File View Extras H</u> elp									
Task Pane X	Visualization ×								
Visualization									
	Step 3 of 4: Select time slots								
New	⊂ Period								
2		From: 23.01.2012 08:36:00 V To:	23.01.2012 09:36:00						
Open									
2	Compare up to 3 time periods	*							
Edit	Time scale	From	То						
🗈 Data Management	1 Hour	25.01.2012 08:36:00	25.01.2012 09:36:00						
	1 Hour	24.01.2012 08:36:00	24.01.2012 09:36:00						
	1 Hour	23.01.2012 08:36:00	23.01.2012 09:36:00						
		< В	ack 📄 📫 Next 🔀 Cancel						
	л с		Automatic Service: Active 🔞						

After selecting at least one time slot for the data to be visualized, you can jump to the next step using "Next".
NOTICE

A maximum of 3 identical time ranges can be selected and thus compared with each other.

Clicking "Cancel" terminates this action, closes the window and stops the process.

You can return to the previous view by selecting "Back".

3.1.1.4 Step 4 of 4: Graph

Step 4 displays the Graph, Values and Events of the selected Time Slot:

File View Extras Hel							
Life Men Drugs Unit	p						
Task Pane X	Visualization	×					
Read out data	🔶 🖶 🛃	🔶 🗊 🙆 ち 🛔	🌆 P 🗗 🔍 🔍 🔍 🏐 🎕				
Visualization	Dev	ice name: 'Importiert'	Device 1' TemperaturR7 (Configu	Measurement values / trend	urRZNesselwang)', 'TemperaturRZ (Config	uration 2)' 'TemperaturB7	
		ice name. Importent,	(TemperaturRZNesselwang))', 'Memograph M', 'Unit 1', 'Unit 1 (Ur	nit 1)' Range: Complete time range	and an application as	
	🗉 Graph						
New	_ 0,6 F 30,0 F	[년 종년	동동안 중 안	* <u> </u>			
2	Zeit C	65.0 °C	Beändert 35.0 °C 25.0 °C 35.0 °C	onnerzek IB/IC+U Netz Aus 35.0 *C	gibi 2. H->L		Importiert Channel 1 [Zeit]
Open	0.4 25,0			Sit 31			TemperaturRZ (Configuration
2	20.0-	Ben Solar				60.0	— Server-5 Mitte [*C] Unit 1 (Unit 1) — Analog 1 [%]
Edit	0,1 -	210 05	Server Server Server				🗹 — Kanal 2 [t]
Data Manage	15,0		_			40,0	🗹 — Analog 3 [%]
	-0.1 -						
	10,0					20.0	
						-20.0	
	-0,4- 5.0-						
	-0.6L 0.0L						
	0,0 0,0		07.2010	01.2011	07.2011		Reduced data volu
					2011-	205	
	Values 0	5.01.2010 12:38:00					
	Timestamp	Importiert Channel 1 [Zeit]	TemperaturRZ (Configuration 1) Server-5 Mitte [°C]	Unit 1 (Unit 1) Unit 1 (Unit 1) Unit Analog 1 [%] Unit 1 (Unit 1) Unit 1 (Unit 1) Unit Analog 1 [%]	it 1 (Unit 1) alog 3 [%]		2
	05.01.2010 12:38:0		24,8				
	05.01.2010 12:39:0		25.1 25.3				
	05.01.2010 12:41:0	00	25,5				~
	E Events	_	All V Cated	gory All	v		
	Status Timestam	no Devi	ice Name	Category	Text		~
	03.09.200		peraturRZ (Configuration 2)	Miscellaneous	int. Speicher gelöscht		
	03.09.200		nograph M	Miscellaneous	int. Speicher gelöscht		
	03.09.200		peraturRZ (TemperaturRZNesselwa peraturRZ (TemperaturRZNesselwa		int. Speicher gelöscht System neu gestartet		
	03.09.200		peraturR2 (TemperaturR2Nesserwa peraturR2 (Configuration 2)	Miscellaneous Miscellaneous	System neu gestartet		~
						da Bac	k 🛛 🗶 Close
	<					ve bac	
						Δι	utomatic Service: Active 🔞
						AL	Itomatic Service: Active 🥨 🚦

The following functions of the icons are possible:



- Disk: Save the visualization; if it has not yet been saved, a new template is created. This template is then available for future visualizations.
- **b** Disk with pen: Save as; create a new template, assign a new name for the template.
- Box with arrow: Export; enables you to export the selected data in the *.csv or *.xls formats.
- Printer icon: Print; allows you to print the current window.
- Preview: Generates a print preview
- Adobe Acrobat[®] icon: Export as PDF file.

Chart settings	Main settings General
Main settings	Image: All y-axes Image: Events Image: Events Image: Events Step height: 1 Image: Events Events
Event filter	Zoom x-æxis x-æxis and y-æxis
	Help lines in the channel colour Pen width: 1 Style:
	Display area distribution Analogue and counter values: 75 🖤 Digital signals: 25 🖤
() <u>H</u> elp	✓ OK 🎉 Cancel

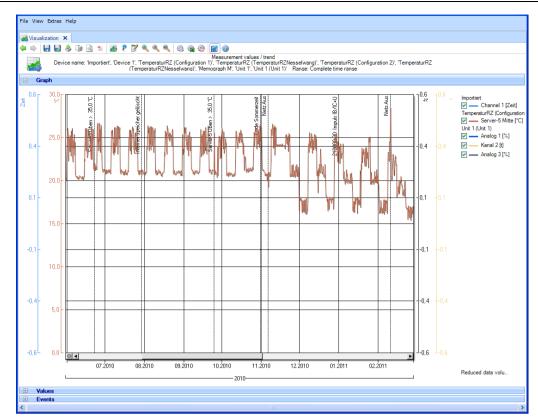
- Pin: Enable or disable value cursor. If you move the cursor over the chart, the value displayed below the graph is automatically updated according to the position of the cursor. By pressing the left mouse button, the displayed values in the "Values" and "Events" area are also updated.
- Votepad: Add comment; enables you to add comments in the chart area, this option is available for the chart view exclusively.
- Refresh: The selected time period is set to the current time and loaded.
- Magnifying glass+: Zoom in
- Magnifying glass-: Zoom out
- Magnifying glass 1:1: Reset zoom
- 🛛 🧐 Gear with printer: Automatic print out
- Gear with Excel: Automatic Excel/ CSV export
- Gear with Adobe Acrobat[®] icon: Automatic PDF export
- C Rectangle with blue arrow: Maximize or minimize the chart

NOTICE

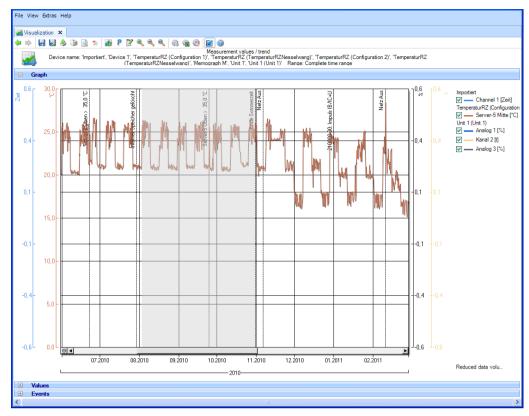
The "Automatic print out", "Automatic Excel/CSV export" and "Automatic PDF export" functions are not supported in the Essential version and therefore cannot be selected.

"Graph" area:

Double-clicking the header in the "Graph" area enlarges the graphic view and shows it in fullscreen mode. The function corresponds to the "Maximize the Chart" icon. This enables you to work more conveniently without additional scrolling effort:



The note "Reduced data volume" means that the data have been reduced automatically to compile the chart. This enables a fast display. If you zoom into the chart (multiple times), this note no longer appears, as all values must be used for the display.



You can left-click to draw a frame in the chart field. This enables you to enlarge the selected area:



Unit 1 (Unit 1): Anal	log 1 [%]	×
Chart		
Line chart	O Bar Chart	
211; 60; 10		
<u>P</u> en width:	1 🗢	
<u>S</u> tyle:	Solid	
Display stored/meas	sured value <u>m</u> arks	
Visi <u>b</u> le		
Size:	1 🚖	
<u>S</u> tyle:	Square	
Scale/y-Axis		
Scale y-Axis to	o max value 🔲 Inverted	
Logarithmic so	cale 🗹 Exponential notation	
Automatic sca	aling	
Minimum:	0.	0 %
Maximum:	0,	0 %
Scale spacing	g automatic generation	
Scale spacing:	0.	0 %
y- <u>A</u> xis:	Default	/
Help line 1:	0.	0 %
Help line 2:	0,	0 %
Help line 3:	0.	0 %
Grid:	Automatic	*
Grid spacing:	1.	0 %
	🗸 ОК 🕌	Cancel

"Values" area:

Display all values with a time stamp. You can select "Search" to search for values for a specific day/time.

If the cursor kinetic is enabled, pressing the left mouse button updates the displayed values according to the position of the cursor in the diagram:

Eile ⊻iew Extras He	elp				
Visualization 🗙					
🗢 🔿 📙 😓 🤌	s 🗊 🗟 🛸 🔓	🚯 👂 📝 🔍 🔍 🔍 🏟 🤅			
Device	name: 'Importiert'	'Device 1', 'TemperaturRZ (Config		rement values / t	
	marrie. Importient,	(TemperaturRZNesselwan			
Graph					
Values 05.0	1.2010 12:38:00	V Search			
e valdes 00.0	(-		
Timestamp	Importiert Channel 1 [Zeit]	TemperaturRZ (Configuration 1) Server-5 Mitte [°C]	Unit 1 (Unit 1) Analog 1 [%]	Unit 1 (Unit 1) Kanal 2 [t]	Unit 1 (Unit 1) Analog 3 [%]
25.01.2012 09:02:00	chunner r (Eerly	22,6		Number 2 [c]	Auguogi o [76]
25.01.2012 09:02:00		22,6			
25.01.2012.09:04:00		22.5			
25.01.2012 09:05:00		22.6			
25.01.2012 09:06:00		22,6			
25.01.2012 09:07:00		22,6			
25.01.2012 09:08:00		22,6			
25.01.2012 09:09:00		22,6	5		
25.01.2012 09:10:00		22,6	5		
25.01.2012 09:11:00		22,6	6		
25.01.2012 09:12:00		22,6	5		
25.01.2012 09:13:00		22.6	5		
<					

"Program Logbook" area:

When measured values of a sampler are selected, the program logbook is displayed in an additional area. It contains all the sample programs that have been fully completed in the selected time period. There is a "Document" button beside the 'Program logbook' header:

<u>File V</u> iew <u>E</u> xtra	Eile <u>V</u> iew <u>E</u> xtras <u>H</u> elp									
Visualization	Visualization ×									
🍬 🔿 🔒 😸	} 🌭 🗊 🗟 🐀 👪	ମ୍ 🕅 🔍 🔍 🔍	8 🛱 🖉 🕜							
	Measurement values / trend Device name: 'EH_CSF48_' Range: 05.05.2010 12:38:09 to 26.05.2010 15:01:41									
🗄 Graph										
🖃 Program	logbook 🗾									
Device Name 🗠	Start Time	Stop Time	Program Name							
EH_CSF48_	05.05.2010 12:40:11	06.05.2010 00:31:05	Program1							
EH_CSF48_	06.05.2010 08:34:36	06.05.2010 20:25:30	Program1							
EH_CSF48_	07.05.2010 08:38:09	07.05.2010 20:29:02	Program1							
EH_CSF48_	10.05.2010 08:53:15	10.05.2010 20:44:08	Program1							
EH_CSF48_	17.05.2010 11:01:14	17.05.2010 22:52:08	Program1							
EH_CSF48_	19.05.2010 08:15:07	19.05.2010 20:06:00	Program1							
EH_CSF48_	21.05.2010 08:23:13	21.05.2010 20:14:07	Program1							
EH CSF48	25.05.2010 08:34:33	25.05.2010 20:25:13	Program1							
<			>							

Once a sample program has been selected, it can be opened with the "Document" button and then saved and printed out:

Program	n logbook											
🕥 🖄	0											
	Program Name : Program1											
	Program logbo	ook (Program1)			Pag	e 1 of 2			25.01.2012 16:42:24			
	07.05.2010 0 Program nam Bottle configu Bottle volume Sampling inte Sampling mo Sampling mo Sampling volu Bottles/sampl Sampling volu Start conditio Start time: 05	26.05.2010, 14: 8:38:09 Program are: Program1 aration: 12x+6x a left: 1000 ml de: Zeitproport erval: 10 min le: 4 le: 0 ume: 100 ml	m start - PE/Glas Vi ional 0:00	erteilerplat	te							
<	Date 07.05.2010 07.05.2010 07.05.2010 07.05.2010 07.05.2010	Time 08:38:10 08:48:10 08:58:10 09:08:10 09:18:10	Sample 1/4 2/4 3/4 4/4 1/4	Bottle 1 1 1 1 2	Running sample nr. 1 2 3 4 5	Volume (ml) 100 100 100 100	Mode Zeitproportional Zeitproportional Zeitproportional Zeitproportional	(Sub-)prgrm Program1 Program1 Program1 Program1 Program1	State Probenahme Ok Probenahme Ok Probenahme Ok Probenahme Ok			
									×	Close		

"Events" area:

Events of the selected device are shown here.

If the cursor *k* is enabled, pressing the left mouse button updates the displayed events according to the position of the cursor in the diagram.

Under "Category" the events can be filtered thematically:

	Events Devi	ce All	 Category 	🛃 Batch,Digital input (In-/Out-messa 🕨	$\mathbf{\overline{\mathbf{v}}}$
Status	Timestamp	Device Name	User Name	Batch Digital input (In-/Out-message)	1
	25.03.2025 15:29:57	Unit 117245 PMO)		Limit violation	
ē	25.03.2025 15:29:59	Unit 117 9045 PMO)		Message acknowledgement	tion T < 178.0 °F
ā	25.03.2025 15:30:31	Unit 113 3045 PMO)		Miscellaneous	tion T > 178.0 °F
Ĩ	25.03.2025 15:31:18	Unit 119 9045 PMO)		Power On/Off SD card/USB-stick	tion T > 215.0 °F
ē	25.03.2025 15:31:19	Unit 114 Main PMO)		Self-calibration	tion T < 215.0 °F
	25.03.2025 15:31:42	Unit 1 Main PMO)		Limit violation Flow H	ligh Alarm

Select "Close" to end the visualization. The window closes.

You can return to the previous view by selecting "Back".

3.2 Visualization of current data (Live View)

3.2.1 Visualization -> New

3.2.1.1 Step 1 of 4: Select device

In step 1, the device to be visualized is selected:

ield Data Manager Soft	ware - Protessional			
<u>V</u> iew <u>E</u> xtras <u>H</u> elp				
Task Pane	× Visualization ×			
Read out data				
Visualization				
<u></u>	Step 1 of 4: Select devices		Endr	ess+Hauser 🕻
New	Display			
2	Saved Data O Current Measurements			
Open	Plant View	Selected Devices		
-	Name / Device Type Serial Number	Name	Device Type	Serial Number
Edit		Unit 1		SIMUIDX002F
			📫 Next	Cance

The selected device appears on the right-hand side.

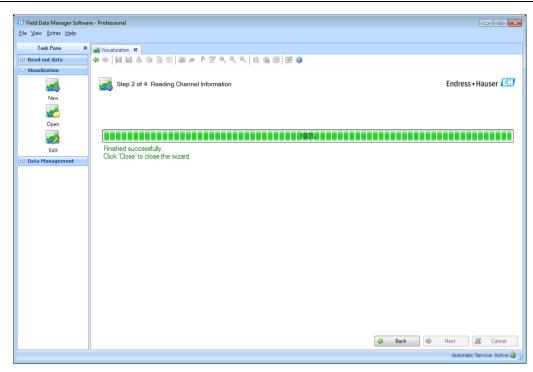
If you later want to remove a device from the list of selected devices, select it in the right-hand list, then double-click the selected device or click the blue arrow that points towards the left to remove it from the list.

If a device has been selected, the "Next" button appears. Click this button to jump to the next step.

Clicking "Cancel" terminates this action, closes the window and ends the process.

3.2.1.2 Step 2 of 4: Read channel information

In step 2, the software reads out the channels of the connected device. Once the read process is completed, the device automatically skips to step 3.



3.2.1.3 Step 3 of 4: Select channels and display format

In step 3, select the channels and display format:

Eile View Extras Help									
Task Pane ×	Visualization [Period 1] 🗴 😹 Visualizati	😴 Visualization [Period 1] 🗙 📷 Visualization 🗙							
🗷 Read out data									
Visualization									
	Step 3 of 4: Channel Selection	1	Endress+Hauser						
New									
	Ourves OBargraph Objital value Objital Objital value Objital Objital	8							
Open	Channels								
	Tag	Device Type	Channel Type						
Edit	Memograph M	Memograph M RSG45							
 Data Management 	Channels Channel 1 Channel 2 Channel 3		Instantaneous Instantaneous Instantaneous						
Plant View	Channel 2 Channel 3 Digital 1 Digital 2 Digital 2		Digital state Counter (Day) Counter (Month)						
export	Digital 2 Digital 2		Counter (Year) Counter (Total Counter)						
Import									
(j)									
Automatic									
			A Back Internet Sector Cancel						
	л		Automatic Service: Active 🧐						
· · · · · · · · · · · · · · · · · · ·									

NOTICE

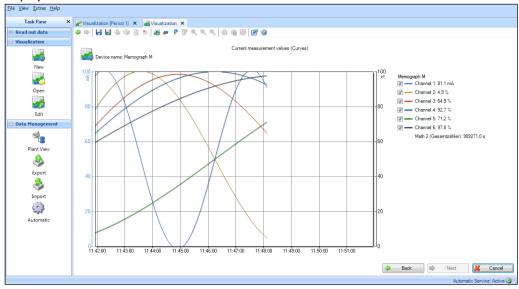
Up to 40 channels or 100 digital inputs can be selected.

Select the channels to be selected and the display format. Measured value curves, bar graphs and digital values are available as possible display formats.

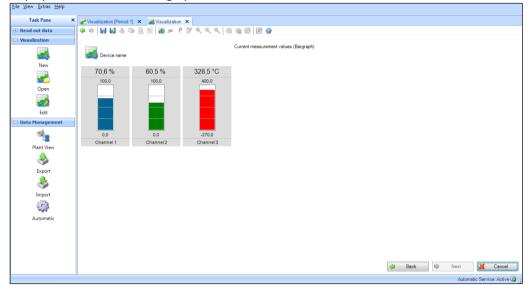
If at least one channel has been selected, the "Next" button is enabled and it is possible to skip to the Live View.

