

SIEMENS

SIMATIC

Process control system PCS 7 PCS 7 APG Readme V9.0 SP2 (online)

Readme

<u>Security information</u>	1
<u>Overview</u>	2
<u>Notes on installation</u>	3
<u>New features and changes as compared to previous versions</u>	4
<u>Information on configuration and operation</u>	5
<u>Notes on the documentation</u>	6
<u>Change history of PCS 7 Advanced Process Graphics</u>	7

Version: 2020-03-20 (online)

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
indicates that minor personal injury can result if proper precautions are not taken.

NOTICE
indicates that property damage can result if proper precautions are not taken.

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.

Trademarks

All names identified by ® are registered trademarks of Siemens AG. The remaining trademarks in this publication may be trademarks whose use by third parties for their own purposes could violate the rights of the owner.

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.

Table of contents

1	Security information	5
2	Overview	7
3	Notes on installation	9
3.1	Scope of delivery	9
3.2	Hardware requirements	9
3.3	Software requirements	9
3.4	Installing PCS 7 Advanced Process Graphics	10
3.5	Uninstalling PCS 7 Advanced Process Graphics	11
4	New features and changes as compared to previous versions	13
4.1	Notes on the changes	13
4.2	Version 9.0	13
4.2.1	What's New in Version 9.0?	13
4.2.2	Changes in version 9.0	13
4.2.3	Update information for version 9.0	13
4.3	Version 9.0 SP1	14
4.3.1	What's new in Version 9.0 SP1?	14
4.3.2	Changes in Version 9.0 SP1	14
4.3.3	Update information for Version 9.0 SP1	15
4.4	Version 9.0 SP2	15
4.4.1	What's new in Version 9.0 SP2	15
4.4.2	Changes in Version 9.0 SP2	15
4.4.3	Update information for Version 9.0 SP2	16
5	Information on configuration and operation	17
6	Notes on the documentation	19
7	Change history of PCS 7 Advanced Process Graphics	21

Security information

Siemens provides products and solutions with industrial security functions that support the secure operation of plants, systems, machines and networks.

In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial security concept. Siemens' products and solutions constitute one element of such a concept.

Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place.

For additional information on industrial security measures that may be implemented, please visit
<https://www.siemens.com/industrialsecurity>.

Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats.

To stay informed about product updates, subscribe to the Siemens Industrial Security RSS Feed under
<https://www.siemens.com/industrialsecurity>.

Overview

2

Note

Read these notes carefully; they contain important information and additional details about the Advanced Process Graphics.

The information given in this Readme file takes precedence over all the PCS 7 manuals.

Notes on installation

3.1 Scope of delivery

The scope of delivery includes the following library:

- PCS 7 Advanced Process Graphics V9.0 SP2

Note

The software includes the necessary blocks for the AS as well as the required picture objects, faceplates and functions for the OS.

The setup installs the libraries with the AS blocks as well as the faceplates for operator control and monitoring of plant objects (block icons, group picture).

Faceplates in the project must be updated with the OS project editor, "Basis data" tab.

3.2 Hardware requirements

The installation is subject to the conditions of SIMATIC PCS 7 V9.0 SP2.

3.3 Software requirements

The blocks of the library require at least:

- SIMATIC PCS 7 V9.0 SP2
- SIMATIC PCS 7 Advanced Process Library V9.0 SP3
- For licensing reasons, APG V9.0 or APG V9.0.1 must be installed before you can install APG V9.0 SP2

3.4 Installing PCS 7 Advanced Process Graphics

Note

Before you install the software, older versions of the Advanced Process Graphics <V9.0 must be uninstalled (see section Uninstalling PCS 7 Advanced Process Graphics (Page 11))

When an Update Version is installed, the setup program checks to determine whether the full version is installed. If an installation of the full version is not found, the update installation terminates.

Installation under Windows Server 2016 Standard Edition (64-bit)

Installation via the system setup is not possible. To install Advanced Process Graphics V9.0 on a computer with Windows Server 2016, you need to install the products individually via the corresponding product setup.

You can find the product setups on the DVD in the "87_APG_V90" directory.

Exit all applications before you start setup.

Place the CD in the drive and start the "Setup" program of the PCS 7 Advanced Process Graphics. You will receive all further information during the installation process.

The library is copied to the same drive on which the PCS 7 basic software is installed. Installation requires about 50 MB of free memory on the hard disk.

