MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Selected official pages for procurement and maintenance review

PRODUCT BRAND

Siemens

PRODUCT MODEL

6ES7400-1JA11-0AA1

UR2 XTR Nine-Slot Aluminum Rack. Source PDF pages: X15 pp. 2,5-7,9-11; C17 pp. 164. Adjacent model text on shared pages is outside this product reference.

OFFICIAL SOURCE

PCS 7 Use with 0 to 70 C ambient temperature; 02/2015, A5E35458345-AA

Siemens original documentation and product reference

Siemens 11/2017; source copyright 2019; C17 source pp. 164

Historical FS01 XTR reference, not complete installation instructions. Apply 0-70 C only when all fitted components are approved. Adjacent model data do not apply.

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Amikon Limited prepared this independent reference package. Selected manufacturer pages follow with their original content and pagination visible.

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.

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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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Preface

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1.1 Preface

Purpose of the manual

This manual provides additional information on the use of various hardware components in ambient temperatures from 0 to 70° C.

Basic knowledge required

Comprehension of this manual requires general knowledge in the field of automation technology. This is provided in the preface of the *CPU 410-5H Process Automation* manual.

Particularly when using an S7-400 in safety-relevant areas, you should read the information regarding the safety of electronic controllers in the appendix of the *S7-400 Automation system; Hardware and Installation* manual.

Scope of the manual

The manual applies to components listed below:

- Rack UR2 XTR; 6ES7 400-1JA11-0AA1 FS01
- Rack UR2-H XTR; 6ES7 400-2JA10-0AA1 FS01
- Rack CR3 XTR; 6ES7 401-1DA01-0AA1 FS01
- Power Supply Module PS 405 4A XTR; 6ES7 405-0DA02-0AA1 FS01
- Power Supply Module PS 405 10A R XTR; 6ES7 405-0KR02-0AA1 FS01
- Power Supply Module PS 407 4A XTR; 6ES7 407-0DA02-0AA1 FS01
- Power Supply Module PS 407 10A R XTR; 6ES7 407-0KR02-0AA1 FS01
- Backup Battery 3.6V/2.2 Ah for PS407/405 XTR; 6ES7971-0BA02,
  Read the labeling on the packaging
- CPU 410-5H Process Automation; 6ES7 410-5HX08-0AB0 as of V8.1 FS02

  Both 1 and the 2 are checked in the "Product versions" field on the front panel of the CPU:
- System Expansion Card 0 POs; 6ES7653-2CH00-0XB0 FS03
- System Expansion Card 100 POs; 6ES7653-2CA00-0XB0 FS03
- System Expansion Card 500 POs; 6ES7653-2CC00-0XB0 FS03
- System Expansion Card 1000 POs; 6ES7653-2CE00-0XB0 FS03
- System Expansion Card 1600 POs; 6ES7653-2CF00-0XB0 FS03

- System Expansion Card 2k+ POs; 6ES7653-2CG00-0XB0 FS03
- Synchronization Module IF 960-H 10m XTR; 6ES7 960-1AA08-0XA0 FS01

Note

All fiber optic cables supplied by SIEMENS can be operated in ambient temperatures from 0 to 70° C. For fiber optic cables not supplied by SIEMENS, make sure that they can also be operated in ambient temperatures from 0 to 70° C.

Scope of information

This manual supplements the following manuals:

- *S7-400 Automation System; Hardware and Installation*
- *S7-400 Automation Systems; Module Data*
- *CPU 410-5H Process Automation*

Recycling and disposal

The hardware components of PCS 7 are suitable for recycling due to their environmentally friendly characteristics. For ecologically compatible recycling and disposal of your old device, contact a certified disposal service for electronic scrap.

Additional support

Contact your Siemens partner at your local office or agencies if you have any questions relating to the product and do not find the right answers in this manual.