3.2.1.4 Step 4 of 4: Display current values (Live View)

Display current values as measured value curves



Display current values as bar graphs

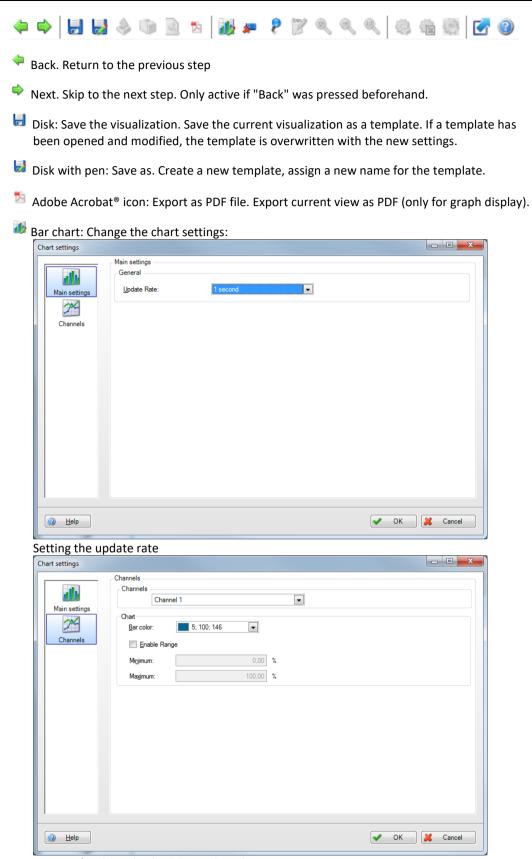


Display current values as digital values

<u>File View Extras H</u> elp					
Task Pane 🗙	Visualization [Period 1] × Kisualization	×			
Read out data	우 수 🖬 🗟 수 🔍 🖻 📓 🖊 두 온	Y < < < @ @ @ @ @			
Visualization		Current measurement value	(Rb)		
	Device name	Current measurement value	s (bargraph)		
New	Digital 1	Digital 2			
2	Off	7496,0			
Open		1400,0			
Edit					
😑 Data Management					
*					
Plant View					
٩					
Export					
Import					
 3 					
Automatic					
				🗢 Back 📫	Next Cancel
					Automatic Service: Active

In step 4, the current data for the selected channels/inputs are displayed.

The following functions of the icons are possible:



Settings for the individual channels: color, area

Reset line chart. Reset the measured value curve (only for measured value curve view).

Pin: Enable or disable value cursor (only for measured value curve view). If you move the cursor over the chart, the value displayed below the graph is automatically updated according to the position of the cursor. By pressing the left mouse button, the displayed values in the "Values" and "Events" area are also updated.

Rectangle with blue arrow: Maximize or minimize the chart

By pressing the "Back" button you can call up and change the channel selection again.

All the channels selected in step 3 are displayed in the right-hand section of the window. The channels can be displayed and hidden by checking and unchecking the check boxes.

3.3 Visualization -> Open

3.3.1 Step 1 of 4: Select template

In step 1, you can select the template of the data to be visualized:

<u>F</u> ile <u>V</u> iew <u>E</u> xtras <u>H</u> elp	
Task Pane X	Visualization ×
■ Read out data	↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓
Visualization	
	Step 1 of 4: Select template
New	🖃 🍪 Templates
2	Peripides Recorder 1 complete Temperature Server
Open	
Edit	
🗉 Data Management	
	📫 Next 🐹 Cancel
	Automatic Service: Active 🤕 🚦

If a template has been selected, the "Next" button appears. If there is a template for saved data, you go directly to step 3. If there is a template for current data, measured value display commences immediately.

NOTICE

In the Essential version, templates can be selected and opened only if they contain data from devices supported by this software version! Templates with more than one device cannot be opened!

Clicking "Cancel" terminates this action, closes the window and stops the process.

3.3.2 Step 2 of 4: Select channel

Step 2 is skipped automatically as the reports and channels of the source devices are already stored in the selected template.

3.3.3 Step 3 of 4: Select time slot or batch

Only for the visualization of saved data. This step is skipped if there is a template for displaying current measured values.

In step 3, select the time slot (or the batch, if available) of the data to be visualized:

Task Pane	× Visualization (Period 1) ×		
Read out data		\$ \$ \$ \$	
Visualization			
<u>~</u>	Step 3 of 4: Select time slots		
New	Period		
2	Range: 1 Day From: 15.08.2015 13:	25:55 To: 16.08.2015 13:25:55 V	
Open	Compare up to 3 time periods		
Edit	Time scale	From	To
Data Management	1 Day	13.08.2015 13:25:55	14.08.2015 13:25:55
-	1 Day 1 Day	14.08.2015 13:25:55 15.08.2015 13:25:55	15.08.2015 13:25:55 16.08.2015 13:25:55
	1 Day	15.08.2015 13.25.55	16.08.2015 13.25.55
Plant View Export Import Automatic			

After selecting at least one time slot for the data to be visualized, you can jump to the next step using "Next".
NOTICE

A maximum of 3 identical time ranges can be selected and thus compared with each other.

Clicking "Cancel" terminates this action, closes the window and stops the process.

You can return to the previous view by selecting "Back".

3.3.4 Step 4 of 4: Graph

Step 4 displays the graph, values and events of the selected time slot or live data (for descriptions, see Section 3.1.1.4 or 3.2.1.4).

3.4 Visualization -> Edit template

3.4.1 Step 1 of 4: Select template

You can edit stored templates here:

Field Data Manager Softwa	ire - Professional	
<u>F</u> ile <u>V</u> iew <u>E</u> xtras <u>H</u> elp		
Task Pane X	Edit template ×	
🕀 Read out data	💅 Schritt 1 von 4: Template auswählen	
Visualization	Vorlage	
	Step 1 of 4: Select template	Endress+Hauser 🖽
New	Templates	
Open		
Edit		
🕀 Data Management		
		📫 Edit 🔀 Close
		Automatic Service: Active 🤯

By selecting a template and right-clicking, you can delete or rename the selected template.

After selecting a template, you can jump to the next step using "Edit" and edit the template.

NOTICE

In the Essential version, templates can be selected and edited only if they contain data from devices supported by this software version! Templates with more than one device cannot be edited!

Select "Close" to end the process. The window closes.

3.4.2 Step 2 of 4: Select devices

In step 2, the source devices are selected. On the left side of the working window, you can see the Plant View (see 4.1 Data management -> Plant view). This view lists all devices for which you can visualize the data.

The right side of the working window shows the devices saved in the visualization template:

<u>File View Extras H</u> elp							
Task Pane ×	Edit template [Period 1]						
Read out data							
Visualization							
2	Step 2 of 4: Select devices						
New	Plant View			-	evices for the selected template		
	Name / Device Type	Begin	End		Name	D Begin	End
Open	Enterprise				Graphic Data Manager (Perio		17.08.2015 12:4
Edit Data Management Plant View So Export Soport Soport Automatic	(a) A Graphic Data. Graphic Data Manager (a) Unit 1 Graphic Data Manager (c) Unit 1 (c) Unit 1 (c) Unit 1 (c) Unit 1 (c) Unit 1	27 07 2015 15:49:41 27 07 2015 15:49:23 27 07 2015 14:46:57 27 07 2015 14:46:57 27 07 2015 13:64:29:8 27 07 2015 13:54:20	30 09 2015 08 38 15 27 07 2015 15 49 23 27 07 2015 15 49 00 27 07 2015 14 31 04 27 07 2015 14 31 04 27 07 2015 14 10 02				
	٠ [ا		F.				
					🗢 Back	Next Next	🔀 Cancel
						Automa	itic Service: Active 🧐

You can select a device for the visualization by checking the device in the Plant View and clicking or double-clicking the blue arrow that appears.

If you later want to remove a device from the list, select it in the right-hand list, then double-click the selected device or click the blue arrow that points towards the left to remove it from the list.

NOTICE

Only supported devices can be selected in the Essential version! No more than one device can be selected!

If at least one device has been selected, the "Next" button appears. Click this button to jump to the next step.

Clicking "Cancel" terminates this action, closes the window and stops the process.

3.4.3 Step 3 of 4: Select channels

In step 3, select the reports and channels:

Task Pane	× Edit template (Period 1)								
	Con template (r enou i)								
Read out data	4 4 (d) X + (b) (2 2 9							
Visualization									
<u></u>	Step 3 of 4: Se	elect channels							
New	Trend	Reports							
2	Measurement values	External External External External	al 3 🔘 External 4						
Open	Channels								
		Tag	Device Type	Min	Max	Average	Status	Instantaneous	*
Edit	📃 😑 Graphic Data M	lanager (Period 1)	Graphic Data Manager						
Data Management	Batches Batch 1								
ಷೆ	Batch 2								
	Batch 3								
Plant View	Batch 4								
	Channel Channel	11							E
>>	Channel					V			
Export	Channel Channel					✓ ✓			
	Channel Channel					V V			
	Channel					V			
Import	Channel								
5	✓ Channel ✓ Digital 1					V			
Automatic	Math 1 Math 2								
Automatic	Math 2								
	V Math 3 Math 4					V			
	Math 5					v			
	Math 6			Ē		V			-

Functions:

Trend:

Measurement values: Instantaneous values (analog values) of the selected device can be selected.

Reports:

Reports can be selected for the selected device, e.g. day, week, month, external (selection only possible if these reports are stored in the device).

Channels:

Device designation/TAG, device type: This shows information about the selected device. Min, max, average, instantaneous: Selection of the analog values of the device. Status: Selection of the digital values of the device.

After selecting the reports and channels for the data to be visualized, the selected template is overwritten by selecting "Update".

Clicking "Cancel" terminates this action, closes the window and stops the process.

You can return to the previous view by selecting "Back".

3.4.4 Step 4 of 4: Update template

In step 4, you update the template selected in step 1.

A progress bar shows the progress in % and displays the estimated time remaining. Once the action has been completed, a confirmation text appears below the progress bar:

<u>File V</u> iew <u>E</u> xtras <u>H</u> elp	
Task Pane ×	Set Edit template [Period 1] ×
Read out data	
Visualization	
	Step 4 of 4: Updating template
New	
~	
Open	
	100%
Edit	The template was successfully updated.
😑 Data Management	
Plant View	
۵	
Export	
Import	
3	
Automatic	
	da Back 📫 Step 1 🎉 Close
	Automatic Service: Active 🤕

To modify additional templates, you can return to step 1 by selecting "step 1".

Select "Close" to end the process. The window closes.

4. Task pane -> Data management

The task "Data Management" includes all functions that pertain to the management of data and devices.

The data are managed by importing data (e.g. in non-secure format as *.csv or *.xls or in secure format as *.fdm). The data can also be relocated from the database to reduce the volume of the database.

The device management takes place primarily via the Plant View, i.e. the tree structure in which all available devices are listed.

4.1 Data management -> Plant view)

You can open the Plant View via the "Data Management -->Plant View" task.

Before you can create devices, an enterprise must be present (is already defined as a default setting). The entire enterprise can then be divided into Site, Area, Process Cell and Unit.

This division results in a tree structure with multiple nodes. You can assign multiple devices to each node:

Task Pane X	Plant View X					
Read out data	+- 🗶 👆 🛍 📝 💷 👶 🦴 🏖 🎯					
Visualization	4					
Data Management	Plant View					
	Name /	Device Type	Begin	End	v Serial Number	
L	😑 🌪 Enterprise					
Plant View	Device 1	Memograph			9A000604267	-
	C Configuration 1		16.04.2010 07:51:29	16.04.2010 14:36:36		
S	🖃 🎢 Memograph M	Memograph			A9007704267	
Export	C Configuration 1		03.09.2009 14:53:06	03.09.2009 15:17:45		
	🖃 👭 Site 1					
	🖃 🔚 Area 1					
	TemperaturRZ	Memograph			A9007704267	
Import	C Configuration 1		05.01.2010 00:00:00	25.01.2012 09:36:00		
5	C TemperaturRZNessel	-	03.09.2009 14:53:09	05.01.2010 11:35:24		
East	C Configuration 2		03.09.2009 14:53:06	03.09.2009 15:17:45		
Automatic	C TemperaturRZNessel	-	03.09.2009 14:53:06	03.09.2009 15:17:45		
Automatic	🖃 🛲 Site 2					
	🖃 🔚 Area 2					
	C Process cell					
	Importiert	Imported				
	C Configuration		15.06.2011 00:00:00	15.06.2011 00:00:00		
	🖃 🗨 Unit					
	🖃 🗷 Unit 1	EngyCal			SCHNALKE002	
	C Configuration		01.01.2010 00:00:00	01.01.2011 19:32:00		
	🖃 🌌 Unit 1	Ecograph T			AA01C004268	
	C Unit 1		15.06.2011 05:52:54	15.06.2011 06:02:42		
	C Unit 1		15.06.2011 05:07:45	15.06.2011 05:57:12		
	C Unit 1		15.06.2011 05:05:48	15.06.2011 05:07:45		
	C Unit 1		15.06.2011 05:04:48	15.06.2011 05:05:45		
	C Unit 1		15.06.2011 05:03:54	15.06.2011 05:04:45		
	C Unit 1		15.06.2011 05:02:57	15.06.2011 05:03:51		
	C Unit 1		15.06.2011 04:58:45	15.06.2011 05:02:56		
					X (Close

NOTICE Not all devices are supported in the Essential version. Only devices supported by this software version can be assigned to the nodes.

The Main Toolbar of the Plant View gives you the following options:



- TPlus": Add a new node, i.e. further subdivide the structure of the enterprise; the hierarchy is as follows: Enterprise, Site, Area, Process Cell and Unit. Devices can be assigned to these nodes. These device nodes can also be renamed, deleted or moved to other plant areas (other higher-level nodes).
- X": Delete a selected node, a device or data from the database. When you delete device data, the time range can be selected:

Delete Da	ta from Configuration 'Config	guration'		×
Please se	elect the time range that shall be del	eted in the database. Select 'Comp	plete time range' to delete the whole node.	
⊂ Period –				
Range:	User defined 🗸 🗸	From: 01.01.2010 00:00:00	то: 01.01.2011 19:32:00	~
			🖌 OK 🔀 Cancel	

NOTICE

When you delete a node, the corresponding allocated subnodes and the devices assigned to these nodes are deleted along with all of the data.

- "Scissors": Cut out the selected node and copy it to the clipboard. You can then reinsert the node by pasting it at another location in the Plant View.
- Clipboard": Paste a node copied to the clipboard earlier

- Import an existing Plant View / device tree (e.g. from FieldCare) (see Section 1.9)
- Wrench": Open the Communication Settings of the selected device (see Section 6.1)
- 😤 "Two arrows": Load the Plant View from the database; this function is needed in order to update the Plant View (e.g. after creating a new device during the first read-out process).

The options listed above (creating, deleting, renaming nodes; merging data; etc.) are also available in the context menu that appears when you right-click.

Creating a new device:

The read-out process for a new device creates a new device node in the Plant View. The readout can take place via the interface or from the storage medium (see Section 2). The data are analyzed while they are read out. If the read-out device is already stored in the database (with serial number and device designation/TAG and the same device configuration) the data are automatically assigned to the corresponding device node and thus to the known device. If there are deviations of the read-out device in the serial number or device designation/TAG, a new device node is created automatically. If the serial number and device designation/TAG do not differ, but the configuration was changed between the last read-out process and the current read-out process, a new configuration node is created for the data under the existing device node. The read-out data are then assigned to this new configuration node.

Importing an existing Plant View/existing device tree:

The Reporting Software allows you to apply an existing, saved device tree or an existing Plant View from another program. This functionality is provided in the "Data Management -> Plant View" task.

Pressing the "Box with arrow" icon opens the directory structure of the computer. Select the storage location and the corresponding CSV file of the Plant View. Then, the tree structure is read into the database and stored there. The same function is provided by selecting the enterprise, then right-clicking and selecting "Import Plant View".

Device settings:

Settings that are assigned directly to a corresponding device can be defined using the setting menu in the Plant View.

To do so, select the corresponding device, then open the settings window by clicking the

"Wrench" icon v by right-clicking "Change Settings" from the context menu. For a detailed description, see Section 6.

4.1.1 Merging configurations

Individual devices which have been read out are identified in the Reporting Software via the device designation/TAG and serial number. In addition, the configuration of the channels is evaluated.

If the read-out data can be clearly assigned to a device (via the serial number and device designation/TAG) but the configuration of the read-out device data does not match the stored device configuration, a new configuration is created below the device node.

This can happen, for example, if the configuration of the device has been changed (e.g. a channel has been switched off or the unit of a channel has been changed) or the device has been used as a portable measuring instrument at different measuring points with a different configuration.

If you want to merge data despite a different configuration, to ensure a continuous database and thus a continuous analysis, you can do so using the "Merge Configurations" function.

When merging, the measuring data are always assigned to the latest, most recent configuration.

Select a configuration in the Plant View in the task "Data Management -> Plant View" 4.1. This selected configuration is then assigned the data of the other configurations, i.e. the selected

configuration remains in place. Clicking the "Rings" icon $\textcircled{0}{0}$ or the context menu that appears when you right-click "Merge Configurations" opens a new dialog window:

4.1.1.1 Step 1 of 2: Select configurations

The left side displays the devices available in the database and their assigned configurations. By double-clicking a configuration, selecting the configuration and clicking the arrow that points to the right in the center of the two boxes or dragging and dropping using the mouse, you can move the configurations to be merged to the right side.

All data of these configurations in the right-hand box are merged and assigned to the configuration selected in the Plant View and the corresponding device.

<u>File View Extras H</u> elp								
Task Pane X	📲 Plant View 🗙 🔘 Merge C	Configurations ×						
🗄 Read out data	(= => @)							
Visualization								
🗉 Data Management	Step 1 of 2: Selec	t Configurations						
		0						
Plant View	Please select at least two confi	gurations from the sam	le device.					
۵	- Plant View	4				Selected Configurati	ons	
Export	Name /	Device Type	Begin	<u>^</u>		Name Dev		End
🕹	⊟ € Unit ⊟ 20 U.	EngyCal RS33	01.01.2010 00:00:00				g 15.06.2011 g 15.06.2011	
Import	🗆 🎮 Unit 1	Ecograph T	01.01.2010 00:00:00					
603	C Unit 1		15.06.2011 05:52:54	_				
inger 5	C Unit 1		15.06.2011 05:07:45	- 1				
Automatic	C Unit 1 C Unit 1		15.06.2011 05:05:48 15.06.2011 05:04:48					
	C Unit 1		15.06.2011 05:03:54		-			
	C Unit 1		15.06.2011 05:02:57					
	C Unit 1		15.06.2011 04:58:45		4			
	C Unit 1		15.06.2011 04:56:09					
	C Unit 1		15.06.2011 04:55:00					
	C Unit 1		15.06.2011 04:53:39	=				
	C Unit 1		15.06.2011 04:20:48					
	C Unit 1njn		25.05.2011 07:20:25					
	C Unit 1		15.06.2011 04:19:42					
	C Unit 1		15.06.2011 04:11:00					
	C Unit 1		15.06.2011 04:11:00	~				
	 III 			>				
							Next	K Cancel
							Automatic S	Service: Active 🔞 🔒

NOTICE

Once devices and device configurations are merged, this cannot be undone.

