

SIEMENS

General notes

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STEP 7 Basic

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WinCC Readme

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SIMATIC Readme STEP 7 Basic

Online help printout

08/2011

Online help printout

Legal information

Warning notice system

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.

⚠ DANGER
indicates that death or severe personal injury will result if proper precautions are not taken.
⚠ WARNING
indicates that death or severe personal injury may result if proper precautions are not taken.
⚠ 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 relevant 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.

Qualified Personnel

The product/system described in this documentation may be operated only by **personnel qualified** for the specific task in accordance with the relevant documentation, in particular its warning notices and safety instructions. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with these products/systems.

Proper use of Siemens products

Note the following:

⚠ WARNING
Siemens products may only be used for the applications described in the catalog and in the relevant technical documentation. If products and components from other manufacturers are used, these must be recommended or approved by Siemens. Proper transport, storage, installation, assembly, commissioning, operation and maintenance are required to ensure that the products operate safely and without any problems. The permissible ambient conditions must be complied with. The information in the relevant documentation must be observed.

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Disclaimer of Liability

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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General notes

1.1 General notes

The information in this readme file supersedes statements made in other documents.

Read the following notes carefully because they include important information for installation and use. Read these notes prior to installation.

Security settings

In order to operate the software packages in the TIA Portal, port 4410 for TCP must be entered as an exception in the Windows firewall during installation.

Installing new .Net versions or .Net service packs

- Close the TIA portal before installing a new .Net version or a new .Net service pack on your programming device/PC.
- Restart the TIA portal only after successful installation of the new .Net version or the new .Net service pack.

Notes on handling

- If a project in the list of projects last used is located on a network drive that is not connected, you may experience delays when opening the "Project" menu.
- When you insert a CPU, you may need to wait for some time if the project editor is open at the same time. This generally takes longer when you insert the first CPU in a newly created project. To be able to continue working more quickly, you should close the project editor before inserting a CPU.
- The message "Application is not responding" may appear in Windows 7 with functions that take a long time to run (loading the CPU for example). If this occurs, wait until the function has correctly finished.
- If you have installed a Microsoft mouse with IntelliPoint, you may find that it superimposes components over the buttons of the title bar. If this is the case, uninstall the IntelliPoint software from Microsoft.
- Enabling the "Virtual Desktop" options with NVIDIA graphics cards can cause problems. In this case, disable the "nView virtual desktop manager" of your NVIDIA graphics driver.

Using the TIA Portal via a remote desktop

In principle, it is possible to use the TIA Portal via a remote desktop connection. During configuration, you should, however, avoid disconnecting the connection to the desktop client. In rare cases, this can lead to the software user interface being blocked.

If you experience this blockage, follow these steps on the desktop client.

1. Open the Windows Task-Manager and close the "rdpclip.exe" process.
2. Type in "rdpclip.exe" in the command prompt to restart the process.

Note that the current content of the clipboard will be lost. You can, however, then continue configuration as usual. To be on the safe side, you should restart the TIA Portal at the next opportunity.

Opening the TIA portal multiple times

If you are running several applications of the TIA portal and they continually become active in turn, you can briefly switch to another application or use the key combination <ALT+Tab> to solve the problem.

Note on SD cards

The SD cards have been formatted and initialized by Siemens for use with S7-1200 modules. This format must not be overwritten otherwise the card will no longer be accepted by the S7-1200 modules. Formatting with Windows tools is therefore not permitted.

Behavior in case of open force job

Note that active force jobs will be retained even after you have loaded a new project to the SD card. This means you should first delete the active force job before you remove an SD card from the CPU and before you overwrite the card in the PC with a new project. If you use an SD card with unknown content, you should format the SD card before the next download.

Issues when shutting down Windows XP or when activating a screen saver

Windows XP uses the ACPI (Advanced Configuration and Power Interface) to shut down the computer or to go to standby mode. It can happen that while the system is processing a newly installed tool that the screen saver is not activated by the ACPI or that after exiting the tool that Windows XP cannot be shut down properly.

If the TIA Portal is running, the Standby function of the computer is deactivated. To put the computer into Standby, you have to first exit the TIA Portal.

The following description shows several optional settings in the "Power Options Properties" you can use to set the Standby mode of the computer with the function "Hibernate":

1. In Windows XP, open the "Power Options Properties" by pointing at "Start > Settings > Control Panel > Power Options" and select the tab "Hibernate". Select the "Enable hibernation" check box.
2. Switch to the "Advanced" tab. In the "Power buttons" dialog, click the drop down list box under "When I close the lid of my portable computer:" and select the option "Hibernate".
3. Then click the drop-down list box under "When I press the power button on my computer:" and select the option "Shut down".

4. Click "Apply" and confirm the settings with "OK".
5. Afterwards, restart the PC.

If you experience problems shutting down the computer, make sure that the TIA Portal has closed completely.

1. In the shortcut menu, select the Task Manager from the shortcut menu on the Taskbar.
2. If you see the process "Siemens.Automation.ObjectFrame.FileStorage.Server.exe" in the "Processes" tab, wait until this process has closed.
3. Then you can shut down the computer.

Subnet addressing for CP 1613 and CP 1623

CP 1613 and CP 1623 are communication modules with microprocessor. To ensure secure management of communication links, these are processed on the module. The protocol stack in your PC is used for diagnostic purposes (SNMP, DCP). To allow both protocol stacks (i.e. CP 1613/23 Firmware and CP 1613/23 NDIS access) access to the same partners, it is recommended to place both stacks of a module in the same subnet.

