

OFFICIAL MANUFACTURER DOCUMENT PACKAGE

Installation Instructions

6ES7318-3EL01-0AB0

Siemens official documentation for the exact article number.

Source: 6ES7318-3EL01-0AB0.pdf

Selected official Siemens pages follow this cover.

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 corresponding information is not taken into account.

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

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 for the specific task, 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 adhered to. The information in the relevant documentation must be observed.

Trademarks

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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

Purpose of this manual

This manual contains essential information about the following:

- Installation
- Communication
- Memory concept
- Cycle and response times
- Technical specifications of the CPUs.

Basic knowledge required

- In order to understand this manual, you require a general knowledge of automation engineering.
- You require knowledge of STEP 7 basic software.

Scope

The name CPU 31xC summarizes all compact CPUs, as table below shows:

CPU	Convention: CPU designations:	Order number	As of firmware version
CPU 312C	CPU 31xC	6ES7312-5BF04-0AB0	V3.3
CPU 313C		6ES7313-5BG04-0AB0	V3.3
CPU 313C-2 PtP		6ES7313-6BG04-0AB0	V3.3
CPU 313C-2 DP		6ES7313-6CG04-0AB0	V3.3
CPU 314C-2 PtP		6ES7314-6BH04-0AB0	V3.3
CPU 314C-2 DP		6ES7314-6CH04-0AB0	V3.3
CPU 314C-2 PN/DP		6ES7314-6EH04-0AB0	V3.3

Changes in comparison to the previous version

The following table contains changes from the previous versions of the following documentation from the S7-300 documentation package:

- Technical specifications manual, version 06/2010
- Operating instructions for installation, version 06/2010

The CPU- 314C-2 PN/DP has been added in delivery stage V3.3. It has the same functionalities as the CPU 314C-2 DP and also has PROFINET functionalities such as those of the CPU 315-2 PN/DP.

In delivery stage V3.3, the functionality and performance of all C-CPU's and the CPU 317-2 DP were improved compared to their predecessor versions.

Additional information was taken from the chapter "Information on converting to a CPU 31xC or CPU 31x". If you required more information, however, please refer to the FAQs on the Internet.

CPU	312	312C	313C	313C-2 DP	313C-2 PtP	314	314C-2 DP	314C-2 PtP	315-2 DP	317-2 DP
Encryption of blocks using S7-Block Privacy	X	X	X	X	X	X	X	X	X	X
Integration of a maintenance LED	X ^{1, 2}	X ²	X ²	X ²	X ²	X ^{1, 2}	X ²	X ²	X ^{1, 2}	X ²
Configurable increase of control and monitoring performance	-	-	-	-	-	-	-	-	X	X
Improved operational limits for PT100 Analog input	-	-	X	-	-	-	X	X	-	-
Data set routing	-	-	-	X	-	-	X	-	X ¹	X
Configurable process image	X ¹	X	X	X	X	X ¹	X	X	X ¹	X
Expansion of the block number range	X ¹	X	X	X	X	X ¹	X	X	X ¹	X
Number of displayed diagnostic buffer entries can be configured in CPU RUN mode	X ¹	X	X	X	X	X ¹	X	X	X ¹	X
Reading out the service data	X ¹	X	X	X	X	X ¹	X	X	X ¹	X
Extension of SFC 12 with 2 new modes to trigger the OB 86 during enabling/disabling	-	-	-	X	-	-	X	-	X ¹	X
Copying of 512 bytes with SFC 81	X ¹	X	X	X	X	X ¹	X	X	X ¹	X

Guide to the S7-300 documentation

1.1 Documentation classification

Documentation classification

The documentation listed below is part of the S7-300 documentation package.

You can also find this on the Internet and the corresponding entry ID.

Name of the documentation	Description
Manual CPU 31xC and CPU 31x: Technical specifications Entry ID: 12996906 http://support.automation.siemens.com/WW/view/en/12996906	Description of: • Operator controls and indicators • Communication • Memory concept • Cycle and response times • Technical specifications
Operating Instructions CPU 31xC and CPU 31x: Installation Entry ID: 13008499 http://support.automation.siemens.com/WW/view/en/13008499	Description of: • Configuring • Installing • Wiring • Addressing • Commissioning • Maintenance and the test functions • Diagnostics and troubleshooting
Operating Instructions CPU 31xC: Technological functions incl. CD Entry ID: 12429336 http://support.automation.siemens.com/WW/view/en/12429336	Description of the specific technological functions: • Positioning • Counting • Point-to-point connection • Rules The CD contains examples of the technological functions.