Pressing the "Next" button or the green arrow in the Main Toolbar jumps to step 2 and merges the configurations.

4.1.1.2 Step 2 of 2: Merge

It is only possible to merge configurations if no data are lost as a result of the merge. Example: A device has 2 configurations. 2 channels were active in the older configuration while one channel was switched off in the more recent configuration. As a result of the merge, all the data are assigned to the latest (more recent) configuration. In this example, only one channel would now be active. It would not be possible to access the data of the second channel. For this reason, in our example it is not possible to merge the configurations. In such situations a message is displayed.

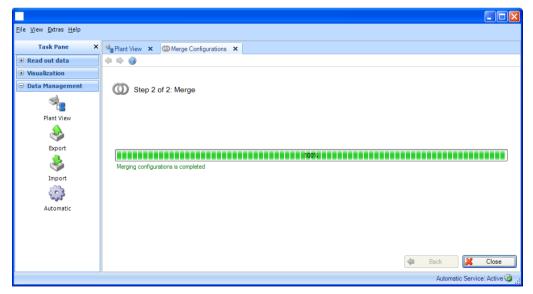
Other situations can, however, occur in which the user can decide whether the configurations are to be merged or not. An example would be changing a unit of a channel or switching a channel from average to minimum. A message is displayed here, e.g.:

@ Merge	X
Merge Configurations: Device 1 - Device 1	
The configurations have a channel 'Analog 1' with a different type. The type will be changed from 'Average' to 'Min'.	<
After the merge the settings of the newer configuration will be used. To keep the data as they have been stored in the device the merge should be canceled.	
Press "Merge Configurations" to use the settings of the newer configuration or "Cancel" to cancel the merge of the configurations.	
Cancel Merge Configurations	

Select the appropriate button to either merge the configurations or cancel the merge.

A progress bar shows the progress in % and displays the estimated time remaining. You can stop the action during this procedure by pressing the "Cancel" button. You can return to the previous view by selecting "Back".

Once the action has been completed, a confirmation text appears below the progress bar:



Select "Close" to end the process. The window closes.

4.1.2 Merge devices

Individual devices which have been read out are identified in the Reporting Software via the device designation/TAG and serial number.

If devices do not match in these points, they are created as separate devices in the Plant View.

For replacement devices/spare devices, you are prompted to merge the data despite the different serial numbers to ensure a continuous database and thus a continuous analysis. The "Merge Devices" function enables you to do this.

You can select one of the devices to be merged in the Plant View in the task "Data Management - > Plant View" 4.1. The selected device remains, and all data of the devices to be merged are

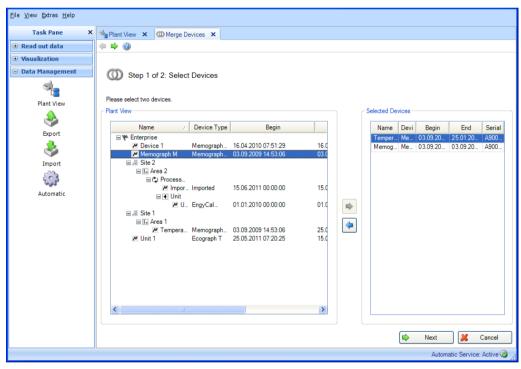
assigned to this selected device from now on. Clicking the icon ⁽¹⁾ or the context menu that appears when you right-click "Merge Devices" opens a new dialog window:

4.1.2.1 Step 1 of 2: Select devices

The left side stores the devices available in the database.

By double-clicking a device, selecting the device and clicking the arrow that points to the right in the center of the two boxes or dragging and dropping using the mouse, you can move the devices to be merged to the right side.

All data of these devices in the right-hand box are merged and assigned to the device selected in the Plant View:

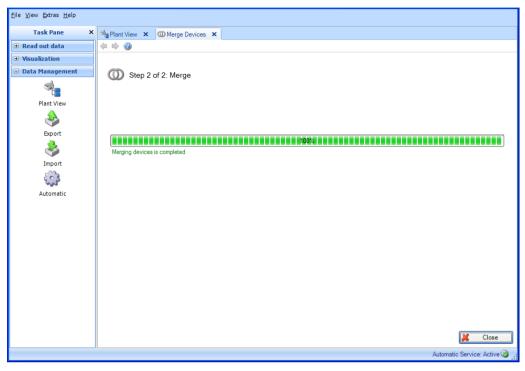


Pressing the "Next" button or the green arrow in the Main Toolbar jumps to step 2 and merges the data of the devices.

4.1.2.2 Step 2 of 2: Result: merge devices

A progress bar shows the progress in % and displays the estimated time remaining. You can stop the action during this procedure by pressing the "Cancel" button. You can return to the previous view by selecting "Back".

After the devices and their data have been merged successfully, a confirmation text appears below the progress bar:



NOTICE

Once devices are merged, this cannot be undone.

Select "Close" to end the process. The window closes.

4.2 Data management -> Export

You can export the data stored in the database. Various options exist for doing so:

- Tamper-proof export in a secure format (binary files *.fdm)
- Export to non-secure formats (Excel / CSV)

Data that are exported in the secure format cannot be modified. This enables you to securely relocate the data to reduce the data volume in the database or to transfer data to another database or another user so that they are secured against tampering.

If data in the secure format are read back into the Reporting Software, they are treated the same as original data.

If data are stored in Excel or CSV format, they are identified as manual data.

The differentiation of the type of export takes place in the first step by selecting the file type/format.

4.2.1 Export in a secure format (binary files, *.fdm)

To export data, the export function under "Data Management -> Export" is used. The export in the secure format takes place in 6 steps:

4.2.1.1 Step 1: Select export format

You can choose between "binary files (*.fdm), Excel (*.xls)", "CSV files (*.csv)" or "CSV for energy monitoring files (*.csv)".

To export in the secure format, select "binary files (*.fdm)" here:

<u>F</u> ile <u>V</u> iew <u>E</u> xtras <u>H</u> elp		
Task Pane 🗙	Second X	
Read out data	(= = % @)	
Visualization		
🖃 Data Management	Step 1: Select Export Format	
Plant View	File type : Binary files (*.fdm)	~
A	Binary files (*.fdm) Excel (*.xls)	
Export	CSV files (*.csv)	
	CSV for energy monitoring files (*.csv)]
Import		
53		
Automatic		
		Cancel
	Automatic Service:	Active 🎯 🔡

Note about export for energy monitoring:

Data for energy monitoring are exported in a non-protected format (*.csv) with specially matched properties (column limit, date and time format are set by default). To import measured values of the evaluation software to the energy monitoring software, you have to enter an import code there. The import code is composed of <channel name>-<type>, i.e. the combination of the first two cells in each column. Example: "Analog 1-average" or "Analog 2-"

NOTICE A "CSV for energy monitoring files (*.csv)" export is not supported in the Essential version.

4.2.1.2 Step 2 of 6: Select device

The left side shows the devices available in the database.

By double-clicking a device, selecting the device(s) and clicking the arrow that points to the right in the center of the two boxes or dragging and dropping using the mouse, you can move the device(s) to be exported to the right side.