Editing a device IP address

Do not use the address range from 192.168.x.241 to 192.168.x.250 when editing a device IP address. If necessary, this address range is automatically assigned by the system to a programming device. Depending on the subnet mask, this applies also for all network classes.

"TM_MAIL" instruction for TeleService

The "TM_MAIL" instruction is not included in the scope of delivery for TIA portal V11.0. The information on the use and functionality of the "TM_MAIL" instruction contained in the information system does not apply.

Migrating projects with the TIA Portal

After the migration of hardware configurations and program blocks from earlier automation solutions, first check the functionality of the migrated project before you use it in productive operation.

Screen display

After long periods of work, it can happen in the case of certain computer configurations with Windows XP that parts of the TIA Portal interface are no longer updated. Reducing the graphic hardware acceleration can correct this problem. You can find the setting for this by clicking on the desktop and selecting "Properties > Settings > Advanced > Troubleshoot > Slider Hardware acceleration" by means of the right mouse button. In this dialog, move the slider "Hardware acceleration" gradually to the left and apply this setting until the contents of the screen are displayed correctly again.

Tablet PCs

For the TIA Portal V11, tablet PCs are only released with the operating system Windows 7, not with Windows XP.

SQL Server

During the installation of the SQL Server 2005 or the SQL Server 2005 Express, an error can occur if the product SQL Server 2008 is already installed on your system.

In order to be able to use both varieties of the SQL Server in parallel, the SQL Server 2005 must be installed before the SQL Server 2008. To do this, follow these steps:

1. Remove the SQL Server 2008 version, without deleting the databases.
2. Install WinCC. The SQL Server 2005 is hereby installed and set up on your system.
3. Install the SQL Server 2008 again. Now you can continue to use the databases already created in the SQL Server 2008.

Working with automatically synchronized network drives

Automatic synchronization after a network interruption can result in current (local) project data being stored as a "backup" on the network drive through user interactions. This could cause outdated project data to be loaded from the network drive when opening the project. For this reason, we do not recommend that you store TIA Portal projects on synchronized network drives.

If, however, you do work on synchronized drives, you can continue working locally in the event of a network interruption. In this case, you must always ensure that the TIA Portal application is closed while data is synchronized. The synchronization itself must be implemented in such a way that the current (local) project data replaces the project data on the network drive.

Entry of decimal places

With certain Windows language settings, it may occur that the entry of values with a comma is not recognised (entering "1,23" leads to an error). Instead, use the international format ("1.23").

FAQs on the TIA Portal

FAQs on the TIA Portal are available at <http://support.automation.siemens.com> (<http://support.automation.siemens.com/WW/view/en/28919804/133000>).

1.2 Notes on the installation

Contents

Information that could not be included in the online help.

Target directory of the installation

Do not use any UNICODE characters (for example, Chinese characters) in the installation path.

Installation of STEP 7 Basic V11 and STEP 7 Professional V11 under Windows XP with Turkish Regional and Language Options

Installation of STEP 7 Basic V11 and STEP 7 Professional V11 under Windows XP may be cancelled, if the regional and language options are set to Turkish. In this case change the regional and language options from Turkish to English or German.

1. Open the Control Panel under Windows with one of the following commands:
 - "Start > Control Panel" (Start menu under Windows XP)
 - "Start > Settings > Control Panel" (classic start menu)
2. Open the "Regional and Language Options".
3. Select the "Regional Options" tab.
4. Under "Standards and formats" select "German" or "English" in the drop-down list.
5. Click "Apply" and confirm with OK.
6. Restart your PC for the setting to become active. Now you can continue with the installation of STEP 7 Basic V11 and STEP 7 Professional V11.
7. After installation, you can revert the regional and language settings (as described in steps 1 to 4) to Turkish.

Removing

In rare cases removal of the program can cause the computer to freeze, even when a full version of SQL Server 2005 is installed. In this occurs, disconnect the computer from the network to continue the removal process.

Installation of the SIMATIC USB driver under Windows server 2003 R2 StdE SP2

An operating system message relating to the SIMATIC USB driver is issued on the operating system Windows Server 2003 R2 StdE SP2. This message must be acknowledged with "Yes" as soon as possible after the message has been issued. The message may be in the background and therefore may not be immediately visible. After a certain period of time, the setup continues with the next component. The SIMATIC USB drivers are then not installed and cannot be used.

Display of the desktop icon

If you do not select the standard installation path during the installation of the TIA portal, the desktop icon may not be displayed correctly. This does not affect the functionality of the product.

1.3 Use of communications processors

Contents

Information that could not be included in the online help.

Necessary hotfixes for the use of certain communications processors

For the following communication processors, hotfixes are required for the use of certain products:

- CP 1613
- CP 1613 A2
- CP 1623
- CP 5613
- CP 5614
- CP 5613 A2
- CP 5614 A2
- CP 5623
- CP 5624

Install the following hotfixes and service packs:

- SIMATIC NET CD V8.0 SP1 for Windows 7: Hotfix 1 for SIMATIC NET CD V8.0 SP1
- SIMATIC NET CD 2008 SP3 for Windows XP, Windows Server 2003 or Windows Server 2008

You can find the hotfixes in the Service & Support area

(<http://support.automation.siemens.com/WW/view/en/12660737>) of the Siemens website under the entry ID 12660737

Operation of communications processors

If both STEP7 V5.5 and STEP7 V11 are installed on a computer and STEP7 V5.5 is removed, the setup repair function of STEP7 V11 must be executed before the following communications processors can be used:

- CP 561x
- CP 5613 A2
- CP 5614 A2
- CP 5623
- CP 5624
- CP 5711

STEP 7 Basic

2.1 Notes on use

Contents

Information that could not be included in the online help.