Following the installation, you can find the blocks of the PCS 7 Advanced Process Graphics in the "APG_V90" library.

Note

The version of the PCS 7 Advanced Process Graphics you need depends on the version of the PCS 7 Advanced Process Library used in the project. The APG version must be adapted to match the APL version used and is neither backward nor upward compatible unless specified otherwise in the section "Software requirements".

To update your AS project, copy the blocks to your project. Then perform a block type import.

The following components are installed by the setup:

- APG_V90 library in the directory ...\\SIEMENS\\Step7\\s7libs\\APG_V90
- WinCC faceplates (block icons) in the directory ...\\SIEMENS\\WINCC\\options\\pdl\\APG
- WinCC project functions in the directory ...\\SIEMENS\\WINCC\\ScriptLibStd
- OS project editor layout configuration ..\\SIEMENS\\WinCC\\Options\\PDL\\SIMATIC_4x1920x1080
- apg_postProcessing.exe ...\\SIEMENS\\WinCC\\bin
- Online help in the directory ...\\SIEMENS\\SSTEP7\\S7LIBS\\APG
- User documentation in the directory ...\\SIEMENS\\STEP7\\S7MANUAL\\APG

3.5 Uninstalling PCS 7 Advanced Process Graphics

You have to remove software in accordance with the MS Windows guidelines.

To do so, open the software management in the Windows Control Panel (Windows Start menu: Start → Setting → Control Panel → Software). Select the function "Uninstall or change a program" and then the component you want to uninstall.

Note

Before uninstalling APG library, select any other suitable layout from OS project editor if the current layout is SIMATIC Standard 4x1920*1080.

Uninstalling AdvFaceplates

To uninstall AdvFaceplates follow these steps:

- Uninstall APG.
- Uninstall AdvFaceplates.

3.5 Uninstalling PCS 7 Advanced Process Graphics

New features and changes as compared to previous versions

4

4.1 Notes on the changes

Note

For possible behavior changes in earlier versions, please refer to the readme of the previous version.

4.2 Version 9.0

4.2.1 What's New in Version 9.0?

- Rapid stop: Analogous to the APL, the APG, too, shows the identification for "Rapid Stop" with MotL, MotRevL, MotSpdCL, MotSpdL, VlvMotL and VlvPosL.
- Bypass function: Analogous to the APL and IL, the APG, too, shows the identification for "Bypass" with MonAnL, MonDiL, PIDConL/R, PIDStepL, TotalL, MonAnDi and MonAn08.
- Scaling factor for faceplates: Analogous to the APL, the APG also uses the scaling factor @APLFaceplateScaleFactor to adjust the faceplate size from 50% to 200%. In this version only the faceplate for activating the scaling function is supported.

4.2.2 Changes in version 9.0

- Support of Advanced Process Library V9.0

4.2.3 Update information for version 9.0

The following applies to the software update from V8.2 to version 9.0:

1.	Make Textual Inter-connections	Yes
2.	Compile AS	Compile changes
3.	Download AS program	Download changes
4.	AS STOP necessary	No
5.	Compile OS	Compile changes

Note

Updating the blocks from the PCS 7 Advanced Process Graphics with TCiR

"Type import - Changed default value" dialog box

- If information on changed internal local default values in the static area is displayed during type import in the dialog box, these changes are not relevant. A complete download in STOP mode is not necessary.
 - If information on changed default values is displayed at block I/Os during type import in the dialog box, these new default values must be applied in the "Update Block Types" dialog.
-

List of blocks

Name	Number	Block version	Interface change (AS STOP is not necessary if a CPU 410-5H with TCiR is used)	Code change
HMIpConn	F1183	3.0	No	Yes

Note

- If "No" is listed in the column "Interface change" and in the column "Code change", only attributes, message texts and/or version number have been changed.
 - If "Yes" is listed in the column "Interface change" and "No" in the column "Code change", only the interfaces were prepared for a future function.
-

4.3 Version 9.0 SP1

4.3.1 What's new in Version 9.0 SP1?

- Additional group display for CountScL, CountOh, CntOhSc, CalcWatP, AccuS, TimeTrig, ShrdResL, VlvDsL
- 4-quadrant display: Enables up to four process pictures to be applied to a shared display

4.3.2 Changes in Version 9.0 SP1

- Support of Advanced Process Library V9.0 SP1

4.3.3 Update information for Version 9.0 SP1

The following applies to the software update from V9.0 to Version 9.0 SP1:

1.	Make Textual Inter-connections	No
2.	Compile AS	No
3.	Download AS program	No
4.	AS STOP necessary	No
5.	Compile OS	Compile changes

List of blocks

Name	Number	Block version	Interface change (AS STOP is not necessary if a CPU 410-5H with TCiR is used)	Code change
No blocks were changed in this version				

Note

- If "No" is listed in the column "Interface change" and in the column "Code change", only attributes, message texts and/or version number have been changed.
- If "Yes" is listed in the column "Interface change" and "No" in the column "Code change", only the interfaces were prepared for a future function.