jile <u>V</u> iew <u>E</u> xtras <u>H</u> elp									
Task Pane X	Sexport ×								
Read out data	🗢 🔿 🗞 🔞								
Visualization									
Data Management	Step 2 of 6: Selec	t Device							
-		C Device							
1	C Plant View					- Selected Dev	ice		
Plant View			(1	
	Name 🗡	Device Type	Begin			Name	Devi	Begin	End
	🖃 🐃 Enterprise					Imported	Imp	15.06.2011	15.06.20
Export	M Device 1	Memograph	16.04.2010 07:51:29	16					
4	EH_CSF48_	Liquistation	05.05.2010 10:27:47	26 03					
Sector 1	Memograph M	Memograph Memograph	03.09.2009 14:53:06 19.11.2009 14:25:58	19					
Import	Scharsche	Memograph	13.11.2005 14.23.36	15					
~~~	E Area 1								
603		Memograph	03.09.2009 14:53:06	25					
484									
Automatic	🖃 🏣 Area 2				-				
	⊟ C Process								
	🖃 🗨 Unit								
	M I		15.06.2011 00:00:00	15	-				
			01.01.2010 00:00:00	01					
	Z Unit 1	Ecograph T	25.05.2011 07:20:25	15					
	<			>					
					4	Back	•	Next	💢 Can
					<u> </u>			Automatic S	

You can export the data of the device on the right side.

Pressing the "Next" button or the green arrow in the Main Toolbar jumps to the next step.

# 4.2.1.3 Step 3 of 6: Select time slot

You can define a time range using the drop-down lists provided. All stored data of the selected devices that lie within this time range are exported.

<u>File View Extras H</u> elp		
Task Pane 🗙	Sexport ×	
🗷 Read out data	4 + % 0	
Visualization		
😑 Data Management	Step 3 of 6: Select Time Slot	
Plant View	~ Period	—
	Range: User defined 🛛 From: 15.06.2011 00:00:00 🔽 To: 15.06.2011 00:00:00 💟	
<b>S</b>		
Export		
Import		
<b></b>		
Automatic		
	🗢 Back 📫 Next 😹 Cance	el
	Automatic Service: Activ	ve 🔞 .:

### 4.2.1.4 Step 4 of 6: Select file name and file size

#### Output File:

File name: You can define the storage location here. Clicking the "..." button opens the directory structure of the computer and the storage location for the export can be selected.

Maximum file size: To limit the size of the export file or adapt it to the medium of the target storage location (such as DVD, CD), you can select the target medium using the drop-down list:

<u>F</u> ile <u>V</u> iew <u>E</u> xtras <u>H</u> elp	
Task Pane X	Sexport X
	🏟 📫 🗞 🎯
Visualization	
😑 Data Management	Step 4 of 6: Select File Name and File Size
	C Output file
Plant View	File name : X/\ExportFile.fdm
۵	Maximum file size : Unlimited
Export	Unlimited
	✓ Repeat export p CD (650 MB) DVD (4.5 GB)
Import	Delete data after export was successful
ŝ	
Automatic	
	🗢 Back 🕪 Next 😫 Cancel
	Automatic Service: Active 🚱 🔒

Beneath that, two additional functions are offered:

#### Repeat export periodically:

Automatic export and automatic storage of data in secure format. Enabling/checking this check box activates an automatic function for export.

Delete data after export was successful:

Enabling this check box deletes the successfully exported data from the database. This means that the data are no longer available in the database, but only as a secure export file.

#### NOTICE

Once data are deleted from the database, this cannot be undone! If you want the data to be available later for reports or visualizations, these data exported in the secure format must be re-imported into the Reporting Software.

#### 4.2.1.5 Step 5 of 6: Configure automatic

## NOTICE

This is visible only if "Repeat export periodically" has been selected in the previous step:

<u>Fi</u> le <u>V</u> iew <u>E</u> xtras <u>H</u> elp					
Task Pane X	🕹 Export 🗙				
🗄 Read out data	💠 🗣 🦠 🔞				
Visualization					
Data Management	A Step 5 of 6:	Configure Automatic			
	-				
Plant View	Data backup				
۵	Active				
Export	Interval:	Monthly			
A	Start day:	Last day in month	Start time:	23:59:59	
Import	Data time period:	0 Day 00:10:00			
<u></u>	File Path:	D:\Users\i00400102\Documents\Exp			
Automatic	File Path:	D:\Users\I00400102\Documents\Exp	ontriie.tam		
	Data elimination				
	Active				
	Interval:	Monthly			
	Start day:	Last day in month	Start time:	23:59:59	•
			Start and.	20.00.00	
	Older then:	100 Days 00:00:00			
			<b>\</b>	Back 📫	Next 🔀 Cancel
					Automatic Service: Active 凌 🔐

#### Data backup:

The interval for automatic export is defined here. For this purpose, the "Active" check box must be selected.

Interval: How often does the export take place?

Depending on the selected interval, define following points, such as repetition, Start day and Start time.

Data time period: This selects the time range for export. This means that the export at the defined point in time contains the data of the selected time range, beginning at the start date/time of export and going back (see Section 6.6).

File path: If a network drive is selected, you are also asked to enter a user and password. The setting is then saved and can be modified under "Extras -> Settings -> Automatic" (see Section 5.1.6).

#### NOTICE

Logon for the automatic service must be modified to allow the automatic function access to the network drive (see Section 5.1.6).

#### Data elimination:

#### NOTICE

Once data are deleted from the database, this cannot be undone! Ensure that data that are deleted from the database are really no longer needed, or have already been saved to another storage location as a secure export so that they are available later if needed.

This configures the automatic function for deleting the data from the database. If you select the "Active" check box, exported data are deleted irretrievably from the database (see Section 6.4).

#### NOTICE

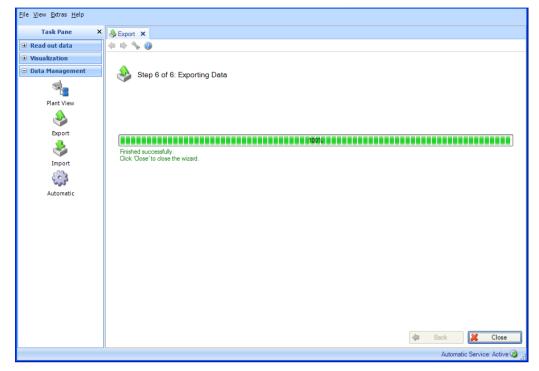
Before confirming with the "Next" button, please check the selection you have made: Do you really want to delete the data? Do the automatic export function and automatic deletion overlap? Have you ensured that the data are not deleted before the secure export?

Pressing the "Next" button or the green arrow in the Main Toolbar jumps to the next step, starts the export, deletes the data and starts the automatic function (if selected).

# 4.2.1.6 Step 6 of 6: Export data

A progress bar shows the progress in % and displays the estimated time remaining. You can stop the action during this procedure by pressing the "Cancel" button. You can return to the previous view by selecting "Back".

After the data are exported successfully, a confirmation appears below the progress bar:



Select "Close" to end the process. The window closes.

# 4.2.2 Exporting in a non-secure format (Excel/CSV, energy monitoring)

To export data, the export function under "Data Management -> Export" is used. The export to a non-secure format (Excel/CSV) takes place in 8 steps:

## 4.2.2.1 Step 1 of 8: Select export format

You can choose between "Excel (*.xls)", "CSV files (*.csv)" or "CSV for energy monitoring files (*.csv)":

<u>File View Extras H</u> elp	
Task Pane 🗙	Sexport ×
🗄 Read out data	
Visualization	
🖃 Data Management	Step 1: Select Export Format
L Plant View	C Output file
	File type : CSV files (*.csv)
<b>*</b>	Binary files (* 1dm)           Excel (* xls)           CSV files (* cav)
Export	CSV files (*.csv) CSV for energy monitoring files (*.csv)
Import	
ŝ	
Automatic	
Automatic	
	📫 Next 🔰 Cancel
	Automatic Service: Active 🥝 🚠

Note about export for energy monitoring:

Data for energy monitoring are exported in a non-protected format (*.csv) with specially matched properties (column limit, date and time format are set by default). To import measured values of the evaluation software to the energy monitoring software, you have to enter an import code there. The import code is composed of <channel name>-<type>, i.e. the combination of the first two cells in each column. Example: "Analog 1-average" or "Analog 2-"

**NOTICE** A "CSV for energy monitoring files (*.csv)" export is not supported in the Essential version.

#### 4.2.2.2 Step 2 of 8: Select usage of template

Here, you can select which data are exported:

<u>File View Extras H</u> elp	
Task Pane X	Seport ×
Read out data	
Visualization	
<ul> <li>Data Management</li> </ul>	
	Step 2 of 8: Select Usage of Template
	Action
Plant View	Don't use templates  () [Create new template] () Open template
٨	
Export	Template
&	🕼 🤣 🛍 🖉
Import	E 🚱 Templates
(Č3	Recorder 1 complete     Sampler
Automatic	Temperature Server
	\Templates
	Template name:
	Sack Next Cancel
	Automatic Service: Active 🤕 🔒

#### Don't use templates:

If the following device and channel selection should apply for the export only, and if the report to be defined is not needed for other automatic actions (automatic visualization/automatic print out), you can select the "Don't Use Templates" option here.

#### Create new template:

If you want to define a new template, you can select the "Create New Template" option here. In this case, the template is also available for later visualizations. Templates are predefined reports with preselected devices and channels.

Using the "Template Name" line, you can assign a new name for the template to be created. Only after a name is defined can you jump to the next step.

You cannot use names that have already been assigned as in this case the existing template would be overwritten. If you want to change an existing name of a template to identify it uniquely, you can do so by right-clicking and selecting "Rename".

Open Template: If a report to be generated has already been defined as a visualization and stored as a template, you can select the template (which already contains the corresponding devices and channels) here.

**NOTICE** In the Essential version, templates can be selected only if they contain data from devices supported by this software version! Templates containing more than one device cannot be edited!

If you want to make changes in the device or channel selection, you can do so by clicking the "Back" button or the corresponding green arrow icon in the Main Toolbar.

# 4.2.2.3 Step 3 of 8: Select devices

### NOTICE

This step is skipped if you are using an existing template.

The left side displays the devices available in the database and their configurations. By double-clicking a configuration, selecting the configuration and clicking the arrow that points to the right in the center of the two boxes or dragging and dropping using the mouse, you can move the devices to be exported to the right side.

You can export the data of the devices on the right side.

<u>File View Extras H</u> elp	
Task Pane 🗙	Sexport X
🗷 Read out data	4 + % 0
Visualization	
🗉 Data Management	Step 3 of 8: Select Devices
-	
	Plant View Selected Devices
Plant View	Name 🛆 Device Type Begin 🔼 Name Devi Begin End
A	Enterprise Device 1 Me., 16.04.2010., 16.04.2010.
Export	E Z Device 1 Memograph M
٩.	Configuratio 16.04.2010 07:51.29
<b>S</b>	© EH_CSF48_ 05.05.2010 10:27:47
Import	Memograph M Memograph M      Configuratio      03.09.2009 14:53:06
63	■ M Scharsche Memograph M
Automatic	C Scharsche 19.11.2009 15:08:00
	Image: Constraint of the state of
	🖬 🖬 Area 1
	C Temp 03.09.2009 14:53:09
	C Confi 03.09.2009 14:53:06
	C Temp 03.09.2009 14:53:06
	E Area 2
	G Process      ✓
	🗢 Back 📫 Next 🎉 Cancel
	Automatic Service: Active 🤕

#### NOTICE

Only supported devices can be selected in the Essential version! No more than one device can be selected!

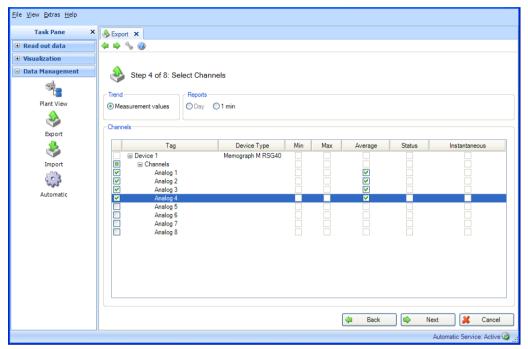
#### 4.2.2.4 Step 4 of 8: Select channels

## NOTICE

This step is skipped if you are using an existing template.

The left side displays the active channels of the selected devices/configurations. You can select the corresponding channels by selecting the check boxes.

You can select all active channels by selecting the check box of the configuration (of the respective higher-level check box).



### Functions:

#### Trend:

Measurement values: Instantaneous values (analog values) of the selected device can be selected.

#### Reports:

Reports can be selected for the selected device, e.g. day, week, month, external, measuring periods (selection only possible if these reports are stored in the device).

#### Channels:

Device designation/TAG, device type: This shows information about the selected device. Min, max, average, instantaneous: Selection of the analog values of the device. Status: Selection of the digital values of the device.

#### 4.2.2.5 Step 5 of 8: Select time slots or batches

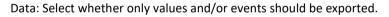
You can define a time range (or the batches if available) using the drop-down lists provided. All stored data of the selected devices that lie within this time range are exported.

<u>F</u> ile <u>V</u> iew <u>Ex</u> tras <u>H</u> elp	
Task Pane 🗙	Sexport X
Read out data	(4 4 4 % (i)
Visualization	
Data Management	Step 5 of 8: Select Time Slots
	CPeriod
Plant View	Range: User defined V From: 16.04.2010 07:51:29 V To: 16.04.2010 14:36:36 V
i 🕹	
Export	
Import	
ŝ	
Automatic	
	🗢 Back 📫 Next 🐹 Cancel
	Automatic Service: Active 🥝

Pressing the "Next" button or the green arrow in the Main Toolbar jumps to the next step.

#### 4.2.2.6 Step 6 of 8: Select file name

You can define a storage location in the "Output File" box. Clicking the "..." button opens the directory structure of the computer and the storage location for the export can be selected.



Task Pane          Export [Recorder 1 complete] ×             Read out data             Visualization             Data Management             Plant View             Plant View             Data Management             Visualization             Data Management             Visualization             Data Management             Visualization             Plant View             Plant View             Plant View             Data Management             Utput file             Plant View             Data and Events             Data Work and Events             Data Work and Events            Plant View             Plant View             Plant View             Data Management             Data Management             Data Management             Data Management	<u>File View Extras H</u> elp	
♥ Visualization         ▶ Data Management         ♥         ♥         Plant View         ●         ▶         Export         ●         Import         ●           Step 6 of 8: Select File Name        Output file       File name :         C\Dokumente und Einstellungen\KinzelC\Eigene Dateien\ExportFile         Data :       Values and Events         ●       Repeat export periodically	Task Pane X	Sexport [Recorder 1 complete]
□ Data Management       Step 6 of 8: Select File Name            Plant View           Output file          Plant View           Cuput file          Export           Data : Values and Events          Data management          w management	■ Read out data	(+ + % ())
Step 6 0 3. Select File Name       Plant View       Step 5 0 3. Select File Name       Output file       File name :       C/Dokumente und Einstellungen/KinzelC/Eigene Dateien/ExportFile       Data :       Values and Events       Import       Import		
	Plant View So Export Import	Output file File name : C:\Dokumente und Einstellungen\KinzelC\Eigene Dateien\ExportFile  Data : Values and Events
Automatic Service: Active 🐼		

Repeat export periodically: Automatic export and automatic storage of data in non-secure format. Enabling/checking this check box activates an automatic function for export.

**NOTICE** Automatic export and automatic storage of data in a non-secure format are not supported in the Essential version.

NOTICE

"Repeat export periodically" is possible only when using a template. (See step 2 of 8).

Pressing the "Next" button or the green arrow in the Main Toolbar jumps to the next step.

#### 4.2.2.7 Step 7 of 8: Configure automatic

#### NOTICE

This is visible only if "Repeat export periodically" has been selected in the previous step.

In the "Excel/CSV Export" box, you can define the interval (repetition rate) of the automatic export. For this purpose, the "Active" check box must be selected.

Interval: How often does the export take place? Depending on the selected interval, define the following points, such as repetition, start day and

start time (see Section 6.6).

Data time period: This selects the time range for export. This means that the export at the defined point in time contains the data of the selected time range, beginning at the start date/time of export and going back.

Export type: Select whether only values and/or events should be exported.

File handling: Select whether a new export file should be created, whether the export file should be appended to an existing file or whether the existing file should be overwritten.

File size: In order to restrict the size of the export file or to adjust it to the medium of the storage location (such as DVD, CD) the target medium can be selected in the drop-down list.

File path: If a network drive is selected, you are also asked to enter a user and password. The setting is then saved and can be modified under "Extras -> Settings -> Automatic" (see Section 5.1.6).

#### NOTICE

Logon for the automatic service must be modified to allow the automatic function access to the network drive (see Section 5.1.6).

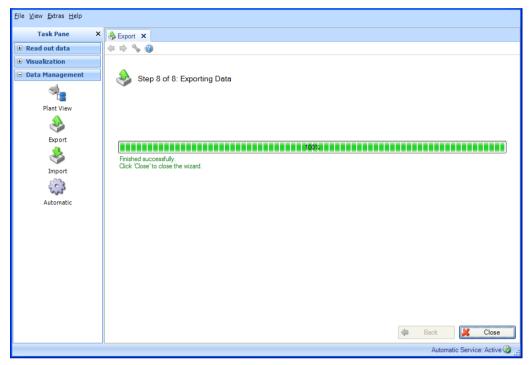
Task Pane	<u>Fi</u> le <u>V</u> iew <u>E</u> xtras <u>H</u> elp	
♥ Visualization         ● Data Management         ● Data Management <tr< td=""><td>Task Pane X</td><td>Sexport [Recorder 1 complete]</td></tr<>	Task Pane X	Sexport [Recorder 1 complete]
□ Data Management       Imagement         Imagement       Imagement         Image	Read out data	(+ + % ())
Step 7 bit 5. Conligure Automatic         Plant View         Step 7 bit 5. Conligure Automatic         Export         Step 7 bit 5. Conligure Automatic         Import         Step 7 bit 5. Conligure Automatic         Export         Step 7 bit 5. Conligure Automatic         Export         Import         Stat tay:         Last day in month         Export typ:         Values         File handling:         New         File format:         CSD Files (*.csv)         File Path:         C:Dokumente und Einstellungen/KinzelC/Eigene Dateien/ExportFile.csv         Back       Next		
Export   Start day:   Import		*
Interval:       Monthly         Start day:       Last day in month         Start day:       Last day in month         Start day:       Last day in month         Data time period:       0 Day 00:10:00         Export typ:       Values         File handling:       New         File format:       CSV Files (".csv)         File Path:       C:\Dokumente und Einstellungen\KinzelC\Eigene Dateien\ExportFile.csv         Image: Back       Next	٠	C Active
Import Data time period: D Day 00:10:00 Export typ: Values File handling: New File Size: Unlimited File format: CSV Files (*.csv) V File Path: C:\Dokumente und Einstellungen\KinzelC\Eigene Dateien\ExportFile.csv V Back Next Kancel	Export	
Automatic       Export typ:       Values         File handling:       New       File Size:       Unlimited         File format:       CSV Files (*.csv)       Image: CSV File Size:       Image: CSV File Size:         File Path:       C:\Dokumente und Einstellungen\KinzelC\Eigene Dateien\ExportFile.csv       Image: Cancel	Import	
Automatic File handling: New File Size: Unlimited File format: CSV Files (*.csv) File Path: C:\Dokumente und Einstellungen\KinzelC\Eigene Dateien\ExportFile csv IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	ි	
File format:       CSV Files (*.csv)         File Path:       C:\Dokumente und Einstellungen\KinzelC\Eigene Dateien\ExportFile.csv         Image: Comparison of the second sec	Automatic	
File Path: C:Dokumente und Einstellungen/KinzelC/Eigene Dateien/ExportFile.csv 💌 🛄		
ack Next X Cancel		File format: CSV Files (*.csv)
		File Path: C:\Dokumente und Einstellungen\KinzelC\Eigene Dateien\ExportFile.csv 💟 🛄
		🗢 Back 🔖 Next 🎉 Cancel
Automatic Service: Active Service		Automatic Service: Active 设

Pressing the "Next" button or the green arrow in the Main Toolbar jumps to the next step and starts the export and the automatic function (if selected).

#### 4.2.2.8 Step 8 of 8: Export data

A progress bar shows the progress in % and displays the estimated time remaining. You can stop the action during this procedure by pressing the "Cancel" button. You can return to the previous view by selecting "Back".

After the data are exported successfully, a confirmation appears below the progress bar:



Select "Close" to end the process. The window closes.

## 4.3 Data management -> Import

The Reporting Software allows you to import data into the database. These data can be provided by devices as well as files.

For this purpose, you have the option of importing data that were previously exported in the secure format using the *.fdm format. This format ensures that data are tamper-protected and thus are genuine measured data.

It is possible to import data from the ReadWin 2000 PC software via the rsd format (see Section 1.10).

NOTICE The transfer of data from ReadWin 2000 is not supported in the Essential version!

It is also possible to import data from Excel (*.xls) or as a CSV file (*.csv). This can be used for planning data, for example. This enables you to carry out direct comparisons of planning data and actual measured data.

Data imported in XLS or CSV format are identified as manual data.

Import format for Excel (*.xls) or CSV (*.csv) files:

If data are to be imported into the Reporting Software using Excel or CSV, the values (measured values, channel names etc.) must be entered into the corresponding file. It is important that the time stamp cell has the format (e.g. YYYY-MM-dd hh:mm:ss).

ISO 8601 must be taken into consideration for the format of the time stamp cell. The dash "-" is defined as the separator for the day, month and year.

Example:

Time format	Channel 1	Channel 2	Channel 3	Channel 4
(YYYY-MM-dd hh:mm:ss)	name	name	name	name
	Channel 1	Channel 2	Channel 3	Channel 4
	unit	unit	unit	unit
2000-11-23 23:48:34	0.0002	0.01	12	2778
2000-11-23 23:48:35	0.345	0.03	24	56456
2000-11-23 23:48:36	0.0688	0.05	36	110134
2000-11-23 23:48:37	0.1031	0.07	48	163812
2000-11-23 23:48:38	0.1374	0.09	60	217490
2000-11-23 23:48:39	0.1717	0.11	72	271168

## 4.3.1 Step 1 of 3: Select source

You can define a storage location for the data in the "Select File" box. Clicking the "..." button opens the directory structure of the computer and you can select the file to be imported.

If you select a file in the secure format (*.fdm), step 2 is skipped, as the devices to be imported have already been defined by the format.

<u>F</u> ile <u>V</u> iew <u>E</u> xtras <u>H</u> elp	
Task Pane X	🗞 Import 🗙
🗈 Read out data	(+ + 0)
Visualization	
🖃 Data Management	Step 1: Select Source
	*
Plant View	Select file
چ	C\Dokumente und Einstellungen\KinzelC\Eigene Dateien\ExportFile_Values.xls
Export	
Import	
<b>E</b>	
Automatic	
	📫 Next 🎉 Cancel
	Automatic Service: Active 🔞 🚲

Pressing the "Next" button or the green arrow in the Main Toolbar jumps to the next step.

## 4.3.2 Step 2 of 3: Select device

Select a device or a node in the Plant View. The data to be imported are then assigned organizationally to this plant section:

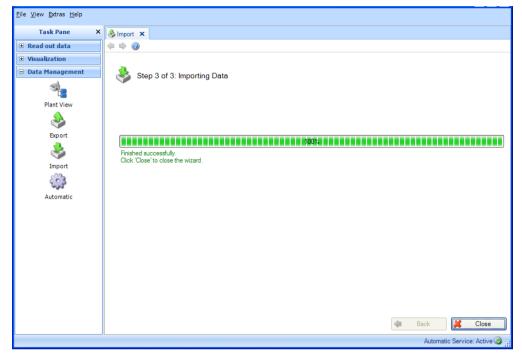
<u>File View Extras H</u> elp	
Task Pane 🛛 🗙	🕻 🎯 Import 🗙
🗈 Read out data	
Visualization	
Data Management	Step 2 of 3: Select Device
Plant View	Plant Vew
۵	Name         A         Device Type         Begin         End         V         Serial
Export	
<u>يل</u>	🖬 Area 1
Import	Area 2
~~~~	E C Process cell
2005	Imported
Automatic	
	🐗 Back 🖨 Next 🎉 Cancel
	Automatic Service: Active 🥝

Pressing the "Next" button or the green arrow in the Main Toolbar jumps to the next step and starts the import.

4.3.3 Step 3 of 3: Import data

A progress bar shows the progress in % and displays the estimated time remaining. You can stop the action during this procedure by pressing the "Cancel" button. You can return to the previous view by selecting "Back".

After the data are imported successfully, a confirmation appears below the progress bar:



Select "Close" to end the process. The window closes.

4.4 Data management -> Automatic

The automatic function is set up as a system service and runs in the background. Before you can activate an automatic function, you have to install the automatic component during the initial installation of the Reporting Software. If the automatic component is installed, the

Automatik Service: Aktiv (2), icon appears on the bottom right of the window. If this icon is not present, the component has to be installed. This is available on the installation DVD (see Chapter 1.5).

NOTICE Only automatic readout, automation deletion of data in the device following successful readout and automatic binary export are supported in the Essential version. The "Automatic XLS/CSV export", "Automatic PDF export" and "Automatic print out" functions are not available in this software version.

4.4.1 Automatic information: Current overview

All the automatic functions are set up in the "Data Management -> Automatic" task. In addition, the task also provides an overview of all the active or inactive automatic processes.

NOTICE

The automatic functions defined in the individual steps are still valid and can also be managed via the central task described here.

4.4.1.1 Step 1 of 3: Job type selection

<u>F</u> ile <u>V</u> iew <u>E</u> xtras <u>H</u> elp	
Task Pane X	WF Abconduce A
🗷 Read out data	
Visualization	
😑 Data Management	Step 1 of 3: Job Type selection
	-4-
Plant View	Automatic Information
٠	Current overview C Event view Automatic new/edit
Export	Select task:
i i i i i i i i i i i i i i i i i i i	Read out device
Import	
ŝ	
Automatic	
	Next 🔀 Cancel
	Automatic Service: Active 🥥 🔒

Automatic information: Select the desired information. Options: Current overview, Event view, Automatic new/edit.

Pressing the "Next" button or the green arrow in the Main Toolbar jumps to the next step.

4.4.1.2 Step 2 of 3: Select template or device

Step 2 is skipped automatically as it is not necessary to make a selection for the automatic overview.

4.4.1.3 Step 3 of 3: Automatic overview

An overview of all the automatic tasks is provided in step 3:

Task Pane >	< 🖗 A	utomatic	x					
Read out data	4 🛛	* 🗶	8 💊 🕜					
• Visualization								
Data Management	5	2	ep 3 of 3: Automatic ove					
Plant View	Auto	omatic tas		SI VIEW				
		Active	Device or template name	Name	Initial time	Previous executi	Current executio	Next execution ti
**			TemperaturRZ	Automatic - Binary E	26.01.2012 10:1	Nicht verfügbar	Nicht verfügbar	31.01.2012 23:59
Export			Unit 1	Automatic - Binary E	26.01.2012 10:1	Nicht verfügbar	Nicht verfügbar	31.01.2012 23:59
٠								
	•		Imported	Automatic - Delete d	26.01.2012 10:1	Nicht verfügbar	Nicht verfügbar	27.01.2012 09:00
Import			TemperaturRZ	Automatic - Delete d	26.01.2012 10:1	Nicht verfügbar	Nicht verfügbar	31.01.2012 23:59
503			Unit 1	Automatic - Delete d	26.01.2012 10:1	Nicht verfügbar	Nicht verfügbar	31.01.2012 23:59
Carol			TemperaturRZ	Automatic - Read out	26.01.2012 10:1	Nicht verfügbar	Nicht verfügbar	27.01.2012 09:00
Automatic			TemperaturRZ	Automatic - Time syn	26.01.2012 10:1	Nicht verfügbar	Nicht verfügbar	27.01.2012 09:00
			Recorder 1 complete	Automatic - XIs/ Csv	26.01.2012 11:3	Nicht verfügbar	Nicht verfügbar	31.01.2012 23:59
						ſ	a Back	Close

The individual automatic task can be enabled or disabled here.

Color code:

Orange: Automatic task is disabled

White: Automatic task is enabled and ready for execution

Green: Automatic task is currently being executed

Blue: Automatic task is selected and can be deleted by clicking "X" in the toolbar.

Red: Status of the automatic service is unknown (error, e.g. automatic function uninstalled)

Select "Close" to end the process. The window closes.

4.4.2 Automatic information: Event view

All the automatic functions are set up in the "Data Management -> Automatic" task. In addition, the task also provides an overview of all the active or inactive automatic processes.

NOTICE

The automatic functions defined in the individual steps are still valid and can also be managed via the central task described here.

