



SIMATIC

**PCS 7 Process Control System
PCS 7 Logic Matrix Readme V9.1
Update 2 (online)**

Readme

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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.

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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>.

Notes on installation

2.1 Installing the Logic Matrix

Software requirements

To operate the Logic Matrix V9.1 Update 2, you must have installed the following software packages:

- For Logic Matrix Editor V9.1 Update 2
 - PCS 7 V9.1 or higher
- For Logic Matrix Viewer V9.1 Update 2
 - PCS 7 V9.1 or higher

Available installation units

Logic Matrix consists of the following installation units:

- Logic Matrix Editor V9.1 Update 2
Creating, configuring a logic matrix, automatic generation of CFCs in a PCS 7 project on a PCS 7 engineering system (ES).
- Logic Matrix Viewer V9.1 Update 2
Operator control and monitoring using icons, faceplates, and controls on a PCS 7 operator station (OS)

Installing Logic Matrix

The Setup program guides you through all steps of the installation. You can switch to the next window from any position or return to the previous window. To install the add-on package, proceed as follows:

1. Ensure that the software requirements are met.
2. Close all applications before starting the Setup program.
3. Start the SETUP.EXE program on the installation media "SIMATIC Logic Matrix V9.1 Update 2".
4. Follow the instructions of the setup program.

License key (usage authorization)

The Logic Matrix Viewer V9.1 Update 2 requires a license key. This license key is installed in the same way as for STEP 7 and the add-on packages. You can find information on installing and working with license keys in the Readme file and the basic help for STEP 7.

2.1 Installing the Logic Matrix

Web capability of the Logic Matrix

To display the Logic Matrix on a Web client, the "Microsoft .Net 4.5" software must be installed on the Web client.

The software is available on the PCS 7 Toolset DVD.

Undo function of Logic Matrix

The Undo function of the Logic Matrix does not involve a general undo action. The user is given the opportunity by this to undo the last deletion of a cause or effect.

What's New?

3.1 Notes on V9.1

Logic Matrix V9.1 contains the following enhancements or corrections:

- Control Module Types are supported for Cause and Effect links. Connection to CM types can be configured for links.
- Alternative links can be configured for Cause links.
- Display of the matrix in the editor and in the OS runtime can be configured separately.
- Matrix projects from older version of Logic Matrix can be migrated to currently installed version by opening the project in the editor or by using the "Migrate" menu command.
- Incomplete matrix configuration is notified with a dialog box before the start of matrix CFC generation.
- During matrix CFC generation of a new project, LM_DigCause block is inserted in the matrix CFC if only digital input tags are configured for a Cause.
- During matrix CFC generation of migrated project, the standard block LM_Cause is replaced by the digital Cause block LM_DigCause in the matrix CFC if only digital input tags are configured for a Cause.
- Cause row and Effect column are highlighted on selecting an interconnection cell.
- Pin button can be used to keep the "Input/Output Tag selection" or "Cause/Effect direct link" dialog box pinned on top of the screen while selecting the links.
- In the "Cause/Effect direct link" dialog boxes, sort and filter buttons can be used in the "Plant Hierarchy" column header.

3.2 Notes on V9.1 Update 1

Logic Matrix V9.1 Update1 contains the following enhancements or corrections:

- When using Causes with digital inputs only, handling of alarms did not work in Logic Matrix V9.1. This issue has now been resolved. If a matrix was handled with faulty Logic Matrix V9.1, a full compile of OS is required after installing this update (Logic Matrix V9.1 Update1).

3.3 Notes on V9.1 Update 2

Note

The changes from all previous updates are also included in the respective subsequent update.

Logic Matrix V9.1 Update 2 contains the following enhancements or corrections:

- When generating a matrix, the time stamp in the matrix generation log did not match the time stamp of the engineering system (ES). This issue has now been resolved. The time zone of the matrix generation log has been changed to match the time zone of the ES.
- An unhandled exception error occurred when multi-user engineering operation was performed. This issue has now been resolved. Note that Logic Matrix does not support multi-user engineering and all exceptions are now handled internally.
- After importing the project data and generating the matrix, it is no longer possible to download changes to the automation system (AS). This issue has now been resolved. Now a message is displayed that there was an interface change and the delta download capability will be lost. You can either continue with the change or cancel the operation.

Notes on usage

4.1 Notes on the add-on package

Note on working with WinCC

The WinCC "Screen composition" function is not supported.

4.2 Notes on the documentation

None

4.3 Configuration note

The project data have to be re-read by the Logic Matrices after a PCS 7 project is dearchived.

This has to take place before generating or updating the Matrix charts.