4.4 Version 9.0 SP2

4.4.1 What's new in Version 9.0 SP2

- Support for 4k UHD Operation Station with (3840X2160) resolution: Helps the user in visualizing 4 different process pictures in a single monitor which could be selected in the OS Project Editor.

4.4.2 Changes in Version 9.0 SP2

- Support of Advanced Process Library V9.0 SP3.
- Names of certain attributes in the objects Bargraph, GradIndicator, and SpiderGraph were changed to appear in English language for example: @Template_APG.pdl.

4.4 Version 9.0 SP2

- Memory is set free by the function 'APG_GetFaceplateBasePicture()' if there is no result. This ensures that there is no script error while opening a sub faceplate.
- APG package installation is possible in Windows Server 2016.
- Faceplate and GroupDisplay can be opened without any script errors.

Note

"Note View" option is not available in the version APG V9.0 SP2.

- SpiderGraphTag > Configuration > AdaptFaceplateObjectPosition > Yes/No works properly.
- The shared parameter is set to 'YES' in the component definition of 'APG_OpenGroupDisplay.fct' as this file is shared with the ADVFPL setup as well as APG setup.
- Web Client: Picture navigation is working on "Quad screen".
- APG GroupDisplay does not close after clicking on the name of the block symbol.
- OS client can display tag with "@local::tagname"

4.4.3 Update information for Version 9.0 SP2

The following applies to the software update from V9.0 SP1 to Version 9.0 SP2:

1.	Make Textual Interconnections	No
2.	Compile AS	No
3.	Download AS program	No
4.	AS STOP necessary	No
5.	Compile OS	Compile changes

List of Blocks

Name	Number	Block version	Interface change (AS STOP is not necessary if a CPU 410-5H with TCiR is used)	Code change
No blocks were changed in this version				

Note

- If "No" is listed in the column "Interface change" and in the column "Code change", only attributes, message texts and/or version number have been changed.
- If "Yes" is listed in the column "Interface change" and "No" in the column "Code change", only the interfaces were prepared for a future function.

Information on configuration and operation

4-quadrant display

Configuring the button for the **4-quadrant display** in the PCS 7 OS button area

The button for calling the 4-quadrant display is available in three different sizes in the APG template picture @Template_APG.pdl.

The following configuration steps are necessary to make the button for calling the 4-quadrant display available in the PCS 7 OS button area.

1. Use the Graphics Designer to open the APG template picture @Template_APG.pdl and the button area @Buttons11.PDL , for example, in all your "...\\GraCS\" project directories for OS and OS-Clients .
2. Place one of the buttons Btn_4Quad_small, Btn_4Quad_medium, Btn_4Quad_large in @Buttons11.PDL .
3. Save the @Buttons11.PDL.

To avoid replacing the modified Buttons11 button area with the original, the "Buttons11.PDL" file must be disabled in the "Basic data" for each project in the "OS Project Editor".

By clicking one of the four quadrants, the currently displayed process picture is applied to the corresponding quadrant of the 4-quadrant display and the 4-quadrant display opens. If you want to add another process picture to the 4-quadrant display or replace a process picture that has already been added, open the respective process picture and click the button in the quadrant to which the process picture is to be added. A 4-quadrant display that is composed in this way can be called again by clicking the circle of the selection button.

Note

The "Save screen composition" function is not supported by the 4-quadrant compilation.

Notes on the documentation

- No notes available

Change history of PCS 7 Advanced Process Graphics

7

Changes since delivery release of PCS 7 Industry Library Readme (Online)

Version	Edition	Change
2018-03-17 (ONLINE)	03/2018	Delivery state PCS 7 Advanced Process Graphics V9.0 SP1
2020-03-20 (ONLINE)	03/2020	Delivery state PCS 7 Advanced Process Graphics V9.0 SP2

