

SIEMENS

SIMATIC HMI

WinCC flexible 2007 What's new in WinCC flexible 2007

System Manual

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Printout of the Online Help

Safety Guidelines

This manual contains notices you have to observe in order to ensure your personal safety, as well as to prevent damage to property. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring only to property damage have no safety alert symbol. These notices shown below are graded according to the degree of danger.

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 WARNING
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 CAUTION
with a safety alert symbol, indicates that minor personal injury can result if proper precautions are not taken.
CAUTION
without a safety alert symbol, indicates that property damage can result if proper precautions are not taken.
NOTICE
indicates that an unintended result or situation can occur if the corresponding information is not taken into account.


If more than one degree of danger is present, the warning notice representing the highest degree of danger will be used. A notice warning of injury to persons with a safety alert symbol may also include a warning relating to property damage.

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The device/system may only be set up and used in conjunction with this documentation. Commissioning and operation of a device/system may only be performed by **qualified personnel**. Within the context of the safety notes in this documentation qualified persons are defined as persons who are authorized to commission, ground and label devices, systems and circuits in accordance with established safety practices and standards.

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This device may only be used for the applications described in the catalog or the technical description and only in connection with devices or components from other manufacturers which have been approved or recommended by Siemens. Correct, reliable operation of the product requires proper transport, storage, positioning and assembly as well as careful operation and maintenance.

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We have reviewed the contents of this publication to ensure consistency with the hardware and software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions.

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What's new in WinCC flexible 2007?

Overview

In addition to optimized system behavior, SIMATIC WinCC flexible 2007 offers a series of functional enhancements:

Performance optimization in engineering

- Optimizations in the setup
- Reduction in generating times
 - Improvement in the generating mechanism
 - Generation of individual devices
- Reduction in project size
 - Data storage in WinCC flexible 2007
 - Saving and optimizing
 - Logging and retrieving
- Improvements in WinCC flexible projects integrated in STEP 7

Enhanced functions

Editors

- "Text lists" and "graphics lists"
 - Evaluation of least significant bit
 - Default value for text lists and graphic lists
 - Multi-line text lists
- User administration
 - Advanced password rules
 - Central user administration using SIMATIC Logon
- Screen editor
 - Animation: Bit-number controlled layout: Evaluation of least significant bit
 - Animation: Bit controlled "operability" and "visibility"

Communication:

- Telemecanique
- Ethernet/IP for Allen-Bradley
- PPI Advanced for OP 77B

ES and RT system functions

- ShiftAndMask
- LookupText
- Encode

Enhancements for OP 73, OP73micro, OP 77A, TP 177A, TP 177micro

- Trend view
- Recipe view
- Simulation on the PC
- Property: vector graphic, font

Licenses

- Simplified license handling
- License key installed determines WinCC flexible Edition
- Improved service scenarios

Runtime options

- Enhanced functions for ProAgent
- SmartService, SmartAccess
- WinAC MP 2007

HMI devices

- New Multi Panel MP 377

Performance optimization in engineering

Increases in performance

WinCC flexible 2007 contains extensive optimizations which further increase engineering performance.

- Installation

- The WinCC flexible setup has been sped up by an optimized scope of installation.

- Reducing generating times

- Improvement in the generating mechanism

- In WinCC flexible 2007, the system now decides whether the WinCC flexible project is to be fully regenerated or simply modified. By default, only a modification is generated. Exceptions include, for example adding another runtime language or replacing the HMI device. In this case, the WinCC flexible project is automatically fully regenerated.

- Generating individual HMI devices

- You can also generate each HMI device individually in a multi-device project. Define the HMI devices in the "Select HMI devices for generation" dialog.

- Reduction in project size

- Data storage

- Data storage in WinCC flexible 2007 has been optimized. The size of your project therefore decreases when you convert to WinCC flexible 2007. Depending on the project, the file size may be halved.