4.4.2.1 Step 1 of 3: Job type selection

<u>Fi</u> le <u>V</u> iew <u>Extras</u> <u>H</u> elp	
Task Pane X	Automatic ×
🗈 Read out data	
Visualization	
😑 Data Management	Step 1 of 3: Job Type selection
Plant View	Automatic Information
٩	○ Current overview ③ Event view ○ Automatic new/edit
Export	
2	Select task:
Import	Read out device
5	
~~~	
Automatic	
	📫 Next 🐹 Cancel
	Automatic Service: Active 🔕 🔐

Automatic information: Select the desired information. Options: Current view, Event view, Automatic new/edit.

Pressing the "Next" button or the green arrow in the Main Toolbar jumps to the next step.

#### 4.4.2.2 Step 2 of 3: Select template or device

Step 2 is skipped automatically as it is not necessary to make a selection for the event overview.

#### 4.4.2.3 Step 3 of 3: Automatic event overview

An event overview of all the automatic tasks is provided in step 3:

<u>File V</u> iew <u>Ex</u> tras <u>H</u> elp	
Task Pane X	🖗 Automatic 🗙
Visualization	
🖃 Data Management	Step 3 of 3: Automatic event overview
	/ Events
Plant View	All entries are stored in the file CADokumente und Einstellungen\All
۵	Users\Anwendungsdaten\Endress+Hauser\FieldDataManager\WindowsServiceLog.txt. If the file size is bigger than one mega byte the automatic will remove the last 500 entries of the file.
Export	0 - TimeStamp: 2012-01-26, Level: Info, Message: Successfully executed Read-Delete Values Job. Id: 4, FireTime: 09:00:00 AM, Device:4;1;2;1;10.55.
	TimeStamp: 2012-01-26, Message: Binary Export Job Error, File path not found:, FireTime: 09:00:00 AM     TimeStamp: 2012-01-26, Message: FdmAutomaticTimeStynchronizeJob. Execute. Can't synchronize because time difference is to big. Difference: 0 da     TimeStamp: 2012-01-26, Level: Info. Message: Successfully executed Delete Device Values Job. 1d: 7. FireTime: 09:00:00 AM     Samp: 2012-01-26, Level: Info. Message: Successfully executed Delete Device Values Job. 1d: 7. FireTime: 09:00:00 AM
Import	3 - Intrestantp. 2012-01-20, Level. Into, message. Successiuny executed beliefe bevice values 300. IO. 7, hie Tittle. 03.00.00 Am
<b>\$</b>	
Automatic	
	8
	🗢 Back 🔀 Close
	Automatic Service: Active 🌚 🔒

Select "Close" to end the process. The window closes.

## 4.4.3 Automatic new/edit

All the automatic functions are set up in the "Data Management -> Automatic" task.

NOTICE

The automatic functions defined in the individual steps are still valid and can also be managed via the central task described here.

#### 4.4.3.1 Step 1 of 3: Job type selection

📓 Reporting Software - Prof	essional Demo	-		$\times$
<u>File View Extras H</u> elp				
Task Pane ×	tyr Automatic			
Read out data				
Visualization				
Data Management	Step 1 of 3: Job Type selection			
Plant View	Automatic Information			
Plant View	◯ Current overview ◯ Event view			
Export	Select task:			_
<b>\$</b>	Read out device Read out device		~	
Import	Binary export			
6.3	Time synchronize Delete data			
Automatic	Print out template XLS/ CSV export			
	PDF export PDF export (multiple templates)			
	Web export Certification PDF export			
	📫 Next	×	Cancel	
	Auto	matic Sen	vice: Active	۵.

Automatic information: Select the desired information. Options: Current overview, Event view, Automatic new/edit. Select task (only possible for "Automatic new/edit"):

- Read out device: The data stored in the field devices are automatically saved to the database.
- Binary export: Is used for secure data export from the database, e.g. to relieve the SQL server.
- Time synchronize: For regular, automated time synchronization, i.e. the time of the device is synchronized with the system time.
- Delete data: Makes it possible to automatically delete data from the database.

Once data are deleted from the database, this cannot be undone!

- Print out template: Makes it possible to automatically print out a visualization template at regular intervals, i.e. a report/visualization that has been defined is saved as a template and is regularly regenerated automatically and printed out.
- XLS/CSV export: Makes it possible to automatically export data in XLS or CSV format at regular intervals. A template must also be selected here, i.e. a report that has been defined is saved as a template and is regularly regenerated automatically and exported.
- PDF export: Makes it possible to automatically export data in PDF format at regular intervals. A template must also be selected here, i.e. a report that has been defined is saved as a template and is regularly regenerated automatically and exported.
- PDF export (multiple templates): Makes it possible to automatically export several templates in PDF format at regular intervals.
- Web export: Makes it possible to automatically export data to other systems via Endress+Hauser middleware. A template must also be selected here, i.e. a report that has been defined is saved as a template and the data are automatically sent to the middleware at regular intervals.
- Certification PDF export: Enables the regular and automatic export of iTHERM TrustSens calibration certificates which are recorded in a Memograph M RSG45 system (TrustSens Calibration Monitoring).

#### NOTICE

Only automatic readout, automation deletion of data in the device following successful readout and automatic binary export are supported in the Essential version. The "Automatic XLS/CSV export", "Automatic PDF export" and "Automatic print out" functions are not available in this software version.

Pressing the "Next" button or the green arrow in the Main Toolbar jumps to the next step.

### 4.4.3.2 Step 2 of 3: Select template or device

### NOTICE

Only possible if "Automatic new/edit" is selected in step 1.

In step 2, the appropriate template or the device to be read out must be selected:

Task Pane X	Automatic ×
🗈 Read out data	
Visualization	
🖃 Data Management	Step 2 of 3: Select template
Plant View	Templates
	C (h Tandata
<b>S</b>	Completes     Recorder 1 complete
Export	Sampler     Temperature Server
<b>*</b>	
Import	
<b></b>	
Automatic	
	🖕 Back 📫 Next 🔀 Cancel
	Automatic Service: Active
	Autoritado dol ritos, Adarto ve
<u>F</u> ile <u>V</u> iew <u>E</u> xtras <u>H</u> elp	
Task Pane X	Automatic ×
■ Read out data	
Visualization	
😑 Data Management	Step 2 of 3: Select template
🖃 Data Management	Step 2 of 3: Select template
<ul> <li>Data Management</li> </ul>	Step 2 of 3: Select template
🖃 Data Management	Templates
Data Management     Plant View	Templates
<ul> <li>Data Management</li> </ul>	Templates
Data Management      Plant View      Export      Export	Templates
Data Management      Plant View      Export      Import	Templates
Data Management	Templates
Data Management	Templates
Data Management      Plant View      Port      Export      Jimport      Coord	Templates
Data Management      Plant View      Port      Export      Jimport      Coord	Templates
Data Management      Plant View      Port      Export      Import      Coord      C	Templates
Data Management      Plant View      Port      Export      Import      Coord      C	Templates
Data Management      Plant View      Port      Export      Import      Coord      C	Templates
Data Management	Templates
Data Management	Templates
Data Management      Plant View      Port      Export      Import      Coord      C	Templates
Data Management	Templates

Pressing the "Next" button or the green arrow in the Main Toolbar jumps to the next step.

#### 4.4.3.3 Step 3 of 3: Settings automatic

#### NOTICE

Only possible if "Automatic new/edit" is selected in step 1.

The frequency is defined in step 3. For this purpose, the "Active" check box must be selected:

<u>File View Extras H</u> elp		
Task Pane X	🖗 Automatic 🗙	
Read out data		
Visualization		
🖃 Data Management	Step 3 of 3: Settings automatic Excel/ Csv export	
Plant View	Excel/ Csv Export	
export	V Active	
🕹	Interval: Monthly	
Import	Start day: Last day in month 👽 Start time: 23:59:59 🗘	
i i i i i i i i i i i i i i i i i i i	Data time period: 0 Day 00:10:00	
Automatic	Export typ: Values	
	File handling: New V File Size: Unlimited V	
	File format: CSV Files (*.csv)	
	File Path: X\ExportFile.csv	
	🗢 Back 🛃 Save 🎜 Close	
	Automatic Service: Active 🕝	

You can then define the frequency using the interval, and define the start time (see Section 6.6).

A data time period also has to be defined for the automatic tasks "Delete Data," "Create PDF", "CSV Export", "XLS Export" and "Binary Export" (secure format).

File handling (for Excel/CSV export): Select whether a new export file should be created, whether the export file should be appended to an existing file or whether the existing file should be overwritten.

File size (for Excel/CSV export): In order to restrict the size of the export file or to adjust it to the medium of the storage location (such as DVD, CD) the target medium can be selected in the drop-down list.

File path: The location of the data report to be exported must be defined for all export automatic tasks. Clicking the "..." button opens the Explorer tree.

If a network drive is selected, you are also asked to enter a user and password. The setting is then saved and can be modified under "Extras -> Settings -> Automatic" (see Section 5.1.6).

#### NOTICE

Logon for the automatic service must be modified to allow the automatic function access to the network drive (see Section 5.1.6).

Timeout (s) (for Web export): Timeout for the transmission of data to the middleware User name / password (for Web export): User that is configured in the middleware. Web URL (for Web export): Web address of the middleware

Certificate (for Web export): If communication with the middleware is to take place via https (encrypted connection), the corresponding certificate must be available permanently for the automatic service.

Connection test (for Web export): To test the connection to the middleware.

Clicking "Save" enables, saves and completes the configuration. Select "Close" to end the process. The window closes.

### 4.4.4 Automatic service

The automatic symbol Automatik Service: Aktiv (2), for the system service is displayed in the bottom, right-hand corner of the Reporting Software. The system service can have different states: pending, paused, stopped, not installed, inactive, undefined status or active.

Explanation of the various states:

- "Pending": The service is currently locked and is waiting to be enabled. If this state does not change within 2 minutes, please notify your system administrator and restart the system service.
- "Stopped", "Paused", "Ended": The service is not currently running. This can happen if the system administrator interrupts the service.
- "Not Installed": The Reporting Software can also be installed without automatic service/automatic components. All automatic settings are inactive in this case. If you would like to subsequently install the automatic component, do so via the setup routine (like when installing for the first time). The "Install Automatic Component" option must be selected (ticked) in the setup routine (see Section 1.5).
- "Inactive": The user can activate or deactivate the internal state of the defined automatic jobs in the Tray Icon menu (see Section 4.4.6).
- "Active": The Windows system service/automatic function is active and running.
- "Undefined Status": This state can appear if the database connection is not available, interrupted or if the service is in an undefined state. Please close the Reporting Software and all the automatic components and restart them. If the status still does not change, please notify your system administrator.

Once an automatic service is started it remains active until is stopped manually, for example via the Tray Icon (see Section 4.4.6).

## 4.4.5 E-mail notification

If an error occurs when executing an automatic function (e.g. "Data readout"), the analysis software automatically sends a one-off e-mail notification to all configured recipients.

The text-based e-mail contains in the subject line the general information "Automatic function failed". The body of the e-mail contains a meaningful error message with cause and corrective measures.

This is noted in the log file, regardless of whether the e-mail is sent correctly or not.

The analysis software does not verify if the e-mail was delivered correctly. This can be done only by the higher-level mail system.

## 4.4.6 Tray Icon

The 'Tray Icon Application' is started automatically during system startup. Once the application has started, the tray icon in the Windows menu program. Right-clicking the icon opens a local menu:

· ·	FDM Software Automatic	;
l	.og File	
l	.og off	
E	Exit	
		%

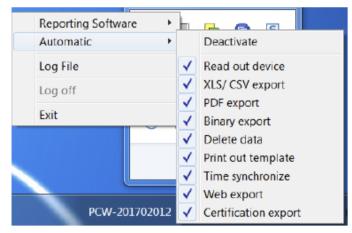
The tray icon changes to soon as an automatic action is busy. The default icon is displayed when the automatic service is active but not currently executing an action.

#### Reporting Software:

The first entry has a subitem to open and close the Reporting Software:

Reporting Software	•	Clos	e	ł
Automatic	· · ["	- <b>-</b>	~	
Log File		5	3	<b>∔</b> ₊
Log off	2	NX	<b>R</b>	
Exit				

#### Automatic:



The Automatic function can be activated or deactivated in the next entry. Activation is only possible if the Windows service is started under "Extras -> Settings -> Automatic" (see Section 5.1.6).

All the defined automatic functions appear in the Automatic subitem. Individual tasks can be manually set to active or inactive. If a task is set to inactive, it is not executed at the time of the next service.

Each time you click the Tray Icon Application, the view of the defined tasks is synchronized with the Reporting Software and the display is refreshed.

#### Log file:

The entry opens the documentation file (WindowsServiceLog.txt), which documents all the activities of the system service. The documentation file is saved under:

Windows 2000 / XP: "C:\Documents and settings\All Users\Application data\ Endress+Hauser\ FieldDataManager"

Windows VISTA and higher: "C:\ProgramData\Endress+Hauser\FieldDataManager"

Log off:

When user administration is active, the user is also requested to log on for the Tray Icon application. Only then is the functionality available. Once the user has logged on, no further check is carried out unless the user logs off again using the "Log off" function. Logging on for the Tray Icon is independent of logging on for the Reporting Software.

Exit:

"Exit" closes the Tray Icon window. This does not affect the system service, however.

If the Tray Icon should not be started automatically, this can be disabled in the Reporting Software under "Extras -> Settings -> Automatic" (see Section 5.1.6). If user administration is enabled in the Reporting Software, the user code must be entered beforehand.

## 4.5 Data Management -> Import/Export Settings

The following FDM settings can be saved (exported) and loaded (imported) again, if required:

- Template settings
- User settings
- User administration settings
- FDM settings
- Codemeter settings
- Database settings
- Automatic settings
- Devices settings

During export, all files for the settings are created simultaneously, zipped and stored in the format *.settings so that they are tamper-proof. The file name and storage location of the zipped file can be selected as desired.

### 4.5.1 Data Management -> Export Settings

To export settings, the export function under "Data Management -> Export" is used. The export takes place in 3 steps:

#### 4.5.1.1 Step 1 of 3: Select Export Format

📓 Reporting Software - Prof	fessional Demo		-		×
<u>F</u> ile <u>V</u> iew <u>E</u> xtras <u>H</u> elp					
Task Pane X	Export 🗙				
🗄 Read out data	🔃 🍫 🦛 🌾				
Visualization					
😑 Data Management	🔬 Ste	p 1: Select Export Format			
	Output file				
Plant View	File type :	Binary files (*.fdm)		~	
۵		Binary files (*.fdm) Excel (*.xls)			
Export		CSV files (*.csv) CSV for energy monitoring files (*.csv)			
		Settings (*zip)			
Import					
i i i i i i i i i i i i i i i i i i i					
Automatic					
		📫 Next		Cancel	
		Auto	matic Serv	rice: Active	۵.

Pressing the "Next" button or the green arrow in the toolbar jumps to the next step.

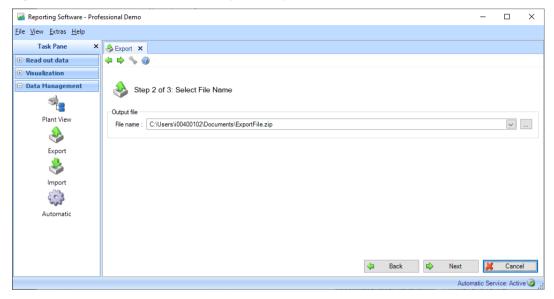
#### 4.5.1.2 Step 2 of 3: Select File Name

#### Output file:

File name: You can define the file name and storage location here.

The "..." button opens the directory structure of the computer where the storage location for the export can be selected,

e.g. D:\Users\I00400102\Documents\ExportFile.zip

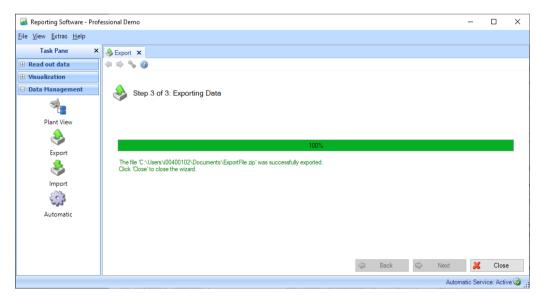


Pressing the "Next" button or the green arrow in the toolbar jumps to the next step and starts the export.

#### 4.5.1.3 Step 3 of 3: Exporting Data

A progress bar shows the progress in % and displays the estimated time remaining.

After the data are exported successfully, a confirmation appears below the progress bar:



Pressing "Close" stops the process and closes the window.

The individual *.settings files are archived as follows inside the ZIP file:

Name	Тур	Komprimierte Größe	Kennwortg	Größe	Verhältnis	Änderungsdatum
AutomaticJobs.zip.settings	SETTINGS-Datei	1 KB	Nein	1 KB	64%	18.09.2019 09:10
CodeMeterSettings.xml.settings	SETTINGS-Datei	1 KB	Nein	1 KB	48%	18.09.2019 09:10
Database.settings	SETTINGS-Datei	1 KB	Nein	3 KB	73%	18.09.2019 09:10
DatabaseServiceConf.xml.settings	SETTINGS-Datei	1 KB	Nein	1 KB	37%	18.09.2019 09:10
Devices.zip.settings	SETTINGS-Datei	1 KB	Nein	1 KB	10%	18.09.2019 09:10
FdmSettings.xml.settings	SETTINGS-Datei	3 KB	Nein	11 KB	79%	18.09.2019 09:10
Templates.zip.settings	SETTINGS-Datei	5 KB	Nein	5 KB	2%	18.09.2019 09:10
UserAdministration.settings	SETTINGS-Datei	1 KB	Nein	1 KB	60%	18.09.2019 09:10
Users.settings	SETTINGS-Datei	1 KB	Nein	3 KB	70%	18.09.2019 09:10

## 4.5.2 Data Management -> Import Settings

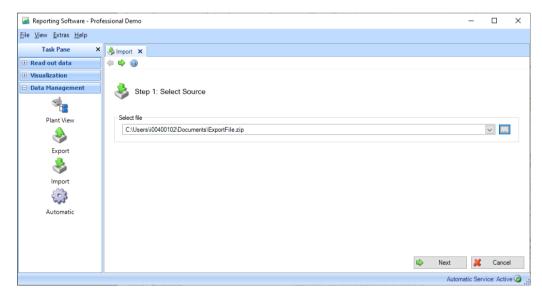
All settings can be imported together by selecting the *.ZIP file. Alternatively, it is possible to import individual settings via a *.settings file. To do so, the ZIP file must first be unpacked.

NOTICE

- The import files are verified using the CRC checksum.
- Import processes are performed completely or not at all.
- A report is displayed at the end of the import (status, changes, errors, ...).
- The same data cannot be imported twice (see sample report below).
- If user administration is active, only the administrator is permitted to perform an export/import.
- FDM must be restarted in order for certain settings to be accepted.
- 4.5.2.1 Page 1 of 2: Select Source In the "Select file" box, you can select the storage location of the data.

The "..." button opens the directory structure of the computer where the file to be imported (*.zip or *.settings) can be selected,

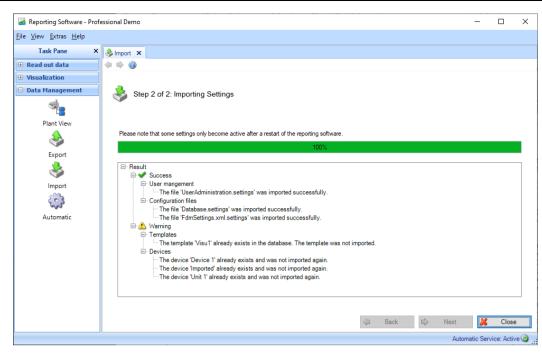
e.g.: D:\Users\I00400102\Documents\ExportFile.zip



Pressing the "Next" button or the green arrow in the toolbar jumps to the next step and starts the import.

4.5.2.2 Page 2 of 2: Import Settings A progress bar shows the progress in % and displays the estimated time remaining.

After the data are exported successfully, a confirmation appears below the progress bar:



Pressing "Close" stops the process and closes the window.

# 5. Extras menu

# 5.1 Extras -> Settings

Here, you can configure general settings for the database, language, export format and user administration.

## 5.1.1 Language

You can select the languages available in the Reporting Software via the drop-down menu.

If you change the language setting, the change does not take effect until after the software is restarted.

Settings		×
	Language Language to be used at next application start:	
Language Jatabase	English (United States)	
Export		
User administration		
Printer		
Automatic		
General		
() <u>H</u> elp	QK QK	

## 5.1.2 Database

In the database settings allow you to select the database used or the corresponding SQL server. You can configure detailed, user-defined settings using the box in the bottom section of the dialog window. To do so, you can assign the server name and port number for existing databases and configure a timeout for automatic disconnection.

If a certain username and password are required for an existing SQL server database, this information can also be entered here.

	Database
	Database: PostgreSQL 8.3.x or above
Language	
	Settings
Database	Use default settings
	Connection
<b>*</b>	Connection
Export	Server: localhost Port number: 5436
25	DB name: NeutralDatabase
User administration	Username: postgres Password:
	Connection timeout: 300 sec
Printer	
(2)	Test
Automatic	
5	
General	
) <u>H</u> elp	V OK 🔀 Canc

#### NOTICE

Only the PostgreSQL[™] database is supported in the Essential version! When using the Essential version, a database stored in the network cannot be accessed simultaneously by multiple PCs.

### 5.1.3 Export

Configure the export formats. For descriptions, refer to Section 4.2 "Data Management -> Export":

Set	ttings				<b>—</b> ×
Г		Export			
	<b>&gt;</b>	Setting: CSV (comm	na separated values)		•