Online operation

The simultaneous online operation of STEP 7 V5.5 or earlier and STEP 7 Basic V11 has not been approved.

Simultaneous online connections on an S7-1200 CPU

It is not possible to establish an online connection from multiple TIA portal instances simultaneously to the same S7-1200 CPU.

Configuring and assigning module parameters

For an overview of the modules you can configure and assign with STEP 7 Basic V11 go to <http://support.automation.siemens.com> (<http://support.automation.siemens.com/WW/view/en/28919804/133000>).

Removing/inserting the memory card

After removing or inserting a memory card, always perform a memory reset on the CPU in order to restore the CPU to a functional condition.

Removing and inserting Ethernet modules

If Ethernet modules are removed and re-inserted during operation, you must boot the PC; otherwise, the "Accessible devices" functionality in STEP 7 or NCM PC will not display all devices. While the PC boots, Ethernet modules must be activated.

Notes on the information system

The following function is already described in the information system, but is not available in STEP 7 Basic V11.0 SP1:

- Loading hardware configurations from the target system to the PG/PC.

2.2 Editing devices and networks

2.2.1 General information on devices and networks

Contents

Currently, there is no general information available on devices and networks.

2.2.2 System reaction of the S7-1200 CPU with firmware version V2.0

Contents

Information that could not be included in the online help.

System reaction of the S7-1200 CPU with firmware version V2.0 to events without OB start

When a module of the distributed I/O (PROFINET or PROFIBUS) is removed or inserted, the CPU generates a diagnostic buffer entry and remains in RUN mode.

If a programming error or an I/O access error occurs in a block for which you do not have local error handling activated, then:

- The CPU generates a diagnostic buffer entry.
- Contrary to the description in the online help, the CPU remains in RUN mode.

2.2.3 Replacing the ET 200S pulse generator and positioning modules

Contents

Information that could not be included in the online help.

Replacing the ET 200S pulse generator and positioning modules

This information is relevant to the "2 Pulse" pulse generator modules (6ES7 138-4DD00-0AB0) and "1 Step 5V" positioning modules (6ES7 138-4DC00-0AB0) from a project which was created with TIA Portal V11.0. When replacing these modules from the TIA Portal V11.0 with a new version of these modules, the parameter settings are reset to the default values.

This is the case with one of the following procedures:

- Replacing the pulse generator module 6ES7 138-4DD00-0AB0 or the positioning module 6ES7 138-4DC00-0AB0 with their successor modules 6ES7 138-4DD01-0AB0 or 6ES7 138-4DC01-0AB0 by means of a device replacement.
- Updating the module version using the appropriate button in the device properties in the Inspector window.

2.2.4 Setting flow control for CM 1241 (RS232)

Contents

Information that could not be included in the online help.

Values for XON and XOFF

If flow control is enabled for the CM 1241 (RS-232) communications module and set to "XON/XOFF", you can enter identical values for the XON and XOFF characters. From a technical point of view, however, this configuration is impractical. You should therefore use different values for XON and XOFF.

2.2.5 Notes on online and diagnostics

Contents

Information that could not be included in the online help.

Hardware detection followed by online connection

When the "Online > Hardware detection" command is performed for an unspecified CPU, the online configuration is not loaded from the CPU. If you do not load the configuration resulting from the hardware detection to the CPU, the device and network views will always show a difference between the offline and online configurations. It will appear there are different configurations in the online and diagnostic views, although the MLFBs are identical in the actual CPU and the offline CPU.

Assigning an IP address

If an IP address is assigned directly to a PLC via the diagnostics and online function with "Functions > Assigning an IP address", this IP address will be set permanently and retained even after a restart or power failure.

2.2.6 Compiling the hardware of a pulse generator

Contents

Information that could not be included in the online help.

Compiling with a disabled pulse generator

If a pulse generator is deactivated and the following error message nevertheless appears during compilation of the hardware "Pulse generator as: PTO cannot be selected. Associated high speed counter not correctly configured.", follow these steps:

1. Deactivate the high-speed counter.
2. Activate the pulse generator and set the operating mode to "PTO".
3. Deactivate the pulse generator.
4. Recompile the hardware.

2.3 Programming a PLC

2.3.1 General notes on PLC programming

Contents

Information that could not be included in the online help.

Programming language SCL

For CPUs of the S7-1200 series, SCL is not yet available in STEP 7 V11.0. This functionality will be provided as part of a service pack as soon as possible.

Downloading inconsistent programs to a device

In TIA portal, it is not possible to download inconsistent programs to a device without a consistency check. During the loading process, all blocks of the program are implicitly checked and are compiled again in the event of inconsistencies. If, however, there are programs on your CPU which were loaded with earlier versions of STEP 7, these programs could demonstrate inconsistencies.

In this case, note the following:

If you load an inconsistent program from a device, you will not be able to load the program unchanged to the device afterwards, because a consistency check always takes place during the loading process and existing inconsistencies are corrected.

Copying overlaying tags

Tags that overlay other tags using the keyword "AT" cannot be copied. In this case, copy the overlaid tag and define the overlay again on the copy.

Process image of PTO/PWM outputs

Do not use PTO/PWM outputs in the process image (for example, for accesses in the user program, for online functions or in HMI). The update rate of the process image is much slower than the rate of the signal changes. The display in the process image does not reflect the signal flow.