- Saving and optimizing projects

- You can use the "Project > Save and optimize" menu command to further reduce the project size. In this process, the project data distributed in the database is combined, rearranged and saved.

- Deleting temporary files

- The files produced by the compiler are deleted.

- Logging/retrieving projects

- You archive WinCC flexible projects using the "Project > Log" menu command. Logged projects are compressed and hence have a smaller memory size. You can also also define the segmentation of the log file. The "Log" function is provided with WinCC flexible Standalone. For projects integrated in STEP 7, please use the archiving method of the SIMATIC manager.

The archive file produced still only contains the two files needed to restore your project (Project.hmi, Project_log.LDF). This functionality is provided in integrated mode as of STEP 7 V5.4 SP2 and in SIMATIC Manager.

In WinCC flexible, you can use the "Project > Retrieve" menu command to unzip the archived WinCC flexible project. In the context of projects integrated in STEP 7, please use the retrieval method of the SIMATIC manager.

- Improvements in WinCC flexible projects integrated in STEP 7

WinCC flexible and STEP 7 work together faster in integrated mode, e.g. when producing, copying or deleting an HMI device.

- Access and synchronization of STEP 7 symbols has been optimized and sped up.

Enhanced functions

3.1 Editors

3.1.1 Text list and graphics lists

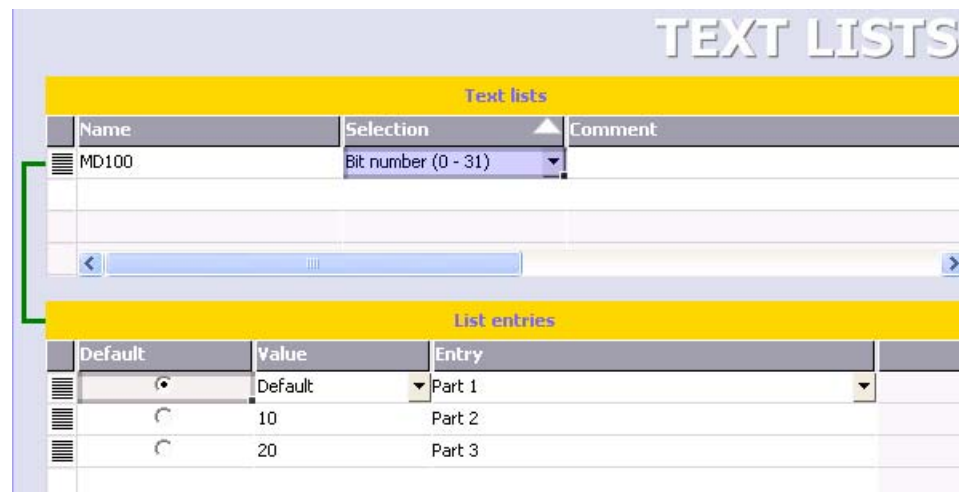
Improved evaluation

The previous version did not display any text or graphic objects in text lists and graphic lists with "Bit number 0 to 31" if no or multiple bits were set at the index tag or multiple bits were set or a list entry which was not configured has been activated.

With WinCC flexible 2007 you can specify the following:

- Default value (Default)

You can define a text or graphic object as default value in the Editor. This text or graphic object is displayed if no bits are set in the index tag.