	Language	<u>T</u> abular			
		Generate header	Text in	n inverted commas	
		All values in invert	ted commas 🛛 📝 Date/t	ime to different columns	
١,	Database	Export status	Export	t limit	
	۵	<u>C</u> olumn limits			
	Export	Tabulator	Semi-colon	Comma	
	2	Space	Fixed length		
	User administration	Decimal character			
		Opecimal point	Decim	al comma	
	Printer	Eormat operating time			
	5	O000h00:00	000.0000 hours	0 seconds	
	Calls .	00:00:00 (	© 00.00000 days		
	Automatic				
	6				
	General				
1					
	<u>Help</u>			<mark>∢ <u>0</u>к</mark>	X <u>C</u> ancel

### 5.1.4 User administration

Activate the security system via the user administration if you want to protect the unit against unauthorized operation. After the initial installation of the Reporting Software, the user administration function is disabled by default.

Basic user administration settings are available in the "Extras -> Settings -> User Administration" menu:

Settings		×
	User administration	
	User administration	
Language	Enable user management	
	User authentication: LDAP/Active Directory	~
Database	LDAP Connection Settings	
۵.	LDAP host URL: LDAP://	
Export	Base DN:	
<b>\$</b>	User ID attribute: sAMAccountName	
User administration	Name attribute: name	
	Search filter:	
Printer	Search subtree	
(j)	Test	
Automatic		
-		
General		
	Automatic log off	
License Server	Enable automatic log off	
	Timeout: 10 🔿 minutes	
Visualization	Live view timeout: 10 ≑ minutes	
Help	✓ 0K	X Cancel
C Incip		

The user administration can be enabled in the settings. If enabled, the first user is automatically assigned the role of administrator.

In addition to enabling the User Administration, you can define the corresponding requirements are defined that must be fulfilled by the passwords.

To comply with the more stringent documentation and security requirements of FDA21 CFR Part 11, this function must also be enabled.

As a result of this function, the user has to identify himself or herself with a user ID and password whenever carrying out an action that affects the database (such as creating templates, creating or changing devices/device settings, deleting devices, etc.).

The administration of users takes place in the function "Extras -> User Administration" (see Section 5.3).

#### NOTICE

User administration can be enabled only in the Professional and Demo versions!

#### NOTICE

From FDM version 1.6 a password synchronization with MS Active Directory via LDAP protocol is available (see chapter 5.4).

If password synchronization is performed via LDAP, the FDA functionality can no longer be selected. FDA compliant authentication must then be implemented in Active Directory if required.

## 5.1.5 Printer

The printout format is defined in the "Printer" menu. If a logo is to appear on the printout, this can be selected and defined via the "Change Logo" button.

You can define the font using the drop-down list:

Settings	×
	Printer
Language	Print logo     Change logo     Don't print logo
Database	
Export	Font
User administration	Arial
Printer	Quality Assurance Fields
- Frinter	Print QA fields for batches
Automatic	
General	
() <u>H</u> elp	V OK Kancel

The following menu opens if the printer icon is clicked in the Reporting Software, e.g. in visualization:

Printer				
Name:	PDFCreator			▼ Properties
Status:	Ready			
Type:	PDFCreator			
Location:				
Comment:	eDoc Printer			Number of copies: 2 🚔
Chart	Reports	Values	Events	
Split gr	aphic to several parts		Events	

The required printer, the print layout and settings can be selected here. A print preview is also possible.

In the visualization printer settings, you can select if the print-out is to be line-based or columnbased. The column-based layout is enabled as standard. The line-based layout is enabled only for templates which contain analyses.

## 5.1.6 Automatic

NOTICE

If user administration is enabled, an administrator must be logged on before these automatic task settings can be changed.

#### 5.1.6.1 Windows System Service

The "Automatic" menu contains start and stop functions for Windows System Service and for the Tray Icon Application. In addition, you can also define whether these functions should be started automatically here:

ettings	
	Automatic
	Automatik Windows Service
Language	Start Stop The windows service is running.
	✓ The windows service started automatically.
Database	Automatic Fdm Tray Icon
۵	
Export	Start Estop The tray icon application is running.
<i>&gt;&gt;</i>	Tray icon application starts manually.
User administration	Network Login Identity
	User: Password:
Printer	User: Password:
E B	Data server settings
Automatic	Host name: PC-CFZ-2 Port: 8007
<u>,</u>	
General	Email Notification
	Enable email notification Send Test Email
License Server	Receivers: User1@example.com; user2@example.com
	Receivers: user1@example.com; user2@example.com
	Sender Settings
	SMTP server: localhost Port: 25
	Sender: automatic@example.com
	Authentication LOGIN Vame: testuser@example.com
	Password:
<u>H</u> elp	V <u>O</u> K <u>Cancel</u>

#### Network login identity:

The automatic function requires a user and a password in order to log onto a remote computer and get access to a directory. This user must have the appropriate rights for the selected directory.

#### NOTICE

Logon for the automatic service must be modified to allow the automatic function access to the network drive:

1. Open 'Endress+Hauser FDM Service': "Control Panel -> System and Security -> Administration - > Services -> double-click "Endress+Hauser FDM Service":

Services	Help						
Services (Local)	🖏 Services (Local)						
	Endress+Hauser FDM Service	Name 🔺	Description	Status	Startup Type	Log On As	
		COM+ System Application	Manages t		Manual	Local System	
	Stop the service	Computer Browser	Maintains a		Automatic	Local System	
	Pause the service Restart the service	Cryptographic Services	Provides th	Started	Automatic	Local System	
	Costore the service	DCOM Server Process Launcher	Provides la	Started	Automatic	Local System	
		where a client where the second secon	Manages n	Started	Automatic	Local System	
		🍓 Distributed Link Tracking Client	Maintains li	Started	Automatic	Local System	
		🆓 Distributed Transaction Coordinator	Coordinate		Manual	Network S	
		🖓 DNS Client	Resolves a	Started	Automatic	Network 5	
		Service Endress+Hauser FDM Service		Started	Automatic	Local System	
		Service Reporting Service	Allows erro	Started	Automatic	Local System	
		🖓 Event Log	Enables ev	Started	Automatic	Local System	
		🍓 Fast User Switching Compatibility	Provides m	Started	Manual	Local System	
		Help and Support	Enables He	Started	Automatic	Local System	
	Extended Standard	<i>bu</i>					

2. Switch to "Log on". Create a user with appropriate rights under "This account":

General Log On Rec	overy Dependencies
Log on as:	
Local System according Allow service to	<b>int</b> interact with desktop
⊙ <u>T</u> his account:	Domain\User Browse
Password:	•••••
Confirm password:	•••••
	ble this service for the hardware profiles listed below:
Hardware Profile	Service
Profile 1	Enabled
	<u>Enable</u> <u>D</u> isable
	OK Cancel Apply

Click "Apply" and "OK" to save the settings.

3. The service must be restarted in order to activate the new setting:

Datei Aktion Ansie	cht ?							
= 🔿 🗔 🖬 🖸 🤕	🔒 🛛 🖬 🕨 🔳 🕪							
) Dienste (Lokal)	🔍 Dienste (Lokal)							
	Endress+Hauser Field Data Manager	Name	Beschreibung		Status	Starttyp	Anmelden als	
	Service	Q DNS-Client	Der DNS-Clien	tdienst (dnscache) speic	Gestartet	Automatisch	Netzwerkdienst	
	Den Dienst beenden	🔅 Druckwarteschlange	Lädt Dateien zu	um späteren Drucken in	Gestartet	Automatisch	Lokales System	
	Den Dienst anhalten	🔍 EFI ES1000	Enables EFI ES1	000 device to be used fr	Gestartet	Automatisch	Lokales System	
	Den Dienst neu starten	🔍 Empirum Remote Installation Service			Gestartet	Automatisch	Lokales System	
		🔐 Endress+ Hauser Field Data Manager Ser 는					Lokales System	
		🔍 Enumeratordienst für tragbare Geräte	Starten	htlinien für Wechs	Gestartet	Manuell	Lokales System	
		🔍 Erkennung interaktiver Dienste	Beenden	rbenachrichtigung		Manuell	Lokales System	
		Stensible Authentication-Protokoll	Anhalten	insible Authenticat		Manuell	Lokales System	
		😪 Fax	Fortsetzen	en und Empfange		Manuell	Netzwerkdienst	
		🔍 Fiery Bridge Mailbox Synchronization	Neu starten		Gestartet	Automatisch	Lokales System	
		Service		s licensing functio		Manuell	Lokales System	
		Sunktionssuchanbieter-Host	Alle Aufgaben	t dient zum Hoste		Manuell	Lokaler Dienst	
		Sunktionssuche-Ressourcenveröffentlic	Aktualisieren	Computer und di		Manuell	Lokaler Dienst	
		Gatewaydienst auf Anwendungsebene		für Protokoll-Plug		Manuell	Lokaler Dienst	
		🥋 Gemeinsame Nutzung der Internetverbi	Eigenschaften	ern in Heim- und k		Deaktiviert	Lokales System	
		Geschützter Speicher	Hilfe	peicher für schütze		Manuell	Lokales System	
Į.	Erweitert / Standard /	Google Undate-Dienst (gundate)	Thine	tware auf dem ne		Automatisch (Verzöne	Lokales System	

Data server settings:

Configuration of data server connection for the online data of devices set up in the analysis software. The host name is identical to the computer on which the automatic service is running.

Port: The port is preconfigured to "8007". Any change is automatically adopted by the data server.

#### 5.1.6.2 E-mail configuration

The mail function can be activated or deactivated, as required. The function is deactivated as standard. To enable e-mails to be sent correctly, the following settings are required:

Recipient:

Up to 10 recipient addresses can be entered. Individual e-mail addresses are separated by a semicolon (;).

SMTP Server / Port:

Enter the SMTP server and port used.

Sender:

Name or e-mail address for sending mail (sender of notification mail).

#### Authentication:

For authentication, you can choose between "automatic detection", "no authentication", "PLAIN authentication" and "LOGIN authentication". If an authentication mechanism is selected, the user must enter a user name and password.

#### NOTICE

For queries regarding sender settings, contact your network administrator or e-mail provider if necessary.

To verify and activate the mail function, you must first send a test mail by activating the "Send test e-mail" button.

The test mail must be sent successfully before the entries can be accepted with "OK".

### 5.1.7 General

In the General menu items, readout with extended service function can be enabled. If this is enabled, a field appears in the readout menu with the option not to delete data from the device once the data have been read out successfully.

Settings		x
	General	
- Contra - C	Readout via online interface	
Language	Standard read out	
	Read out with extended service function	
Database		
ا 🔶		
Export		
25 C		
User administration		
Printer		
Automatic		
-		
General		
1		
() <u>H</u> elp	✓ QK QK _ancel	

### 5.1.8 License server settings

The use of a central licence server is centrally managed after the successful activation of a multiuser licence, without further configuration via the shared database.

## 5.2 Extras -> Audit trail

For complete documentation, the audit trail function offers the display of all actions carried out by the Reporting Software and on the corresponding database.

Any action that has an effect on the database is documented in the audit trail with the time stamp and user name (when User administration is enabled). This includes, for example, the following functions: create a new device, read out data, create template, user logs in, user logs out, report is generated, etc.

In the Audit Trail, you can search for certain entries using the filter (Time, Text, User, Category).

You can print out the Audit Trail using the printer icon 💴.

The 🗧 icon allows you to export the audit trail as a PDF file.

<u>F</u> ile <u>V</u> iew <u>E</u> xtras <u>H</u> elp							
Task Pane X	Audit Trail 🗙						
Read out data	🗊 🖻 🖻 🔞						
Visualization							
🗉 Data Management	Audit Trail						
	Filter						
	From: 29.12.2011	14:50:53		~	To:	26.01.2012 14:50:53	*
	Username: •			*	Category:	All	~
	Text:				ĺ	App	alv
					]		<u> </u>
	Events						
	Timestamp $\nabla$	Username	Category	Text			^
	26.01.2012 14:20:07		Automatic	Auton	natic Excel/ (	Csv export was deleted	
	26.01.2012 14:19:59		Automatic	Auton	natic binary e	export was deleted	
	26.01.2012 13:16:14		Archiving	Impor	ted data from	n binary file 'ExportFile.fdm'.	
	26.01.2012 13:14:47		Archiving	Impor	ted data fron	n RSD file 'Memograph_M_20090903_145300_200	9090:
	26.01.2012 12:18:38		Topology	Creat	ed device 'Im	nported' in database.	
	26.01.2012 11:37:54		Automatic	Auton	natic Excel/ (	Csv export was modified	
	26.01.2012 11:11:30		Application	Repo	rting software	e started	
	26.01.2012 10:39:46		Application	Repo	rting software	e stopped	
	26.01.2012 10:36:10		Application	Repo	rting software	e started	
	26.01.2012 10:35:05		Application	Repo	rting software	e stopped	
	26.01.2012 10:14:06	Automatic User	Automatic	Auton	natic service	started.	
	26 01 2012 10·14·02	Automatic User	Automatic	Auton	natic service	stonned	>
						Automatic Service: Ac	ose
						Automatic Service: Ac	nive 🌚 🔡

## 5.3 Extras -> User administration

#### NOTICE

User administration can be enabled only in the Professional and Demo versions!

The administration of users takes place in the function "Extras -> User Administration". This menu item can be accessed by administrators only. The administrator can create up to 50 users. Once a user is created, he or she appears in the overview in the left box:

<u>File View Extras H</u> elp		
Task Pane X	User administration ×	
■ Read out data	& & # 🗟 💊 🤷	
Visualization	Q. User administration	
🗉 Data Management	User administration	
	Users	Plant View
	User / Name Role Last access	Locked Name Device Serial
	Admin Admin Admini 24.02.2011 12:0	
	Service Service Servic 19.01.2012 15:3	Site 1
	1	Grea 1 Competition Memogra A9007704
		Imported Imported
		Memograph M Memogra A9007704
		Device 1 Memogra 9A000604
		Site 2
		Area 2     Process cell
		✓
		Uni EngyCal SCHNALK
		EH_CSF48_ Liquistation B113FE05
		Scharsche Memogra A9000904
	L	
	Selected User: Admin	Save Close
	л.	Automatic Service: Active 🤕

Create a user:

You can add new users using the "Person with plus sign" icon

User ID: For each user, the administrator has to assign a unique User ID. Max. 8 characters

Password, password confirmation: For the initial login of the user, the administrator has to assign a password. Max. 10 characters

Selecting the "Password Must be Changed after First Login" function ensures that the new user has to change the first password he or she is assigned:

🕹 Add User	×
User ID:	Admin
Real name:	Adam Admin
Password:	•••••
Confirm password:	
Access role:	Administrator 💌
Password must be cl	nanged after first login
() <u>H</u> elp	OK Cancel

When logging in for the first time, the user must enter the password assigned by the administrator at the first login and assign a new password.

Access role: You can assign various access roles to the user. These define the scope of user and access rights.

The following overview defines the rights for the individual user roles:

Access roles and access rights Responsibility	Adminis trator	Service Enginee r	Planning Engineer	Maintenanc e Engineer	System Operato r	Observer
Create new site	х		Х			
Create new area, unit	Х		Х			
Create new devices	Х		Х	х	Х	
Move sites and devices	Х		Х			
Rename devices	Х		Х	х		
Site import from FieldCare CSV	х		X			
Data readout	Х		Х	х	Х	
Data export	Х		Х	Х		
Data import	Х		Х	Х		
Import tamper-proof data	Х		Х	Х	Х	
Export tamper-proof data	Х		Х	Х		
Visualization, printout, PDF, CSV	х		x	X	х	x
Create, modify, delete automatic functions	х		х	x		
Start/stop automatic	Х		Х	Х	Х	
Select, merge data	Х		Х	х		
Delete data	Х		Х	х		
Change language	Х	Х	Х	X	Х	Х
Change export settings	Х		Х	х		
Password settings	Х					
User administration	Х					
Audit trail view	Х	Х				

Edit user:

Using the "Person with pen" icon with pen" icon with password. The dialog for changing the user information corresponds to the settings for creating a new user:

🍰 Edit User	
User ID:	Service
Real name:	Service
Password:	
Confirm password:	
Access role:	Service Engineer 💌
<ul> <li>Password must be cl</li> <li>Deactivate user</li> </ul>	hanged after first login
<u>(@)</u> <u>H</u> elp	✓ <u>O</u> K <mark>¥ C</mark> ancel

The "Deactivate user" function enables you to block a user temporarily. In this case, a lock icon for "Locked" appears in the user overview.

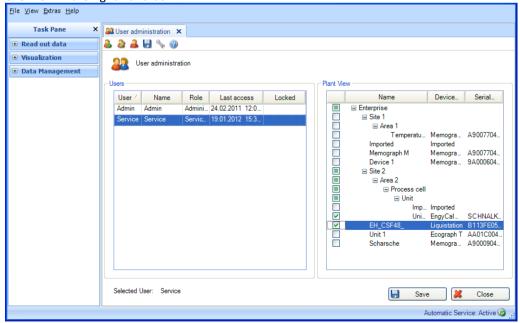
If the user enters incorrect information multiple times when logging in, the user also shows up as locked. The administrator can remove the lock by resetting the password. The user can then change the password again.

Delete user:

The "Person with red X" icon allows you to delete a user selected in the list. Before the user is deleted, you are prompted for additional confirmation in a dialog window. If you confirm the deletion of the user, the corresponding account is deleted immediately.

User rights for plant sections:

In addition to the assignment of the user role, you can limit access to additional devices or plant sections. The assignment of the user rights for devices and plant sections takes place in the overview in the right-hand box:



By selecting the user in the list, you can give this user defined access to individual devices and plant sections. In doing so, the administrator selects a node. This gives the user access to the corresponding node (e.g. site, area etc.) and to all assigned subnodes.

If a user does not obtain access to certain plant sections or devices (node is not selected), these plant sections or devices are also not visible to the corresponding user in the Plant View.

#### Access rights to templates:

The access rights to the templates are defined via the corresponding devices. A user has access to a template only if he or she has access to the corresponding devices.

#### Access rights to devices:

Access rights to devices are defined in the user administration function via the Plant View. If a user is the first to create and read out a device, the user who carries out the readout automatically obtains access rights to this device.

#### Login as user:

The user logs in with his or her user ID and password. These are case-sensitive. When logging in for the first time, the user must enter the password assigned by the administrator at the first login and assign a new password where applicable. Every logon, whether successful or not, generates an entry in the audit trail of the Reporting Software.

#### Logout as user:

The user can log out in different ways:

- By closing the Reporting Software
- By selecting "File -> Logout"
- By selecting "File -> Login under another user name..."

Every logout, whether successful or not, generates an entry in the Audit Trail of the software.

# 5.4 LDAP protocol for directory services support (MS Active Directory)

FDM is used in production and laboratory environments, sometimes with many user accounts. The administration of these accounts represents a not inconsiderable effort for the administrators. The directory service Microsoft Active Directory is often used here. As of FDM version 1.6, synchronization of accounts via LDAP is supported and passwords are verified during login. LDAP (Lightweight Directory Access Protocol) is an open and cross-platform protocol used for communication between FDM and Microsoft Active Directory.

User administration   Language   Database   Object administration   Database   Object administration   User administration   Database   Object administration   User administration   User administration   User administration   User administration   Database   Database   Database   Database   User administration   Database		User administration	
Language User authentication: LDAP/Active Directory  LDAP Connection Settings LDAP host URL: LDAP/// Base DN: User ID attribute: sAMAccountName User administration User ID attribute: name Search filter:  Search filter:  Search filter:  Search filter:  Search filter:  License Server  Li		User administration	
User authentication: LDAP/Active Directory     User authentication: LDAP connection Settings   LDAP host URL: LDAP///   Base DN:	<b>V</b>	Enable user management	
LDAP host URL: LDAP///   Export Base DN:   User administration User ID attribute:   Search filter: Search filter:   Search subtree Search subtree   Test Test	Language	User authentication: LDAP/Active Directory	,
LDAP host URL: LDAP://   Export Base DN:   User administration User ID attribute:   Search filter: Search filter:   Search subtree Test			
Export   Base DN:   User administration   View administration	Database	LDAP Connection Settings	
License Server Licens		LDAP host URL: LDAP://	
User administration       Image: Constraint of the second data of th	Export	Base DN:	