Conversion of know-how protected blocks from V10.5

After the conversion from V10.5 to V11.0, the program must be compiled. If you use know-how protected blocks, you are prompted to enter the password.

2.3.2 Instructions

Contents

Information that could not be included in the online help.

MODBUS library

The instruction "MB_SLAVE" was updated in STEP 7 V10.5 SP2.

If you have already used "MB_SLAVE" V1.0 in a project that was created with STEP 7 V10.5 SP1, you must manually replace this version with the new version "MB_SLAVE" V1.1 after the installation of STEP 7 V11.

To do this, follow these steps:

1. Delete "MB_SLAVE" V1.0 from all blocks in the project.
2. Delete "MB_SLAVE" V1.0 from the project library.
3. Insert "MB_SLAVE" V1.1 in all required locations of use.
4. Compile the project.

Using instructions with parameters of type VARIANT in logic blocks with different access types (S7-1200)

Logic blocks (FBs/FCs) and data blocks (DBs) can be created with different access types ("standard" and "optimized"). In logic blocks, you can call any instructions. Certain instructions (for example, "WRIT_DBL" and "READ_DBL") use pointers of type VARIANT at input and output parameters to address data blocks.

Ensure that you do not use these instructions in programs in which logic blocks of different access types are called reciprocally. This could cause the following to occur:

- A structure from a standard data block is directly or indirectly passed to an optimized logic block, which forwards this structure directly or indirectly to one of the blocks mentioned above.
- The reverse scenario, whereby a structure from an optimized logic block is directly or indirectly passed to a standard data block, which forwards this structure directly or indirectly to one of the blocks mentioned above.

2.3.3 Testing the user program

2.3.3.1 Testing with the watch table

Contents

Information that could not be included in the online help.

Multiple access to the same CPU

Access to a CPU from a PG/PC is permitted only when a TIA portal is open. Multiple access to the same CPU is not permitted and can lead to errors.

Modify with trigger

When modifying with a trigger, for example when permanently modifying a tag, an existing control job is aborted if the CPU memory is currently being reset (MRES). The control job is also terminated even if you answer "no" to the prompt asking whether to stop modifying with trigger in the watch table dialog.

Rounding floating-point numbers

In the watch table, floating-point numbers are stored as binary numbers in IEEE format. Since some floating-point numbers (real, long real) that can be displayed in the user interface cannot be mapped exactly to the IEEE format, it is possible that floating-point numbers will be rounded.

If a floating-point number has been rounded for this reason and it is then copied to another input cell in the watch table, the rounding may result in a slight deviation.

Loading data blocks during an active control job

NOTICE
Loading changed data blocks during an active control job can result in unforeseen operating states. The control job continues to control the specified address, although the address allocation may have changed in the data block. Complete active control jobs before loading data blocks.

Testing programs converted from STEP 7 V10.5

To monitor and test a program converted from STEP 7 V10.5, you have to first compile and load with STEP 7 V11.0.

2.4 Technology functions

2.4.1 Notes on technology functions (S7-1200)

S7-1200 technology functions

There are no notes available on the S7-1200 technology functions.

WinCC Readme

3.1 Notes on use

Contents

Information that could not be included in the online help.

Parallel installation in the TIA portal

You will be prevented from starting the TIA portal if you set up a non-permitted parallel installation of STEP 7 and WinCC.

The following parallel installations are not permitted in the TIA portal:

- STEP 7 V11 and WinCC V11 SP1
- STEP 7 V11 SP1 and WinCC V11

Both Engineering Systems must always have the same version after an installation.

A dialog opens during installation to inform you of any inconsistencies in your parallel installation.

Copying HMI devices with HMI connections

If you copy an HMI device with HMI connections to a PLC, the HMI connection in the new HMI device will not automatically be connected to an existing PLC with the same name. This statement applies to copying within a project as well as copying across projects.

To access the PLC tag via HMI tag in the new HMI device, you will have to complete the HMI configuration immediately after the copying step. Proceed as follows:

1. Open the "Devices & Networks" editor.
2. Connect the new HMI device with the desired network.
3. Open the connection table.
4. Select the HMI connection of the new HMI device.
5. Select the desired PLC under "Partner".

If you compile the new HMI device or connect additional PLC tags in between copying the HMI device and completing the connection, there may be some instances in which you create an additional HMI connection to the same PLC. This is especially true if you connect HMI tags with DB array elements.

Device replacement

After an HMI device has been replaced, you should check the appearance of the configured screens. Changing the size of the display may result in changes to the position and appearance of screen objects, e.g. recipe view and alarm view.

Device replacement - communication

If an HMI device is replaced, error messages of the type "... will not be supported in the new configuration. It will be removed" will be issued. These alarms refer to configured connections of the device and are triggered, for example, if the HMI devices have a different number of interfaces. These connections are marked red after a device replacement. If you would like to continue to use these connections, you have change the configuration of the connection. Proceed as follows:

1. Open the "Devices and Networks" editor.
2. Click "Network" in the toolbar of the network view.
3. Network the interface of the HMI device with the interface of the CPU.
4. Click in the tabular area of the network view on the "Connections" table.
5. Select the connection marked red.
6. Enter the new interface under "Properties > Properties > General > Interface" in the Inspector window.

Specifying the time of modification in the overview window

The times of modification displayed in the overview window only refer to changes to the object itself. Changes to subordinate objects, e.g. screen objects in a screen, do not cause the time of the last change to the screen to change in the overview window.