- Set least significant bit

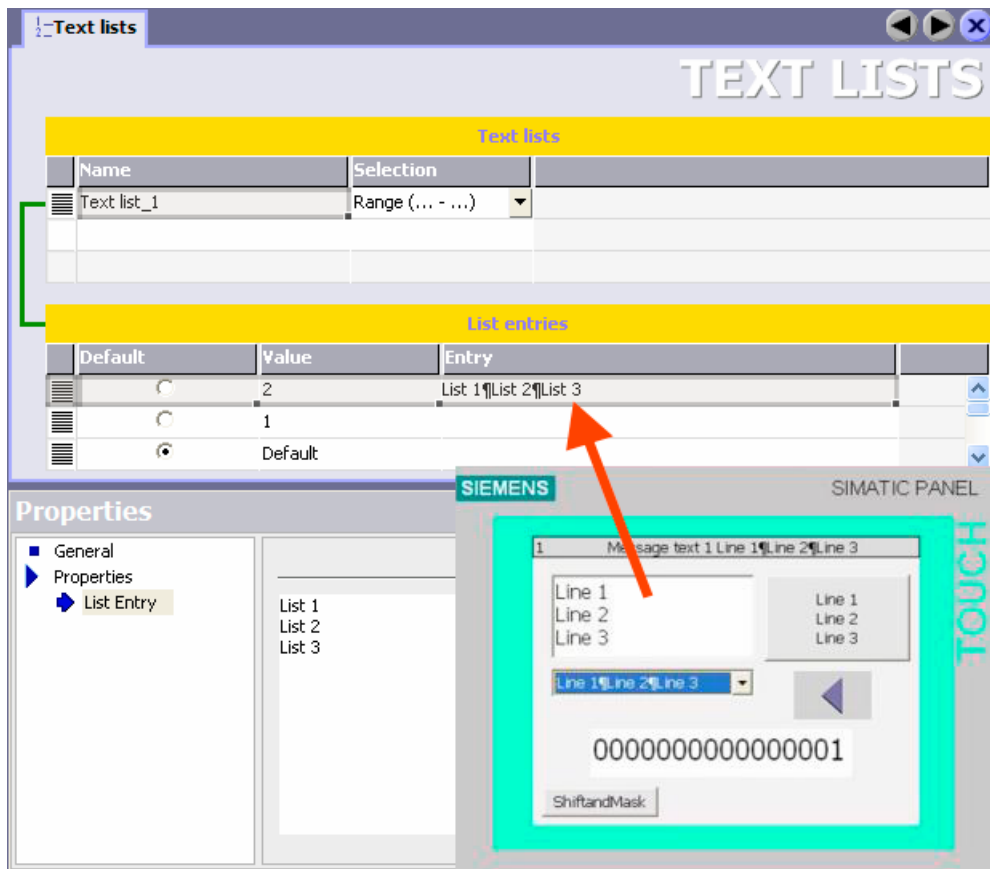
If multiple bits are set in the index tags, you can now establish that the text or the graphic that is assigned to the set bit of the least significance will be displayed. The program outputs the default value if the set least significant bit is not assigned any values. You can establish this setting in the "HMI device settings (Page 12)" editor.

Multiline text list entries

You can now create multiline text list entries in the "Text list" editor. Line breaks are displayed using the "¶" carriage return symbol.

A line break is entered in the "Text list" editor using the "<SHIFT>+<Return>" key combination. Alternatively, you can enter the line break with "Return" using the properties dialog.