User administration User administration  Printer  Automatic  General  License Server  License Server  Differ  Differ  Constraints  Automatic log off  Timeout: 10	$\sum$	User ID attribute: sAMAccountName	
Printer     Search subtree       Image: Search subtree     Image: Search subtree       Image: Sea	User administration	Name attribute: name	
Printer Test Test Automatic General License Server Timeout: 10 © minutes		Search filter:	
Automatic Ceneral Ceneral License Server Circense Server Circense Center Circense Cen	Printer	Search subtree	
General       Image: Constraint of the second s	< <u>``</u>	Test	
Automatic log off       License Server       Enable automatic log off       Timeout:       10       minutes	Automatic		
Automatic log off       License Server       Enable automatic log off       Timeout:     10 \$ minutes			
License Server Enable automatic log off Timeout: 10	General		
Timeout: 10 🗘 minutes		- Automatic log off	
Timeout: 10 💠 minutes	License Server	Enable automatic log off	
	Visualization		

Setting up user authentication via LDAP:

#### sAMAccountName

The sAMAccountName attribute is a logon name used to support clients and servers from previous version of Windows. The logon name must be 20 or fewer characters and be unique among all security principal objects within the domain.



The further setup of the settings for the use of the LDAP functionality is not part of these instructions. Please ask/contact your IT department for this.

## 5.4.1 Synchronization of users via LDAP with Active Directory

After setting up the interface via LDAP to Active Directory, the accounts created there must be synchronized with FDM. To do this, open the user administration via "Extras -> User administration". The "Synchronize Users" button synchronizes the users (user ID and name) in FDM and Active Directory. The user role must be defined and edited manually during the first synchronization or when new accounts are created. At this point, FDA-compliant roles can be assigned to the users again.

User administration ×				
22 🗄 🖶 📏 🕭 🥝	<b>)</b>			
User administration				
User administration	1			
ers				
User ID 🛆	Name	Role	Last access	Locked
Administrator	Administrator	Administrator	14.06.2021 15:43:28	
ae_admin	Administrator	Administrator	14.06.2021 15:43:28	
ASGSINPC	ASGSINPC	Observer	14.06.2021 15:43:28	
DefaultAccount	DefaultAccount	Observer	14.06.2021 15:43:28	
cie-test	cie-test	System Operator	14.06.2021 15:43:28	
ciptest	ciptest	Service Engineer	14.06.2021 15:43:28	
i_0001234	MGM_1234	Planning Engineer	14.06.2021 15:43:28	
i_0002345	MGM_2345	System Operator	14.06.2021 15:43:28	
i_0003456	MGM_3456	System Operator	14.06.2021 15:43:28	
i_0004567	MGM_4567	System Operator	14.06.2021 15:43:28	
a_0001234	ABCD_1234	Maintenance Engineer	14.06.2021 15:43:28	
a_0002345	ABCD_2345	System Operator	14.06.2021 15:43:28	
a_0003456	ABCD_3456	Observer 🗸	14.06.2021 15:43:28	
		Administrator	14.06.2021 15:43:28	
		Planning Engineer Service Engineer	14.06.2021 15:43:28	
		Maintenance Engineer	14.06.2021 15:43:28	
		System Operator Observer	14.06.2021 15:43:28 14.06.2021 15:43:28	

# 6. Device Settings dialog

Settings that are assigned directly to a device can be defined using the setting menu. To do so, in the task pane select the corresponding device under "Data Management -> Plant View", then

open the settings window by clicking the "Wrench" icon  $\searrow$  or by selecting "Change Settings ..." from the context menu that appears when you right-click:

e <u>V</u> iew <u>E</u> xtras <u>H</u> elp								
Task Pane ×	Plant Vie	w ×						
Read out data	+- 🗶 -+	• 🖹 🛛 🧶	s 2 0					
Visualization								
Data Management	1 Se 1	Plant View						
		Name		Device Type	Begin	End	$\nabla$	Serial Number
	🖃 🎌 Enter			200000,000				
Plant View	⊞ # N	leue Anlage Iew Site						
٠		🖬 New Area						
Export		New Process 0     New Unit	Cell					
<u>يار</u>		E M HKC 1		Graphic Data Record	er		D	1007D04267
		C HK			22.01.2013 10:30:07 10.09.2012 11:04:40	28.01.2013 12:12:05 21.12.2012 15:51:05		
Import		C HK	C 1		05.07.2012 08:12:20	05.07.2012 09:28:33		
C S								
Automatic								
								🕌 Close
							Automatio	Jervice. Active g
TrustSens Demo: '	Settings						Automatic	
TrustSens Demo: :	Settings						Automatic	
TrustSens Demo:	Settings	Communica		3			Automatic	
TrustSens Demo:	Settings	Select sou	irce					
TrustSens Demo:			irce	e select an interf	асе		Automatic	
		Select sou	Pleas	e select an interf			Automatic	
Communication Se	ttings	Select sou	Pleas					
	ttings	Select sou	Pleas	e select an interf			Automatic	
Communication Se	ttings	Select sou	Pleas	e select an interf				
Communication Se Communication Se Database Information	ation	Select sou	Pleas	e select an interf				
Communication Se	ation	Select sou	Pleas	e select an interf			Automatic	
Communication Se Communication Se Database Information	ation	Select sou	Pleas	e select an interf				
Communication Se Communication Se Database Informa Communication Automatic - Read ou Communication	ettings ation t device	Select sou	Pleas	e select an interf				
Communication Se Communication Se Database Information	ettings ation t device	Select sou	Pleas	e select an interf				
Communication Se Communication Se Database Informa Communication Automatic - Read ou Communication	ettings ation t device	Select sou	Pleas	e select an interf				
Communication Se Communication Se Database Inform Communication Automatic - Read ou Communication Automatic - Delete Communication	ttings ation t device e data	Select sou	Pleas	e select an interf				
Communication Se Communication Se Database Informa Communication Automatic - Read ou Communication Automatic - Delete Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communicat	ttings ation t device e data	Select sou	Pleas	e select an interf				
Communication Se Communication Se Database Informa Communication Automatic - Read ou Communication Automatic - Delete Communication Automatic - Time sy	ttings ation t device e data nchroni	Select sou	Pleas	e select an interf				
Communication Se Communication Se Database Informa Communication Automatic - Read ou Communication	ttings ation t device e data nchroni	Select sou	Pleas	e select an interf				
Communication Se Communication Se Database Informa Communication Automatic - Read ou Communication Automatic - Delete Communication Automatic - Time sy Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Comm	ttings ation t device e data nchroni	Select sou	Pleas	e select an interf				
Communication Se Communication Se Database Informa Communication Se Communication Second Automatic - Read ou Communication Automatic - Deleter Communication Automatic - Time sy Communication Automatic - Binary Communication Communication Second Communication Second Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Co	ttings ation t device e data nchroni export	Select sou	Pleas	e select an interf				
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Database Inform Catabase Inform Catabase Inform Catabase Inform Catabase Automatic - Read ou Catabase Automatic - Delete Catabase Automatic - Time sy Catabase Automatic - Binary Catabase Automatic - Certifical	ttings ation t device e data nchroni export	Select sou	Pleas	e select an interf				
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Communication Se Communication Se Database Informa Communication Se Communication Se Communication Sector Automatic - Read ou Communication Automatic - Read ou Communication Automatic - Time sy Communication Automatic - Time sy Communication Communication Communication Sector Communication Sector Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communicatio	ttings ation t device e data nchroni export tion Pd	Select sou	Pleas	e select an interf				
Communication Se Communication Se Database Informa Communication Se Automatic - Read ou Communication Automatic - Read ou Communication Automatic - Time sy Communication Automatic - Time sy Communication Automatic - Certification Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communicat	ttings ation t device e data nchroni export tion Pd	Select sou	Pleas	e select an interf				
Communication Se Communication Se Database Informa Communication Se Automatic - Read ou Communication Automatic - Read ou Communication Automatic - Time sy Communication Automatic - Time sy Communication Automatic - Certification Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communication Communicat	ttings ation t device e data nchroni export tion Pd	Select sou	Pleas	e select an interf				

## 6.1 Communication Settings

The Communication Settings of the devices are defined during the first read-out process. You can change already defined Communication Settings in the setting menu.

The setting of the communication depends on the selected communication type and thus on the field device connected.

In the first step, select the type of communication with the field device in the top area, "Select Source". The device type is defined by default through the selection of the device in the Plant View.

After selecting the communication type, define the communication parameters in the lower area.

To confirm and save the Communication Settings, you have to exit the menu using the "OK" button.

Communication types and Communication Settings:

Serial communication: For serial communication (RS232/485, etc.), configure the specified parameters.

"Automatic": All available serial interfaces are scanned, thus providing automatic detection of the connected device and the necessary communication settings.

"Manual": Define the communication parameters manually and enter them into the specified fields.

🗞 TrustSens Demo: Settings					
Communication Settings	Communication Settings Select source Interface: Serial interface				
Database Information	<u>S</u> etup:	Automatically     Manually			
Automatic - Read out device	<u>P</u> ort:	COM3			
Automatic - Delete data	<u>B</u> audrate: <u>D</u> ata bits:	8 💌			
Automatic - Time synchroni	Pa <u>r</u> ity: St <u>o</u> p bits:	None  One			
Automatic - Binary export	Connection timeout:	2.0 seconds			
Automatic - Certification Pd	Device <u>a</u> ddress:	U			
Time Setting					
@ <u>H</u> elp		<u>✓ 0</u> K	K <u>C</u> ancel		

Settings							X
Communication Settings	Communication Settings Select source Interface: Modem					Ĩ	•
Database Information		0					
	Device <u>a</u> ddress: <u>P</u> ort:	COM3	Data <u>b</u> its:	8	-		
Automatic - Read out device	Ba <u>u</u> drate:	115200 💌	Pa <u>r</u> ity:	None	•		
Automatic - Delete data	<u>S</u> top bits:	One		•			
	Init command:						
Automatic - Time synchroni	Dialing prefix: Telephone <u>n</u> umber:						
Automatic - Binary export	<u>D</u> ial System:	MFV (Tone)		•			
	Abort dial sequence after	60	seconds				
Automatic - Certification Pd	Read <u>t</u> imeout:	15000	milliseconds				
Time Setting							
(a) Help					<u>о</u> к	🔀 <u>C</u> ance	el

Modem: Enter the communication parameters in the specified fields. In some cases, these are provided in the documentation of the modem and from the wireless provider.

Ethernet: Enter the Ethernet communication parameters manually in the specified fields. For detailed information such as the port number, contact your system administrator.

Settings			
Communication Settings	Communication Settings Select source Interface: Ethernet Ethernet		•
Database Information	IP address/Host name: Port:	10.55.83.100 8000	
Automatic - Delete data	OPC Port:	8002	
Automatic - Time synchroni			E
Automatic - Binary export			
Time Setting	٠	Ш	-
<u>     H</u> elp	· · · · · · · · · · · · · · · · · · ·		<u>OK</u> <u>Cancel</u>

USB: You can usually keep the default USB setting. If necessary, change the "Device Address" and "Readout ID" parameters manually.

	Communication Set	ttings	
	Select source		
Communication Settings	Interface:	USB	
	Device type:	Graphic Data Recorder	
Database Information			
(G)	Memory:	Device memory	<b>v</b>
Automatic - Read out device	USB		
<b>A</b>	Device <u>a</u> ddress	s: 1	
Automatic - Delete data	Read out PC:	1	
<u>i</u>		e is read out by more than one Reporting Software	
Automatic - Time synchronize			
Automatic - Binary export			
<u> H</u> elp			V OK K Cancel

### 6.2 Database information

The database information in the device dialog provides information about the device data and the volume of data that has been read out of the device and imported into the database:

		- Database Information	1	
		- Information		
		Name:	Graphic Data Recorder	
	Communication Settings	Firmware version:		
		Order code:	-	
		Order identifier:		
	Database Information	Database size:		
	<u> </u>	Database Size.	J2 MU	
	Automatic - Read out device			
	Automatic - Delete data			
	<b>4</b>			
	Automatic - Time synchronize			
	()			
	Automatic - Binary export			
. '				
(	(2) Help		V OK Kancel	

Name: Name of the device

Firmware version: Firmware version of the device

Order code: Identifies the device with the ordered and delivered options

Order identifier: Number identifying the device, order and customer

Database size: Size of the device data that are stored in the SQL database.

Additional device information can be accessed via the Endress+Hauser W@M portal using the order code and the order ID. This is relevant for device management over the entire life cycle of the plant.

# 6.3 Automatic – Read out device

The automatic function for reading out the device is enabled/disabled in the Settings menu:

	- Automatic - Read out de	vice				
	Data read out					
Communication Settings	Active					
	Interval:	Daily	Additional ba	tch triggered:		
Database Information	Start time:	09:00:00	•			
Automatic - Read out device						
100 A						
Automatic - Delete data						
(3)						
Automatic - Time synchronize						
Sec.						
Automatic - Binary Export						
() <u>H</u> elp				<b>~</b>	<u>OK</u> <u>X</u> ance	

(For more details, see Section 4.4 "Data Management -> Automatic")

Active: Enables or disables the "Data Readout" automatic function.

Interval: Select the interval for this automatic function. Options: Minutely, hourly, daily, weekly, monthly

Repeat every (only if minutely or hourly is selected for the interval): Select the time lag for the automatic function of the selected interval.

Start day (only if weekly or monthly is selected for the interval): Select the day of the week for the automatic function of the selected interval.

Start time (only if daily, weekly or monthly is selected for the interval): Select the starting time for the automatic function of the selected interval.

Additional batch triggered:

Can only be selected for the following automatic functions: Read out device, Print out template, XLX/CSV export and PDF export, if batch data are available. As soon as the batch job is completed, the automatic function is run.

# 6.4 Automatic – Delete data

#### NOTICE

Once data are deleted, this cannot be undone! Ensure that data that are deleted from the device are really no longer needed, or have already been saved to another storage location as a secure export so that they are available later if needed.

The automatic function for deleting data is enabled/disabled in the Settings menu:

Nr HKC 1: Settings			
	Automatic - Delete dat	ta	
	Data elimination		
Communication Settings	Active		
Database Information	Interval: Start time:	Daily 09:00:00	
Automatic - Read out device	Older then:	100 Days 00:00:00	
Automatic - Delete data			
Automatic - Time synchronize			
Automatic - Binary export			
<u> H</u> elp			<u>2</u> K <u>X</u> ancel

Active: Enables or disables the "Data Elimination" automatic function.

Interval: Select the interval for this automatic function. Options: Minutely, hourly, daily, weekly, monthly

Repeat every (only if minutely or hourly is selected for the interval): Select the time lag for the automatic function of the selected interval.

Start day (only if weekly or monthly is selected for the interval): Select the day of the week for the automatic function of the selected interval.

Start time (only if daily, weekly or monthly is selected for the interval): Select the starting time for the automatic function of the selected interval.

Time slot: Select the time slot for deleting the data. The data of the set time are not deleted.

Example:

Interval: Daily; start time: 23:59:00; time slot: 0 day 00:09:00

The data are deleted daily at 23:59. The data of the last 9 minutes are retained in the memory.

# 6.5 Automatic – Time synchronize

Here, you can automatically synchronize the device time with the system time of the computer. The automatic function for time synchronization is enabled/disabled in the Settings menu:

	-Automatic - Time synd	chronize	
	Time synchronize –		
Communication Settings	Active		
Database Information	Interval: Start time: Tolerance:	Daily 09:00:00 0 Day 00:01:00	
Automatic - Read out device	Tolerance.	U Day UU.UT.UU	
Automatic - Delete data			
ŝ			
Automatic - Time synchronize			
Automatic - Binary Export			
👔 Help			✓ <u>O</u> K X Cancel

Active: Enables or disables the "Time Synchronize" automatic function.

Interval: Select the interval for this automatic function.

NOTICE

The possible options for the interval depend on the device.

Repeat every (only if minutely or hourly is selected for the interval): Select the time lag for the automatic function of the selected interval.

Start day (only if weekly or monthly is selected for the interval): Select the day of the week for the automatic function of the selected interval.

Start time (only if daily, weekly or monthly is selected for the interval): Select the starting time for the automatic function of the selected interval.

Tolerance: Select the tolerance for time synchronization. If the system time between the device and computer differs by more than the tolerance set here the time is not synchronized.

# 6.6 Automatic – Binary export

The automatic function for data backup is enabled/disabled in the Settings menu:

	-Automatic - Binary Expo	ort				,
	Data backup					]
Communication Settings	Active					
	Interval:	Monthly	*			
Database Information	Start day:	Last day in month	*	Start time:	23:59:59	\$
Automatic - Read out device	Data time period:	0 Day 00:10:00	\$			
	File Path:	X:\\ExportFile.fdm				✓ …
Automatic - Delete data						
<b>i</b>						
Automatic - Time synchronize						
Automatic - Binary Export						
Melp					<u> </u>	Cancel

Active: Enables or disables the "Data Backup" automatic function.

Interval: Select the interval for this automatic function. Options: Minutely, hourly, daily, weekly, monthly

Repeat every (only if minutely or hourly is selected for the interval): Select the time lag for the automatic function of the selected interval.

Start day (only if weekly or monthly is selected for the interval): Select the day of the week for the automatic function of the selected interval.

Start time (only if daily, weekly or monthly is selected for the interval): Select the starting time for the automatic function of the selected interval.

Data time period: Select the time period of the data to be backed up (e.g.: "0 day 10:00:00" saves the data of the last 10 hours).

File path: The file storage location is defined here. Clicking the "..." button opens the directory structure of the computer and you can select the storage location.

If a network drive is selected, you are also asked to enter a user and password. The setting is then saved and can be modified under "Extras -> Settings -> Automatic" (see Section 5.1.6).

#### NOTICE

A new file is created each time a backup copy of the data is created. The time stamp with the format "year-month-day h-m-s" is automatically added to the file name (e.g.: automatic_test_ 2010-06-25 08-09-30.fdm).

# 6.7 Automatic – Certification PDF export

This function enables the regular and automatic PDF export of iTHERM TrustSens calibration certificates which are recorded in a Memograph M RSG45 system (TrustSens Calibration Monitoring):

2	TEST94XXX: Settings					
S.	TEST94XXX: Settings		Automatic - Certificati PDF certification ex Cative Interval: Start time:			
	Automatic - Read out device Automatic - Delete data Color Automatic - Time synchronize		Export path: Export folder: Timestamp:	<ul> <li>Create automatically export folder for every device.</li> <li>Append timestamp at the end of the file name.</li> </ul>		
_	Automatic - Binary export	•			ОК	Cancel

Active: Enables or disables the automatic function for PDF certification export.

Interval: Use this option to select the interval for this automatic function.

Options: Every minute, hour, day, week, month

Repeat every (only if minute or hour is selected for the interval): Select the time lag for the automatic function of the selected interval.

Start day (only if week or month is selected for the interval): Select the day of the week for the automatic function of the selected interval.

Start time (only if day, week or month is selected for the interval): Select the starting time for the automatic function of the selected interval.