HMI device wizard

When you create a device with a color display using the HMI device wizard, the graphics of the navigation buttons may be displayed in black and white. This error only occurs, however, if the new device is created with the same name as a device with a monochrome display which has been deleted in the meantime.

You can avoid this error by always deleting the associated graphics in the Graphics collection whenever you delete a device from the project.

Objects with object references in the project library

Two copying methods can be used in WinCC flexible.

- With "simple copy" a WinCC flexible screen including an IO field, for example is copied. Only the object name of a tag configured on the IO field is copied, as this is a reference.
- With "copy", a screen, an IO field contained there and a tag configured on the IO field together with its properties are copied.

These two methods can also be used for storing an object in a library. Project libraries and the objects contained there are migrated during migration and can be used in WinCC.

In WinCC, however, only one copying method is available. With regard to tags, it functions like "simple copy" in WinCC flexible. With regard to graphics, graphics lists and text lists, it functions like "copy" in WinCC flexible.

If you stored objects with references to tags in a library in WinCC flexible, you must reconfigure the referenced objects when using them in WinCC.

Installing East Asian project languages on a PC without Asian operating system

If you select an East Asian project language on a PC that does not have an Asian operating system installed, the default font will be marked as invalid in the "Runtime settings > Language & font" editor.

To resolve this problem, open the "Regional and Language Options > Languages" dialog in the Control Panel and select the "Install files for East Asian languages" option.

Windows 7 and Windows 7 SP1

WinCC V11 SP1 is released for:

- Windows 7
- Windows 7 SP1

Parallel installation of WinCC V11 SP1 and WinCC V7.0

A parallel installation of WinCC V11 SP1 and WinCC V7 is not released for versions prior to WinCC V7 SP3.

3.2 Migration

Contents

Information that could not be included in the online help.

Changing the names of alarm classes

In contrast to WinCC flexible, the names of the predefined alarm classes are not dependent on the user interface language currently in use. During migration, the names of the alarm classes are assigned as follows:

WinCC flexible	WinCC
Error	Errors
System	System
Warnings	Warnings

The display names of the alarm classes can be changed as necessary after migration.

Project languages in WinCC

WinCC V11 does not support all project languages that were available in WinCC flexible, such as Arabic. If you receive an empty project as the result of your migration, you may want to check the set editing language. Do not set the project languages that are not supported as editing language in the source project. Proceed as follows:

1. Open the project with WinCC flexible.
2. Change the editing language to English, for example.
3. Save the project.
4. Restart the migration.

Objects with object references in the project library

Two copying methods can be used in WinCC flexible.

- With "simple copy", a WinCC flexible screen including an IO field, for example, is copied. Only the object name of a tag configured on the IO field is copied, as this is a reference.
- With "copy", a screen, an IO field contained there and a tag configured on the IO field together with its properties are copied.

These two methods can also be used for storing an object in a library. Project libraries and the objects contained there are migrated during migration and can be used in WinCC.

In WinCC, however, only one copying method is available. It functions like "simple copy" in WinCC flexible.

If you have stored objects with references to other objects in a library in WinCC flexible, you must reconfigure the referenced objects when using them in WinCC.

Structures with data type "Stringchar"

In WinCC V11, the data type "StringChar" is not supported in HMI user data types.

If you have used this data type in a structure in a WinCC flexible project, an invalid element is created by the migration in the HMI user data type.

You have to rework this user data type in WinCC. You can only remove the invalid element if you assign a valid data type and release the user data type. You can then delete the element. However, doing this causes any interconnections present between a faceplate and the elements of the user data type to be lost.

Also check the offsets of the subsequent elements and change them, if required.

Tag logging archives from WinCC V7

It is not possible to use the tag logging archives from WinCC V7 after migration to WinCC V11.

3.3 Engineering System

3.3.1 Screens and Screen Objects

Contents

Information that could not be included in the online help.

Text format of output fields in alarm text

It is not possible to underline tags and text list entries.

Copying display objects between two projects or two devices

In Project_1 configure an alarm window in the Global Screen, for example. You copy the alarm window and paste it in the Global Screen in Project_2.

The enabled alarm classes are partly not enabled in the alarm window after pasting.

This behavior applies to the following display objects:

- Alarm window
- Alarm indicator
- Alarm view

Representation of the cross-references in the Inspector window

The Inspector window displays objects used by a screen object in the "About > Cross-reference" tab.

A screen is open and an object selected. You are using an HMI tag at the object as process tag.

The object and the linked HMI tag are displayed in the cross-references. All locations of use of the object and the HMI tags are listed.

If the HMI tag is interconnected with a PLC tag or a DB tag, then the locations of use of the interconnected PLC tag or DB tag will be displayed.

Event names in case of alarms in the "Info" tab of the Inspector window

In some alarms of the Inspector window the event names in the "Info" tab will deviate from the names in the "Properties" tab.

Name in the "Properties" tab of the Inspector window	Name in the "Info" tab of the Inspector window
Cleared	ClearScreen
Loaded	GenerateScreen
Enable	Activate
Change	Change
When a dialog is opened	ONMODALBEGIN
When a dialog is closed	ONMODALEND
User change	PASSWORD
Screen change	SCREEN
Disable	Deactivate
Press	Press
Outgoing	Going
Incoming	Coming
Limit "high limit error" violated	AboveUpperLimit
Limit "low limit error" violated	BelowLowerLimit
Click	Click
Loop-In-Alarm	LoopInAlarm
Release	Release
Alarm buffer overflow	OVERFLOW
Acknowledge	Acknowledgement
Runtime stop	Shutdown
Press key	KeyDown
Release key	KeyUp
Switch ON	SwitchOn
Switch OFF	SwitchOff
Value change	Change value

Dynamization of object properties in a group

The dynamization of properties for all objects of the group which have these properties is not possible in a group. In WinCC V11, the properties of the objects belonging to a group can only be dynamized for each object itself.