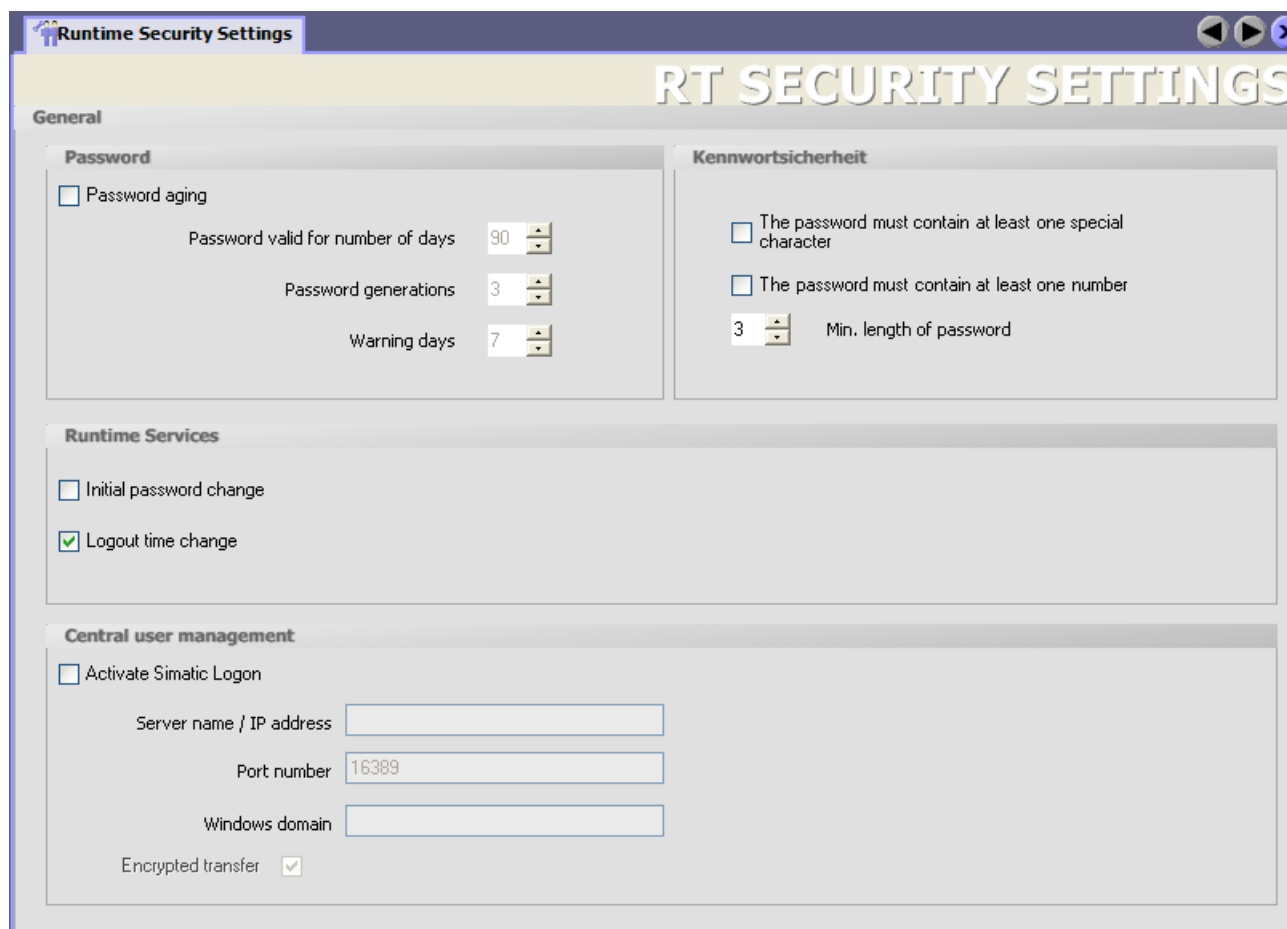
Multiline text list entries are only output over several lines in symbolic output fields and on buttons. In all other cases, the multi-line texts are displayed using the "¶" carriage return symbol, e.g. message line, symbolic I/O box.



3.1.2 User administration

Enhancements

You can use the "Runtime security settings" editor to configure user administration in compliance with FDA Directives 21CFR Part 11, for example.



The "Runtime security settings" editor has been expanded to include the following:

- Advanced password rules in the "Password security" area

Passwords have a configurable minimum length. It also now checks if a password includes a special character or number.

- "Central user administration" area using SIMATIC Logon

SIMATIC Logon is used to link WinCC flexible to a central user administration. The users are no longer created and maintained separately for each HMI device in the corresponding user administration, instead the data are managed on a central log-on server. If a new user is created on the log-on server in the Windows operating system in user administration and is assigned to a Windows group, then this user can immediately log on to any panel on which there is a corresponding WinCC flexible group.

The user logs on using the SIMATIC Logon service.