Export path: Use this field to specify the storage location. Clicking the "..." button opens the menu structure of the computer and you can select the storage location.

Export folder: If this option is selected, a separate folder is automatically created for each TrustSens device (e.g.: EH_TM371_N3044B04487)

Time stamp:

If this option is selected, the time stamp is automatically added at the end of the file name. Sample file name: "N3044B04487-0-19_20190124-140934.pdf"

"N3044B04487" TrustSens serial number

"0_19" Calibration number

"20190124" Date in the format "year-month-day"

"140934" Time in the format "h-m-s"

# 7. Troubleshooting

### 7.1 System error messages

Error messages during data readout:

Error code	Problem, cause	Remedy
0x20000001	An internal error occurred during data readout.	Please try again.
0x20000002	Unable to access the file.	Please check the file path.
0x20000003	Unable to access the data.	Please check your access authorization.
0x20000004	An error occurred when connecting to the	Please try again.
0A20000001	device.	r lease try again.
0x20000005	An error occurred when communicating with	Please try again.
0X20000000	the device.	
0x20000006	The communication settings are not correct.	Please check the settings.
0x20000007	An error occurred when communicating with	Please try again.
0.20000007	the device.	
0x20000008	An error occurred when communicating with	Please try again.
0X20000000	the device.	
0x20000009	An error occurred when communicating with	Please try again.
0x20000009	the device.	r lease try again.
0x2000000A	The Reporting Software does not support the	Please select another device.
0x2000000A	connected device.	riease select another device.
0x2000000B	An error occurred when communicating with	Please try again.
0x20000000	the device.	riease try again.
0x2000000C	The configured device address is not correct.	Please check the configuration.
0x2000000C	The connection to the device has been	Please try again.
0x20000000		Please fly again.
0x2000000E	interrupted. No device found at the interface.	Please check the connection and interface
UXZUUUUUUE	no device found at the interface.	
0x2000000F	An opport occurred when communicating with	settings.
0X2000000F	An error occurred when communicating with the device.	Please try again.
0x20000010	The IP address or host indicated cannot be	Diagon shock the settings
0x20000010	found.	Please check the settings.
0x20000011		Diagon shock the connection pattings
UX20000011	The COM port indicated is being used by	Please check the connection settings.
0x20000012	another application.	Diagon shock the composition pattings
	The COM port does not exist.	Please check the connection settings.
0x20000013	The data are corrupted and cannot be read in.	Please notify Support.
0x20000014	Unable to find the indicated path.	Please check the file path.
0x20000015	No data are available for the time range	Please choose another time range.
0.000001(	indicated.	
0x20000016	The data are from an unknown device type and	Please notify Support.
0.0000017	cannot be read in.	
0x20000017	The connected modem could not be initialized.	Please check the connection to the modem
0.0000010		and try again.
0x2000018	The connected modem does not answer.	Please check the connection and the
0.0000010		settings.
0x20000019	General modem error.	Please try again.
0x2000001A	Currently not possible to access the device as all	Please try again.
	the available communication channels are	
	busy.	
0x20000020	Device is already being accessed.	Please check the manual and automatic
0.00000000		configuration.
0x20000021	No other device data are available.	Please try again later.
0x20000022	Device is already being accessed.	Please check the manual and automatic
		configuration.
0x20000023	Error updating the device time. Possible	Please try again later.
	limitations in time synchronization.	
0x20000024	Another device has been detected.	Please check the specified device type.
0x20000025	Incompatible file format found.	Please update the Reporting Software.

Error code Problem, cause Remedv The Automatic Service and the Tray Icon Please install the Automatic Application of the Reporting Software are not components. 0x4000000 installed. The Automatic Service of the Reporting Software is Please start the Automatic Service. 0x4000001 stopped. 0x4000002 An error has occurred in the Automatic Service. Please check the automatic settings. 0x4000003 An error occurred when reading out a device. Please check the automatic settings. An error occurred when storing the transmitted Please check the automatic settings. 0x40000004 data. An error occurred when automatically deleting the Please check the automatic settings. 0x40000005 data. No communication possible between the Service Please notify Support. 0x40000006 and Tray Icon. An error occurred when automatically exporting Please check the automatic settings. 0x4000007 the data in binary format. An error occurred when automatically exporting Please check the automatic settings. 0x4000008 the data in XLS or CSV format.

#### Error messages associated with automatic service:

#### Error messages during database access:

Error code	Problem, cause	Remedy
0x60000000	An error occurred when accessing the database.	Please check the database settings and
		the database availability.
0x6000001	Error when accessing the database.	Please check the database settings and
		the database availability.

#### Error messages associated with user administration:

Error code	Problem, cause	Remedy
0x60010000	The user account has been blocked by an administrator.	Please contact the administrator.
0(0010001		Discourse of the educinistration
0x60010001	The current user is not an administrator.	Please contact the administrator.
	Administrator rights are required for this	
	action.	
0x60010002	Administrator rights are required.	Please contact the administrator.
0x60010003	The password has not been changed. The new	Please assign a different password.
	password was not accepted.	
0x60010004	Password modification has failed.	Please assign a different password.
0x60010005	User deletion has failed.	Please try again or contact the
		administrator.
0x60010006	User administration cannot be activated as an	Please set up an administrator in the user
	administrator has not been configured.	administration function.
0x60010007	User account has been blocked after incorrect	Please contact the administrator.
	password entered {0} times.	
0x60010008	User account has been blocked for 10 minutes	Please try again after 10 minutes.
	after incorrect password entered {0} times.	
0x60010009	Login has failed.	Please try again.
0x60010010	Incorrect user ID or password	Please try again.
0x60010011	The password has expired and a new password	Please assign a new password.
	is required.	
0x60010012	Not possible to delete all the administrators if	Please disable user administration.
	user administration is enabled.	

Error code	Problem, cause	Remedy
0x60010013	The user currently logged in cannot be deleted.	Please log in under another user name to
		delete this user.
0x60010014	There should always be at least one	Please set up an administrator in the user
	administrator while user administration is	administration function.
	enabled!	
0x60010015	The new password and the confirmed new	Please enter the two passwords again.
	password are not identical.	
0x60010019	The new password must differ from the last {0}	Please assign a different password.
	passwords.	
0x60010020	The password must contain at least {0}	Please assign a different password.
	characters.	
0x60010021	The password must contain at least five	Please assign a different password.
	characters.	
0x60010022	The password must contain digits.	Please assign a different password.
0x60010023	The password must contain special characters.	Please assign a different password.
0x60010024	The password must contain upper case and	Please assign a different password.
	lower case characters.	
0x60010025	No more users can be created. The Reporting	Please delete old user accounts first.
	Software permits a maximum of 50 users.	
0x60010027	This user ID already exists.	Please assign a different user ID.
0x60010028	User administration cannot be activated as an	Please set up an administrator in the user
	administrator has not been created in the	administration function.
	database.	
0x60010032	You are not authorized to change the database	Please contact the administrator.
	setting. The database setting has not been	
	changed.	

Error messages during data readout:

Error code	Problem, cause	Remedy
0x60020000	Data storage not successful. The following files	Please check the file and/or try again.
0 (0020001	are corrupted: '{0}'	
0x60020001	Error when accessing the database. The following files could not be stored: '{0}'.	Please try again.
0x60020002	Data storage not successful. The following files	Please try again.
	could not be stored: '{0}'.	
0x60020003	Data readout was not successful. Not possible to connect to the device.	Please try again.
0x60020004	Data readout was not successful. A new device	Please check your access authorization.
0X00020001	could not be created in the database as the	
	current user does not have appropriate access	
	authorization. The following file could not be	
	stored: '{0'}	
0x60020005	Configurations '{0}' and '{1}' could not be	Please choose other configurations.
	merged as data would be lost.	
0x60020006	The configurations could not be merged as	Please choose other configurations.
	there is a time overlap between configurations	5
	'{0}' and '{1}'.	
0x60020007	Cannot establish connection to the database	Please check the settings.
	server!	
0x60020008	Not possible to connect to the database server	Please check the settings.
	with the new settings. The changes to the	
	database settings are not accepted!	
0x60020009	Invalid database settings	Please check the settings.
0x60020010	Files not deleted successfully.	Please delete the data manually.
0x60020011	The data that have been read out could not be	Please delete the data manually.
	deleted from the device.	
0x60020012	An error occurred when connecting to the	Please check the communication settings
0. (000.001.0	device.	and try again.
0x60020013	The devices could not be merged because	Please choose two devices of the same
	device '{0}' and device '{1}' are different types of device.	type.
0x60020014	The devices could not be merged as there is a	Please choose two devices that do not
0x00020014	time overlap between devices '{0}' and '{1}'.	overlap timewise.
0x60020015	A new node could not be added.	Please try again.
0x60020016	Node addition has failed.	Please try again.
$\cup x \cap \cup \cup Z \cup \cup \cup I$	Impossible to add a new node	Please log in with a higher-level user role
0x60020017	Impossible to add a new node.	Please log in with a higher-level user role (e.g. administrator).
0x60020017	Impossible to add a new node. Add node	(e.g. administrator).
	-	
	-	(e.g. administrator). Please log in with a higher-level user role
0x60020018	Add node	(e.g. administrator). Please log in with a higher-level user role (e.g. administrator). Please log in with a higher-level user role (e.g. administrator).
0x60020018	Add node	(e.g. administrator). Please log in with a higher-level user role (e.g. administrator). Please log in with a higher-level user role
0x60020018 0x60020019	Add node The selected node may not be deleted.	(e.g. administrator). Please log in with a higher-level user role (e.g. administrator). Please log in with a higher-level user role (e.g. administrator).
0x60020018 0x60020019	Add node The selected node may not be deleted.	<ul> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> </ul>
0x60020018 0x60020019 0x60020020 0x60020021	Add node         The selected node may not be deleted.         Delete node         The selected node may not be moved.	<ul> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> </ul>
0x60020018 0x60020019 0x60020020	Add node         The selected node may not be deleted.         Delete node	<ul> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> </ul>
0x60020018 0x60020019 0x60020020 0x60020021 0x60020022	Add node         The selected node may not be deleted.         Delete node         The selected node may not be moved.         Move node	<ul> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> </ul>
0x60020018 0x60020019 0x60020020 0x60020021	Add node         The selected node may not be deleted.         Delete node         The selected node may not be moved.	<ul> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> </ul>
0x60020018 0x60020019 0x60020020 0x60020021 0x60020022 0x60020023	Add node         The selected node may not be deleted.         Delete node         The selected node may not be moved.         Move node         The selected node may not be renamed.	<ul> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> </ul>
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0x60020018 0x60020019 0x60020020 0x60020021 0x60020022 0x60020023 0x60020024	Add node         Add node         The selected node may not be deleted.         Delete node         The selected node may not be moved.         Move node         The selected node may not be renamed.         Rename node	<ul> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> </ul>
0x60020018 0x60020019 0x60020020 0x60020021 0x60020022 0x60020023 0x60020024 0x60020025	Add node         Add node         The selected node may not be deleted.         Delete node         The selected node may not be moved.         Move node         The selected node may not be renamed.         Rename node         A new node could not be created.	<ul> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> <li>Please log in with a higher-level user role</li> <li>(e.g. administrator).</li> </ul>
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0x60020029	Node deletion has failed.	Try again. You might have to increase the
		timeout value in the database connection.
0x60020030	The selected node could not be deleted.	Try again. You might have to increase the
		timeout value in the database connection.
0x60020032	An error occurred during the import. {0} of {1}	
	lines have not been imported!	
0x60020034	The selected node could not be moved.	Please check the settings.
0x60020035	Not possible to move the node.	Please check the settings.
0x60020036	Unable to open the file '{0}'!	Please check whether the file can be read.
0x60020037	The plant view could not be refreshed.	Please check the settings.
0x60020038	Plant view refresh has failed	Please check the settings.
0x60020039	The template view could not be refreshed.	Please check the settings.
0x60020040	Template view refresh has failed	Please check the settings.
0x60020041	The selected node cannot be renamed.	Please make sure that the name is not
		longer than 30 characters.
0x60020042	Node renaming has failed.	Please make sure that the name is not
		longer than 30 characters.
0x60020043	Failure to update the communication settings.	Please check the settings.
0x60020044	Failure to update the communication settings.	Please check the settings.
0x60020045	Cannot establish connection to the database	Please contact your administrator.
	server. Database scheme has not been	
	generated.	
0x60020046	Invalid communication settings!	Please select "Back" and change the
		communication settings.
0x60020047	Configuration merge has failed.	Please try again or select other
		configurations.
0x60020048	Device merge has failed.	Please try again or select other devices.
0x60020049	There are no communication settings for the	Please change the communication settings
	selected device.	for the selected device.
0x60020050	No files available with data.	Please select another directory.
0x60020051	An error occurred when reading the device	Please check the connection and try again.
	information.	

Error code	Problem, cause	Remedy
0x60030000	Finished with an error.	Try again.
		Click 'Close' to exit the Wizard.
0x60030001	Finished with an error.	Click 'Close' to exit the Wizard.
	The data have been exported from the	
	database but could not be deleted.	
0x60030002	There are no data in the database for the	Please choose a valid time range.
	selected time range. No file has been	
	generated.	
0x60030003	The selected template contains devices that are	Please delete the template.
	no longer available in the database.	
0x60030004	Missing devices	Please delete the template.
0x60030005	The selected template contains at least one	Please delete the template.
	device that is no longer in the database.	
0x60030006	Missing device	Please delete the template.
0x60030007	The selected template is no longer in the	Please choose another template.
	database. It has probably been deleted in the	
	meantime.	
0x60030008	Template not available	Please choose another template.
0x60030009	You cannot open this template as you do not	Please contact the Reporting Software
	have access authorization for at least one	administrator. He/she can assign you the
	device in this template.	necessary authorization.
0x60030010	No access authorization	Please contact the Reporting Software
		administrator. He/she can assign you the
		necessary authorization.

#### Error messages during export:

#### Error messages during import:

Error code	Problem, cause	Remedy
0x60040000	The binary file has been saved with a more recent version of the Reporting Software and cannot be imported.	Update the Reporting Software to the current version.
0x60040001	Finished with an error. No data have been imported.	Please check the import file. Click 'Close' to close the Wizard.
0x60040002	Finished with a warning. Some data could not be imported.	Click 'Close' to exit the Wizard.
0x60040003	Import not successful. The import file indicated does not contain any data. No data have been imported.	Please check the file.

Error code Problem. cause Remedy 0x60050000 The changes to the automatic function cannot Please save the template. be saved as the template has not been saved! 0x60050001 An error occurred when saving the template. Please check the database settings. The template was not saved in the database. 0x60050002 Error when saving the template. Please check the database settings. 0x60050003 An error occurred during the export. Export Please check whether there is sufficient was not successful. space in the selected directory and whether you have write-access for this directory. 0x60050004 The "Minimum" value must be smaller than the Please correct the values chosen. "Maximum" value! 0x60050005 There are no data in the database for the Please choose another time range. selected time range. 0x60050006 No data available Please choose another time range.

#### Error messages associated with visualization:

#### Error messages associated with the installation or database:

Error code	Problem, cause	Remedy
0x60060000	The Demo version test period has expired. You	Please order a serial number for the full
	cannot start this application any more.	version.
0x60060001	The Demo version test period has expired. You	Please order a serial number for the full
	cannot start this application any more.	version.
0x60060002	The license information is incorrect.	Please start the installation program again.
0x60060003	The license information is incorrect.	Please start the installation program again.
0x60060004	The new language setting is enabled once the	Please start the Reporting Software again.
	program has been restarted.	
0x60060005	The new language setting is enabled once the	Please start the Reporting Software again.
	program has been restarted.	
0x60060006	There is no valid database on the database	Please contact your administrator.
	server that is currently connected, or the wrong	
	version of the database is available.	
0x60060007	Incorrect database	Please contact your administrator.

#### Error messages during printout:

Error code	Problem, cause	Remedy
0x60070000	The document requires more than 1000 pages.	Please select a shorter time frame to avoid this problem.
0x60070001	Document creation was stopped after 1000 pages because the maximum number of pages has been reached.	Please select a shorter time frame to avoid this problem.

# 8. TrustSens Calibration Monitoring

#### NOTICE

Available in conjunction with Memograph M RSG45 (as of firmware version 2.04) and iTHERM TrustSens TM371/TM372.

Memograph M RSG45 application package:

- Up to 20 iTHERM TrustSens TM371/TM372 thermometers can be evaluated via the HART interface
- Self-calibration data displayed on screen or via the Web server
- Generation of a calibration history
- Creation of a calibration certificate as an RTF file directly at the RSG45
- Evaluation, analysis and further processing of the calibration data using "Field Data Manager" (FDM) analysis software

Additional information: Please refer to the Operating Instructions for "TrustSens Calibration Monitoring" (BA01887R)

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