Illegible characters in Runtime Professional

With Runtime Professional, only characters belonging to the language area which is defined with the operating system setting "Language for non-Unicode programs" can be displayed on the target system. Texts with characters from other language areas can, however, also be configured in the project.

Illegible characters may occur in the Engineering System with the objects text field, symbolic I/O field, gauge and slider if the settings in the operating system relating to "Language for non-Unicode programs" do not match the selected editing language and the objects are displayed in a different design than "WinCC Classic". The characters are displayed correctly in the Inspector window and the "Project texts" editor.

Therefore, first check in the Control Panel under "Regional and Language Options > Advanced" whether the setting for "Language for non-Unicode programs" is the same as the editing language. Otherwise, you can check or change the correct texts in the Inspector window or the "Project texts" editor.

Faceplates

Faceplates cannot be rotated or mirrored.

Persistence with display objects in WinCC Runtime Professional

The objects f(t)-trend view, f(x)-trend view, alarm view, recipe view, table view and value table have settings for the persistence of online configurations. If you have configured "Persistence" for "Online configuration" and "Keep changes" for "Reaction to screen change", you can make changes to the configuration dialogs in runtime which will be retained after a screen change and after runtime is exited.

However, online configurations for the settings mentioned cause changes to the configuration of the objects in the Engineering System to only be applied in Runtime if you recompile the device with the command "Compile > Software (rebuild all)".

Basic Panels, OP73, OP77A and TP177A: Displaying texts in runtime

The default font selected in the "Runtime settings > Languages & font" editor has an effect on the display of texts in runtime.

Text entries may be truncated if you selected an unfavorable font size or style.

This setting possibly has an effect on the following text entries:

- Tooltips
- long alarm text
- text in the dialogs

3.3.2 Tags

Contents

Information that could not be included in the online help.

Tag names

HMI tag names may not start with the character @.

Display of deleted array elements at location of use of HMI tags

The locations of use of HMI tags, such as the process value of IO fields, are usually indicated by the tag name. If the element of an array tag is used, then the tag name will be extended by the index of the array element indicated in brackets.

If a used tag is no longer included in the project, then the tag name will still be displayed at the location of use. The field will be displayed with a red background to indicate the missing tag. If a used array element or the array tag is no longer present, then only the index of the array element will be displayed in brackets. The tag name will not be displayed. The field is highlighted in red. You can no longer identify the name of the associated array tag based on the location of use in this instance.

If you do not know which array tag was linked to this location of use, then it may be necessary to link the array element once again.

If a tag or array tag was created based on a reference, then the selected reference will be closed automatically.

If an HMI tag is connected with an array element of a PLC tag and the PLC tag does no longer exist in the project, then the same behavior will take place in the "HMI tags" editor.

Array tags as list entry of multiplex tags

You can use the array tags of the Char data type just like the tags of the String data type.

The use of an array tag of the Char data type as list entry of a multiplex tag in the "HMI tags" editor is not supported.

3.3.3 Alarm system and alarm displays

Contents

Information that could not be included in the online help.

Displaying special characters in alarm texts

When configuring alarm texts, a fixed character set is used in the Engineering System. This character set allows you to use numerous special characters in alarm texts.

Language-dependent fonts are used in runtime to display the texts, for example MS PGothic, SimSun. The fonts used in runtime do not support all special characters. As a result, some special characters are not displayed in runtime.

Use of multiplex tags in output boxes with alarm texts

In the engineering system, it is also possible to use multiplex tags in the output boxes of alarm texts. During runtime, this leads to an incorrect display of the alarm, because the use of multiplex tags is not supported by the basic panels.

3.3.4 System functions

Contents

Information that could not be included in the online help.

3.3.5 Recipes

Contents

Information that could not be included in the online help.

3.3.6 User administration

Contents

Information that could not be included in the online help.

3.3.7 Communication

Contents

Information that could not be included in the online help.

Connection interruptions with Mitsubishi PLCs

After multiple connection interruptions, a situation may arise where all the connection resources of the Mitsubishi PLC are in use and the connection can no longer be established. It is recommended to check these connection resources in the PLC program of the PLC and also enable them again.

Using "DTL" data type for area pointers

Use the "DTL" data type for configuration of area pointers "Date/time" and "Date/time PLC". The "DTL" data type supports time information down to the nanosecond range. Because Basic Panels support time information only down to the millisecond range, you will encounter the following restrictions in the case of use on the area pointers:

- Area pointer "Date/time"
For transmission of time information from a Basic Panel to the PLC, the smallest unit of time is 1 millisecond. The value range from microseconds to nanoseconds of the "DTL" data type will be filled with zeros.
- Area pointer "Date/time PLC"
For transmission of time information from a PLC to a Basic Panel, the area from microseconds to nanoseconds will be ignored. The time information will be processed on the panel down to milliseconds.

Limited number of possible HMI connections

An error message is displayed during compilation of a device indicating that the configuration of the HMI connection in the "Devices & Networks" editor is invalid. The reason may be that the maximum number of possible connections of the HMI device or PLC has been exceeded.