SIMATIC Logon is available on the following HMI devices:

- Mobile Panel 177, Mobile Panel 277
- OP 177B, TP 177P, MP 277, TP 277, OP 277, MP 377
- PC and panel PCs with WinCC flexible Runtime

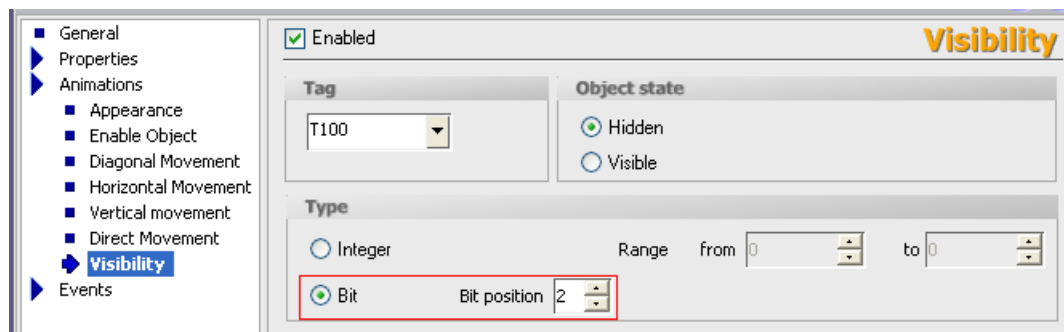
3.1.3 Screens

Functional expansion

The "Screens" editor of WinCC flexible 2007 features the improvements outlined below:

- Animation "operability" and "visibility"

Operability and visibility were previously controlled only by means of the range of values. Operability and visibility can now be controlled by setting tag bits.



- Animation "structure"

If multiple bits were set in the index tag, the basic configuration of the field appeared for the range "Bit number 0-31". You can now specify to display the configuration which is assigned to the set least significant bit in this situation. For this reason, the "HMI device settings (Page 12)" editor has been enhanced.

3.1.4 Device settings

New settings

Runtime settings



- Bit selection in text lists and graphic lists
- Bit selection for structure

These settings define whether to display the configuration in the text lists, graphics lists and in the "Appearance" animation if the least significant bit is set.

3.2 Communication

New features

Telemecanique

The following HMI devices can communicate with the following PLCs via the Uni-Telway which acts as a multi-point connection:

- HMI devices
 - OP 77B
 - TP 170A, OP 170B, TP 170B, TP 177B, OP 177B, OP 270, TP 270, OP 277
 - MP 270B, MP 277, MP 370, MP377
 - Mobile Panel 170, Mobile Panel 177 DP, Mobile Panel 277
- PLCs
 - TSX 7 PLC series with P47 411
 - TSX 7 with P47/67/87/107 420
 - TSX 7 with P47/67/87/107 425
 - Module TSX SCM 21.6 with the aforementioned TSX 7 CPUs
 - TSX 17 with module SCG 1161
 - TSX 37 (Micro)
 - TSX 57 (Premium)

Ethernet/IP for Allen-Bradley

All Panels with integrated Ethernet interface and PCs with WinCC flexible Runtime can communicate with the following Allen Bradley PLCs by means of Ethernet/IP drivers:

- ControlLogix
- CompactLogix

Up to 8 connections can be configured depending on the HMI device used.

PPI Advanced for OP 77B

The PPI advanced driver supports up to four S7-200 connections for OP 77B by way of PPI network.

3.3 New ES and RT system functions

ShiftAndMask

This system function converts the input bit pattern of the source tags into an output bit pattern of the target tags. This involves bit shifting and masking.

Available on:

OP 73micro, OP 73, TP 170micro, TP 170A, TP 177micro, OP 77B, TP/OP 170B, Mobile Panel 170, Mobile Panel 177, TP/OP 177B, TP/OP 270, TP/OP/MP 277, Mobile Panel 277, MP 370, MP 377, WinCC flexible Runtime

Encode

The system function adapts the "String" data type of a tag for passing to the automation system (AS). "Encode" can be used to transfer Asian strings to the controller, for example.