You will find your contact partner at:

Contact partners (http://www.siemens.com/automation/partner)

A guide to the technical documentation for the various SIMATIC products and systems is available at:

Documentation (http://www.automation.siemens.com/simatic/portal/html_76/techdoku.htm)

The online catalog and online ordering system are available at:

Catalog (http://mall.industry.siemens.com/)

Training Centers

We offer various courses for newcomers to the PCS 7 process automation system. Contact your regional Training Center, or the central Training Center in D-90327 Nuremberg, Germany:

Training (http://www.sitrain.com/index_en.html)

Technical Support

You can contact Technical Support for all Industry Automation products using the Web form for Support Request
Support Request (http://www.siemens.de/automation/support-request)

Additional information about our technical support is available on the Internet at
Technical Support (http://support.automation.siemens.com)

Service & Support on the Internet

In addition to the documentation, Siemens offers a comprehensive online knowledge base on the Internet at:

Service & Support (http://www.siemens.com/automation/service&support)

There you will find:

- The newsletter that provides the latest information about your products.
- The current documentation using the Search function on the Service & Support pages.
- An international forum where users and specialists can exchange their experience.
- Your local contact partner for automation and drive technology in our contacts database.
- Information about on-site services, repairs and spare parts. Lots more is available on the "Services" pages.
- Applications and tools for the optimal use of PCS 7. Performance measurements for DP and PN are published here, for example.

1.2 Security information

Siemens provides products and solutions with industrial security functions that support the secure operation of plants, solutions, machines, equipment and/or networks. They are important components in a holistic industrial security concept. With this in mind, Siemens' products and solutions undergo continuous development. Siemens recommends strongly that you regularly check for product updates.

For the secure operation of Siemens products and solutions, it is necessary to take suitable preventive action (e.g. cell protection concept) and integrate each component into a holistic, state-of-the-art industrial security concept. Third-party products that may be in use should also be considered. You can find more information about industrial security on the Internet (http://www.siemens.com/industrialsecurity).

To stay informed about product updates as they occur, sign up for a product-specific newsletter. You can find more information on the Internet (http://support.automation.siemens.com).

Product combination

2

2.1 The basic system for operation at 70° C

Hardware of the basic system

The basic system consists of the hardware components required for a controller. The following figure shows the components in the redundant configuration.

The basic system can be only operated in ambient temperatures from 0 to 70° C if all components used are also approved for this.

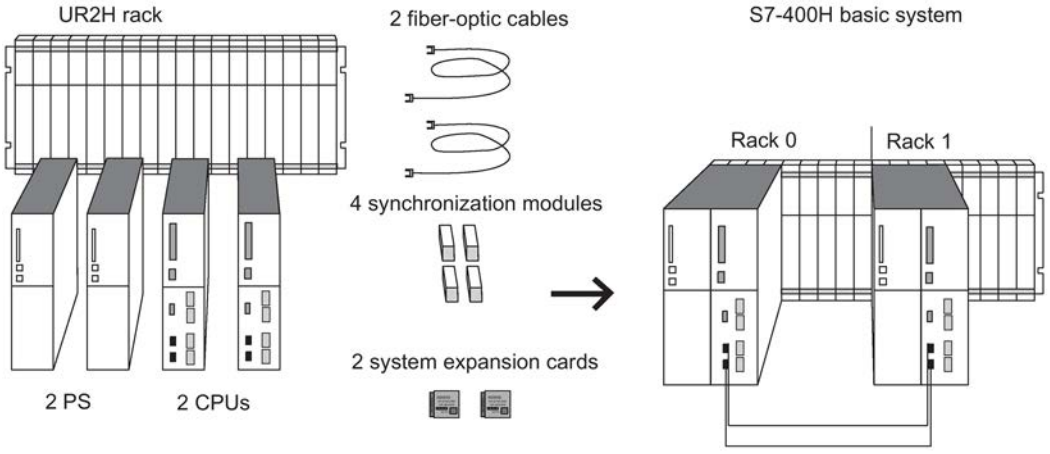


Figure 2-1 Hardware of the basic system in redundant mode

The following figure shows the components in the single mode configuration. In this case as well, the basic system can be only operated in ambient temperatures from 0 to 70° C if all components used are also approved for this.