Check the maximum number of available connections. Consult the device manuals of the devices you are using.

Routed communication with S7 300/400

The communication of connection partners in various subnets can be routed via the following links: PROFINET, PROFIBUS, MPI.

Using PROFINET IO with panel HMI devices

When using PROFINET IO to connect the direct keys and LEDs of HMI devices to the PLC, you can define an offset for the address area of the inputs and outputs during configuration in HW Config.

The following restriction applies when you use a PROFINET IO-capable CPU of the 400 series with one of the HMI devices listed below:

The offset for the start of the address area of the inputs must not be bigger than the offset for the start of the address area of the outputs.

The restriction applies to the following HMI devices:

- OP 177B
- OP 277
- Mobile Panel 177

For the configuration of the address parameters, open the PLC with the CPU of the 400 series in HW Config. Select the HMI device connected via PROFINET IO in the station window of HW Config. A table with the properties of the HMI device is displayed at the bottom of the station window in the detail view. Select the line containing the addresses of the HMI device in the table and open the object properties using the shortcut menu.

Select the "Addresses" tab in the "Object properties" dialog. Configure the offset for the inputs under "Inputs > Start". Configure the offset for the outputs under "Outputs > Start".

Exceeding value ranges with Mitsubishi MC and Mitsubishi FX

With some data types, the communication drivers Mitsubishi MC and Mitsubishi FX do not check whether the value of a recipe tag exceeds the value range of the PLC tags. The data types affected are:

- 4-bit block
- 12-bit block
- 20-bit block
- 24-bit block
- 28-bit block

Area pointer Coordination in an OPC connection

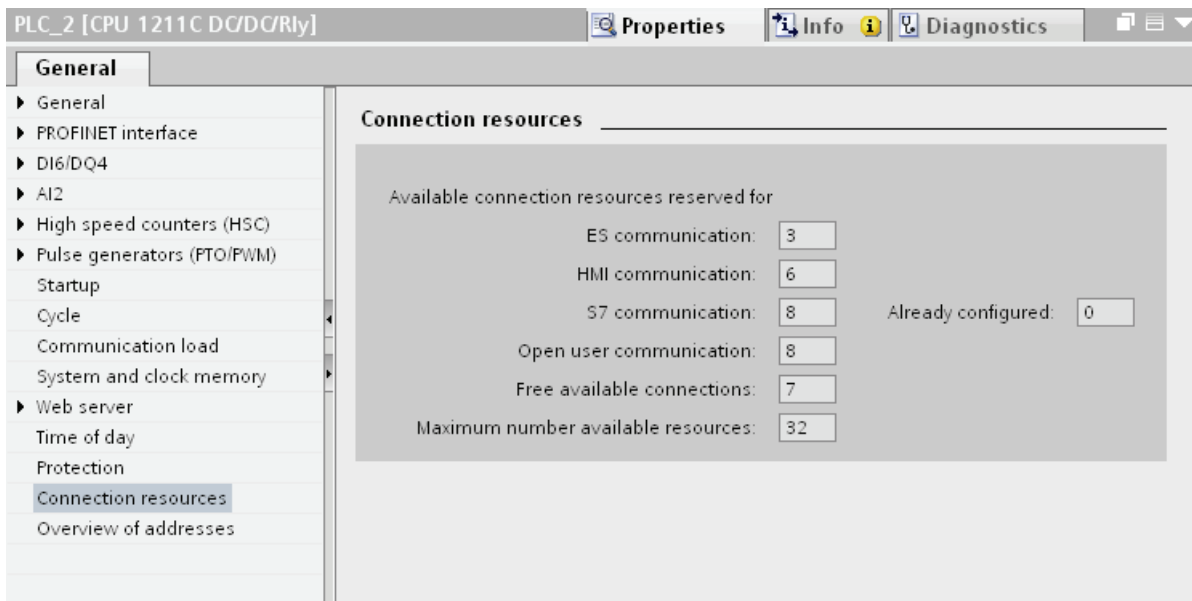
In principle, the area pointer Coordination can be used eight times in an OPC connection. If you have configured an OPC connection and automatically create another OPC connection using "Add", the area pointer Coordination is only displayed once in the newly created connection. In this case, you should change the communication driver of the connection. If you then set OPC again as the communication driver, the area pointer Coordination can again be used eight times.

Communication resources: SIMATIC S7 1200

The SIMATIC S7 1200 controller provides six communication resources for HMI communication.

The number of HMI connections that you can actually configure depends on the HMI devices that you connect with the SIMATIC S7 1200.

One HMI Panel occupies one communication resource per connection.



Valid operand types for communication with Mitsubishi MC TCP/IP

Operand type "W" is not available for the "String" data type.

3.4 Compiling and loading

Contents

Information that could not be included in the online help.

Compiling and loading

If internal errors or warnings occur during compiling, compile the complete project using the command "Compile > Software (rebuild all)" in the shortcut menu of the HMI device.

Before you start productive operation with your project, compile the entire project using the "Compile > Software (rebuild all)" command from the shortcut menu of the HMI device.

If you are using HMI tags that are connected to the control tags in your project, compile all modified blocks with the command "Compile > Software" in the shortcut menu before you compile the HMI device.

Saving the WinCC project

If you save a project in WinCC using the "Save As..." command, this has no effect on the name of the Runtime projects generated for the devices. If you do not adapt the target path of the devices in the "Extended download to device" dialog, the Runtime projects on the target devices will be overwritten.