Available on:

OP 77B, TP/OP 170B, Mobile Panel 170, Mobile Panel 177, TP/OP 177B, TP/OP 270, TP/OP/MP 277, Mobile Panel 277, MP 370, MP 377, WinCC flexible Runtime

LookupText

The system function identifies an entry from a text list.

Available on:

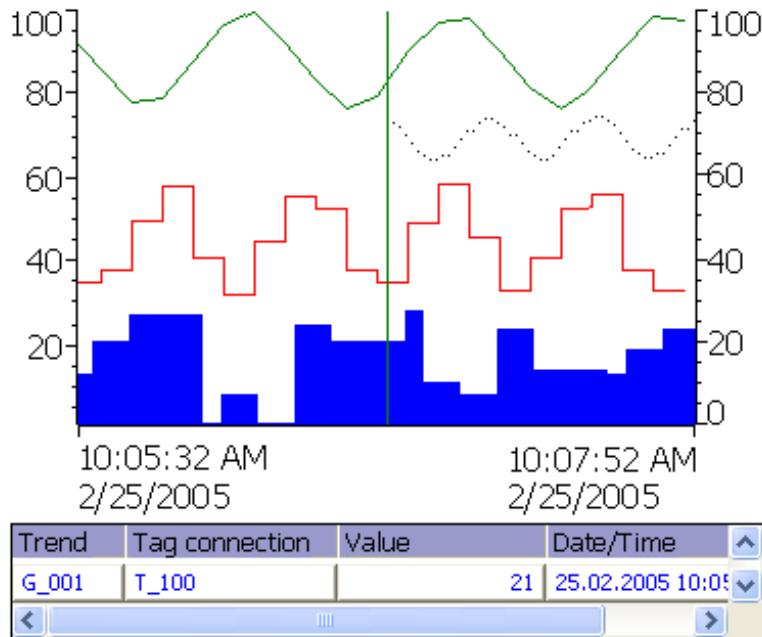
OP 77B, TP/OP 170B, Mobile Panel 170, Mobile Panel 177, TP/OP 177B, TP/OP 270, TP/OP/MP 277, Mobile Panel 277, MP 370, MP 377, WinCC flexible Runtime

3.4 Enhancements for OP 73, OP73micro, OP 77A, TP 177A, TP 177micro

3.4.1 Trends

Displaying trends

The The "Trend display" graphic object can now be used on the TP 177micro and TP 177A HMI devices.

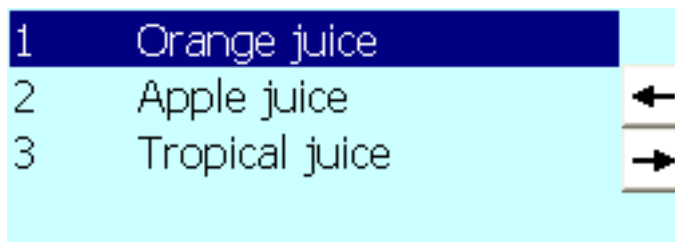


With the trend display you can graphically view tag values from the current process, e.g. the time-related temperature course of a kiln control. A Trend view can visualize several trends simultaneously.

3.4.2 Recipes

Managing recipes

The "Recipe view" graphic object is also available on the OP 77A and TP 177A HMI devices. Only a simple recipe view can be configured on the OP 77A and OP 177A. You use the recipe view to manage the recipe data records.



3.4.3 Simulation on the PC

Improved simulation

Projects for OP 73micro, OP 73, OP 77A, TP 177A and TP 177micro can now be tested using the Simulator of WinCC flexible 2007. Simulation allows you, for example, to verify the functionality of the screens, screen objects or alarms you configured.

The screens can be zoomed for simulation.



3.4.4 Property: vector graphic, font, animation

Enhancement for vector graphic

The line style has been enhanced for the TP 177micro and TP 177A HMI devices. The previous version only allowed you to select the "Default" style for the line start and end. Version 2007 or higher lets you define an arrow for the line start and end.