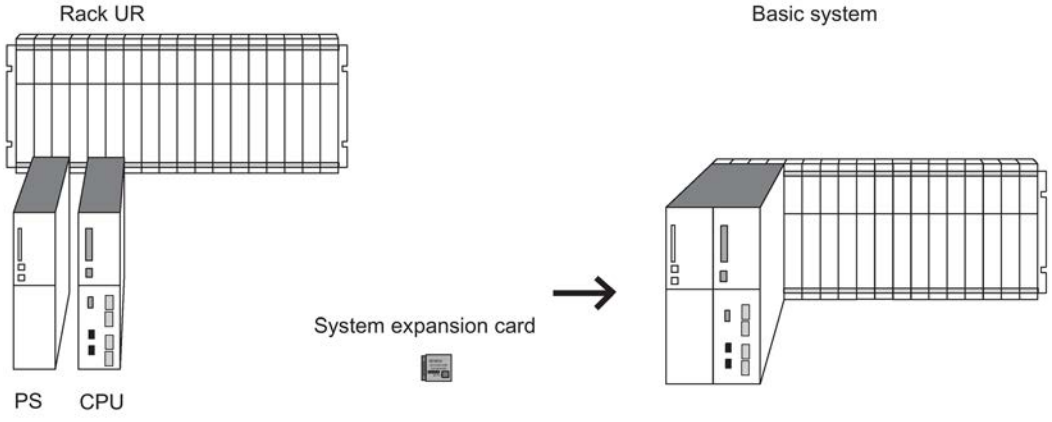


Figure 2-2 Hardware of the basic system in single mode

You can find the article numbers of the components that can operate in ambient temperatures from 0 to 70 °C in the section Preface (Page 5). You can find additional information these components in the following sections.

Product family

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3.1 Specifications

General technical specifications

You can find the following information in the *Automation System S7-400; Module Data* manual:

- The approvals and standards that the S7-400 fulfills.
- Information on electromagnetic compatibility
- The shipping and storage conditions for modules and backup batteries
- The mechanical and climatic ambient conditions for operation

  The "Temperature 0 to +60° C" specification is obsolete, 0 to 70° C is the permissible ambient temperature range.
- Specifications for isolation tests, safety class, and degree of protection

Note

You will find the current approvals on the type plate of the respective product.

Specifications for power supply modules and racks

The power supply modules and racks have the same specifications as the corresponding components without the suffix "XTR" in their names. You can find this information in the *Automation System S7-400; Module Data* manual.

Specifications of the CPU, SECs and the synchronization module

You can find the specifications of the CPU, SECs and the synchronization module in the *Process Control System PCS 7; CPU 410-5H Process Automation* manual.

3.2 Rack

The racks listed below can be operated in ambient temperatures from 0 to 70° C.

Rack UR2 XTR; 6ES7 400-1JA11-0AA1 FS01

The UR2 XTR rack is used for configuring central devices. The UR2 XTR rack has both an I/O bus and a communication bus. The UR2 XTR has 9 single-width slots.

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Standard automation systems

Ordering data	Article No.
Backup battery for PS 405/407, type AA, 3.6 V, 2.3 Ah	**6ES7971-0BA00**
XTR backup battery for PS 405/407, type AA, 3.6 V, 2.3 Ah; for operating temperature up to 70 °C	**6ES7971-0BA02**
Aluminum rack	
• UR1, 18 slots	**6ES7400-1TA11-0AA0**
• UR2 XTR, 9 slots (conformal coating; for operating temperature up to 70 °C)	**6ES7400-1JA11-0AA1**
• CR3 XTR, 4 slots (conformal coating; for operating temperature up to 70 °C)	**6ES7401-1DA01-0AA1**
Steel rack	
• UR1, 18 slots	**6ES7400-1TA01-0AA0**
• UR2, 9 slots	**6ES7400-1JA01-0AA0**
Individual components for AS 410E standard automation systems	
CPU 410E Process Automation as spare part Conformal coating; for operating temperatures up to 70 °C 4 MB RAM integrated (2 MB each for program and data); module occupies 2 slots	**6ES7410-5HM08-0AB0**
System expansion card PO 200M	**6ES7653-2CB00-0XB0**

	Article No.
Runtime licenses for SIMATIC PCS 7 automation systems (can be added to existing licenses)	
SIMATIC PCS 7 AS Runtime license Language-neutral, floating license for 1 user	
No SIMATIC PCS 7 Software Media Package	
• Physical delivery License key on USB flash drive, certificate of license	
- 100 POs	**6ES7653-2BA00-0XB5**
- 1 000 POs	**6ES7653-2BB00-0XB5**
- 10 000 POs	**6ES7653-2BC00-0XB5**
• Online delivery License key download, online certificate of license Note: Email address required!	
- 100 POs	**6ES7653-2BA00-0XH5**
- 1 000 POs	**6ES7653-2BB00-0XH5**
- 10 000 POs	**6ES7653-2BC00-0XH5**