Settings for update of operating system

If you select the command "Online > HMI device maintenance > Update operating system" from WinCC, you cannot change the settings such as the type of PG/PC interface or baud rate. The settings used during the last download are always used.

To make changes to the settings, open the "Extended download" dialog using the "Online > Extended download to device" command and change the settings. When you click the "Load" button the changed settings are saved.

Alternatively, you can perform an update of the operating system with changed settings with ProSave. You start ProSave via the Windows Start menu "Siemens Automation > Options and Tools > HMI Tools > SIMATIC ProSave".

Incorrect installation of ProSave

If you receive an error message during installation of ProSave when loading data to a target device or maintenance of an HMI device, then you cannot remedy this error using the repair function of setup. Remove ProSave via the Control Panel. Then start setup and install the "ProSave" component again.

Checking the address parameters

During compilation of an HMI device in the project tree with the command "Compile > Software" in the shortcut menu, the address parameters of the HMI device, such as the IP address, will not be checked. If you want to ensure that the address parameters are checked as well, you will have to compile the HMI device in the "Devices & Networks" editor of the toolbar.

Error message when downloading data to the PLC

A panel and a PLC are connected and communicating with other.

If a tag is accessed while downloading data from the panel to the PLC, an error message is displayed on the panel.

Delayed reaction in the "Extended download to device" dialog

If the settings in the "Extended download to device" dialog for "Type of the PG/PC interface" and "PG/PC interface" do not match the settings on the HMI device, this can result in the application not responding for up to a minute.

Extended download with an S7-1200 and a Comfort Panel

An S7-1200 PLC and a Comfort Panel are located in the same physical network as the PG/PC. You open the "Extended download to device" dialog for the Comfort Panel.

If you activate the option "Show all accessible devices", it may occur that the application stops responding.

OP77A, OP73, TP177A: Loading projects

When loading a project to an HMI device, it can happen that Runtime is not automatically ended, even though "Remote Transfers" is activated in the Panel.

If this happens, stop Runtime and manually set the transfer mode on the HMI device.

Loading a SIMATIC HMI application to a PC station

The following circumstances can lead to an error message during the first load of a SIMATIC PC station:

- A SIMATIC HMI application is configured in a PC station in the project
 - WinCC Runtime Advanced
 - WinCC Runtime Professional
 - WinCC Standby
 - or WinCC Client
- The property "S7RTM is installed" is activated.

Before you load a SIMATIC PC station for the first time, select the configured device HMI_RT (WinCC...) in the project navigation. Open the "Extended download to device" dialog and select the appropriate interface and parameter settings. Click "Load".

You then load the PC station as normal.

Unpacking a distributed "Pack&Go" file


To unpack a "Pack&Go" file which is distributed over several files, you need an unpack program. The unpack program integrated in the operating system is not adequate to unpack distributed files.

3.5 Runtime

3.5.1 Notes on operation in Runtime

Contents

Information that could not be included in the online help.

 CAUTION
Ethernet communication In Ethernet-based communication, the end user is responsible for the security of his data network. The proper functioning of the device cannot be guaranteed in all circumstances; targeted attacks, for example, can lead to overload of the device.

Special characters in the user view

Special characters, such as / " § \$ % & ' ?, are not permitted when entering a name or the password in the user view.

Language behavior - Layout of screen keyboard

The layout of the screen keyboard is not switched when the runtime language changes.

Tag values overwrite the maximum length

You enter a character string in a string tag via an I/O field. If the character string exceeds the number of configured tags, the character string will be shortened to the configured length.

3.5.2 Notes on operation of panels in Runtime

Contents

Information that could not be included in the online help.

Using the mouse wheel in Runtime

The use of the mouse wheel in Runtime is not supported on all panels.

3.6 HMI devices

3.6.1 General notes

Contents

Information that could not be included in the online help.

If the PC goes into standby or hibernate mode while the transfer is in progress, the panel status after interruption of the transfer is not defined.

TS Adapter with Ethernet interface

If an HMI device is connected via Ethernet and a TS adapter, it can not be reset to factory settings.

Simulation of the Basic Panels

Use an output field in an alarm text to output an external tag. The content of the output field will always be displayed with "0" during simulation.

Simulation with real PLC connection

The access point used by the simulation is independent from the settings of the Engineering System and can only be altered in the Control Panel with the "Setting PG/PC Interface" tool. If the PLC connection is terminated right after the start of the simulation with alarm 140001, you should check the access point used by the simulation with "Setting PG/PC Interface".

1. Double-click "Setting PG/PC Interface" in the Control Panel. A dialog opens.
2. Select "S7ONLINE" in the "Access point of application" field as standard for HMI.
3. Select the interface in the "Interface Parameter Assignment Used" area.
4. Exit the dialog "Setting PG/PC Interface" with OK

Loading of projects without recipe data records

You are using recipes in a project. You transfer the project to a Basic Panel without recipe data records.

You may encounter inconsistencies if you have altered the structure of the recipe in the Engineering System and the device already held recipe data records.

Check the consistency of the data records in this case. The device will not issue a note for all structural changes.

Floating point numbers on MP 277, MP 377, TP 177B 4" and CP4

Only floating point numbers in the range from 10^{-293} ... 10^{+307} are displayed correctly on the HMI devices MP 277, MP 377, TP 177B 4" and CP4. If the tag value is outside this range, it is displayed as 0.

USB device driver under Windows XP

If a configuration PC with Windows XP and a Comfort Panel are connected via USB, the S7-USB driver may be reinstalled when the HMI device is restarted. The device settings may in this case not be restored.

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