"Font" property

The OP 73, OP 73micro, OP 77A, TP 177A and TP 177micro HMI devices support the following font styles:

- Italic
- Bold
- Italic and bold

You can highlight the importance of a piece of information by means of the "Bold" font style, for example.

3.5 Runtime options

3.5.1 ProAgent

Simplified and convenient process diagnostics

WinCC flexible/ProAgent is a software tool for process diagnostics, and allows the quick recognition of error causes.

The SIMATIC WinCC flexible/ProAgent option offers the following new features:

- ProAgent now also supports the MP 377 HMI device.
- Generating unit-specific messages

ProAgent imports the messages of all units selected for diagnostics in WinCC flexible by default. Messages can now also be imported depending on the message's display class.

- Graphic step sequence display

In addition to the step list, you can display the GRAPH 7 step sequence as a step diagram. The color coding in the step diagram identifies the step status and the currently focused object of the step sequence.

- New ProAgent functions

- StepViewToggleDisplayMode

Changes between the step list and the step diagram in the step sequence display.

- StepViewZoom

Zooms the step diagram by the next lower or higher zoom ratio.

- DetailViewChangeAnalyzeMode

Toggles the "Step sequence" and "Alarm" analysis mode in the detail display or changes to another analysis mode.

When in "Step sequence" mode, the detailed view shows the network belonging to the current step of the step sequence. Provided that there are no ALARM-S messages and no error definitions are selected.

- StartSimaticManager

Calls SIMATIC Manager during PC runtime.

- GoToSTEP7

Calls STEP 7 and visualizes the control program section which is associated with the selected message or unit.

3.5.2 Sm@rtService/Sm@rtAccess

Service and diagnostics

WinCC flexible/Sm@rtAccess and WinCC flexible/Sm@rtService have changed as follows:

- The options can be used on the new Ethernet-enabled HMI devices:
 - MP 377
 - ProAgent and Sm@rtAccess/Sm@rtService can be run in parallel on the following HMI devices:
 - MP 277
 - Mobile Panel 277.
- Up to two clients can log on to a Sm@rtServer.

3.5.3 WinAC MP 2007

New software PLC

The SIMATIC WinAC MP 2007 software PLC can be used in combination with the following devices:

- MP 277 8" Touch, MP 277 10" Key / Touch
- MP 377 12" Key / Touch, MP 377 15" Touch and MP 377 19" Touch

The MP 277 / MP 377 and WinAC/MP components used are configured using HW Config in STEP 7.

3.6 Licensing

Simplified license handling

You will need new license keys to license WinCC flexible 2007. You can use these license keys to also license previous versions of WinCC flexible 2005 and 2005 SP1.

The license key is supplied on a USB stick.

License key installed determines WinCC flexible Edition

In the past, the edition relating to the license key acquired had to be selected at the start of the installation process. This no longer has to be done during WinCC flexible 2007 installations. The subsequently installed license key determines the WinCC flexible edition used.

Improved service scenarios

The license keys are retained during image updates and when restoring to the panels. This functionality is available on the following HMI devices: TP/OP 177B, TP/OP/MP 277, Mobile Panel 277, MP 377.

BackupRestore is also used to back-up or restore licenses on the panel.

HMI devices

4.1 New Multi Panel

MP 377

Previous HMI device	replaced by
MP 370	MP 377

The panel-mount dimensions of MP 377 are compatible with the predecessor devices. In addition to the already known display sizes, the product line was expanded with a 19" Touch Multi Panel.

The number of interfaces has increased compared to MP 370.

The MP 377 has a TFT display with 64K colors and two integrated PROFINET interfaces. This optimizes its integration in plants with PROFINET network. Its two USB 2.0 ports can be used to connect distributed USB devices such as memory sticks, mouse and keyboard input devices, selected USB printers and USB hard disks.

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