MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Selected official pages for procurement and maintenance review

PRODUCT BRAND

Siemens

PRODUCT MODEL

6ES7635-0AA00-4AA0

Screw-terminal connector set for SIMATIC C7. Relevant section pages: 21, 43, 47. Adjacent model text on shared pages is outside this product reference.

OFFICIAL SOURCE

SIMATIC C7-635 Control System manual; 03/2004, A5E00155581-04

Siemens original documentation and product reference

Accessory reference for 4AA0. C7-635 pages describe that host only. They do not establish identical wiring for every C7 variant.

AMIKON PRODUCT SUPPORT

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

Safety Guidelines

This manual contains notices intended to ensure personal safety, as well as to protect the products and connected equipment against damage. These notices are highlighted by the symbols shown below and graded according to severity by the following texts:



Danger

indicates that death, severe personal injury or substantial property damage will result if proper precautions are not taken.



Warning

indicates that death, severe personal injury or substantial property damage can result if proper precautions are not taken.



Caution

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

Caution

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

Notice

draws your attention to particularly important information on the product, handling the product, or to a particular part of the documentation.

Qualified Personnel

Only **qualified personnel** should be allowed to install and work on this equipment. Qualified persons are defined as persons who are authorized to commission, to ground and to tag circuits, equipment, and systems in accordance with established safety practices and standards.

Correct Usage

Note the following:



Warning

This device and its components may only be used for the applications described in the catalog or the technical description, and only in connection with devices or components from other manufacturers which have been approved or recommended by Siemens.

This product can only function correctly and safely if it is transported, stored, set up, and installed correctly, and operated and maintained as recommended.

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Disclaim of Liability

We have checked the contents of this manual for agreement with the hardware and software described. Since deviations cannot be precluded entirely, we cannot guarantee full agreement. However, the data in this manual are reviewed regularly and any necessary corrections included in subsequent editions. Suggestions for improvement are welcomed.

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Siemens Aktiengesellschaft A5E00155581-04

Preface

Purpose of this Manual

This manual provides a complete overview of the **C7-635 Control System** and assistance with its installation and commissioning. Options for connecting additional devices are explained, and the required components are presented.

Scope of Manual

This manual is applicable to the following:

C7	Order Number	As of Version Firmware/Hardware
C7-635 Touch	6ES7 635-2EB01-0AE3	CPU V2.0.7 / 01 HMI V 6.0.2.23 (Win CE)
C7-635 Key	6ES7 635-2EC01-0AE3	CPU V2.0.7 / 01 HMI V 6.0.2.23 (Win CE)

Audience and Knowledge Requirements

This manual is intended for persons having the required qualifications to commission, operate, and program the hardware product described.

You should be familiar with the use of computers or similar tools (such as programming devices) under the Windows 98/2000/NT 4.0/XP operating system and be knowledgeable regarding the basic STEP 7 software and ProTool configuration software and their documentation.

C7-635 Documentation Package

The C7-635 consists of the following individual components:

- SIMATIC S7-CPU 314C-2 DP
- SIMATIC Touch Panel TP170 B (C7-635 Touch) and Operator Panel OP170 B (C7-635 Key)

Manuals providing detailed information on these individual components are included in this documentation package. These manuals are essential when working with the C7-635.

The documentation package consists of seven manuals and an instruction list:

You are reading this manual.	**C7-635 Control System** → Manual	Description of: • Installation and wiring • Operator input • Technical Specifications of the C7-635
	Touch Panel "TP170 A", "TP170 B", Operator Panel "OP170 B" Manual	Provides information about: • Functionality • Device description • Operating modes and operation of the OP/TP
	Communication for Windows-Based Systems Manual	Includes: • Connection to S7-200, S7-300, and S7-400 by means of MPI and PROFIBUS • User data areas for communication between CPU and Touch Panel/Operator Panel
	CPU 31xC and CPU 31x, Technical data Manual	Description of operator input, the functions, and the technical specifications of the CPU.
	CPU 31xC Technological Functions Manual Examples	Description of the Individual Technological Functions Positioning, Counting, and Control The CD contains examples of the technological functions.
	S7-300, CPU 31xC and CPU 31x: Hardware and Installation Operating Instructions	Description of how to configure, install, wire, network, and commission the S7-300.
	S7-300 Module Data Reference Manual	Function description and technical specifications of the signal modules, power supply modules, and interface modules.
	S7-300 Instruction List CPU 31xC, CPU 31x, IM 151-7 CPU, BM 147-1 CPU, BM 147-2 CPU	List of CPU instruction sets and their execution times. List of executable blocks (OBs/SFCs/SFBs) and their execution times.

Accessories

The following components can be ordered as **C7-635 accessories**:

- **I/O set with two modules** for I/O expansion directly on the device
  6ES7635-0AA00-6AA0

  Consisting of:

  – A cable, approximately 0.25 m (for connecting the C7-635 to the S7 module)

  – A cable, approximately 0.08 m (for connecting the S7 module to the S7 module)

  – Mounting plate with S7 DIN rails including four Kombitorx screws (screwed to the back of the device)

- **I/O set with four modules** for I/O expansion directly on the device
  6ES7635-0AA00-6BA0

  Consisting of:

  – A cable, approximately 0.20 m

  – S7 DIN rail, 190 mm including 4 countersunk screws (screwed to the back of the device)

- **Cable, 1.5 m,** for I/O expansion up to a maximum distance of 1.5 m
  6ES7635-0AA00-6CA0

  You must order a **standard DIN rail** for the **S7-300** programmable controller in addition.

- **Connector set with screw terminals** for C7 I/O with coding profiles and coding carriers 6ES7635-0AA00-4AA0 or

- **Connector set with spring-loaded terminals** for C7 I/O with coding profiles and coding carriers 6ES7635-0AA00-4BA0

- **Grounding bar with shielding terminals** for analog I/O
  6ES7635-0AA00-6EA0

- **Protective film** for the C7-635 display
  6AV6574-1AD00-4AX0

- **Paper documentation *C7-635 control system***

  Consisting of:

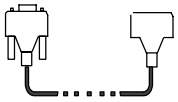
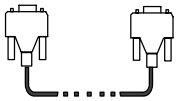
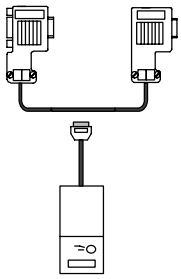
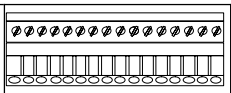
  – *C7-635 manual* in the following languages:

German:	6ES7635-1AA00-8AA0
English:	6ES7635-1AA00-8BA0
French:	6ES7635-1AA00-8CA0
Spanish:	6ES7635-1AA00-8DA0
Italian:	6ES7635-1AA00-8EA0

C7-635 Device Connections

You can use the following cables to connect the C7-635 to other components:

Table 3-11 Cables for Connection to C7-635

Connecting Cable	Length	Special Features	Illustration	Connection
S7-300 I/O Bus				
I/O expansion cable	0.25 m 1.5 m	-		C7-635 — S7-300 rack
MPI Interface				
Programming device (PG) cable	5 m	-		For example: C7-635 — PG C7-635 — S7-300 C7-635 — S7-400
PROFIBUS-DP interface				
PROFIBUS bus cable Indoor cable, buried cable, and bus connector, without programming port, with programming port and PROFIBUS bus terminal RS 485, with 1.5 m cable, with 3 m cable, with programming port and 1.5 m cable	-	Self-made cable		C7 — PG/PC C7 — C7 C7 — S7-300 C7 — S7-400
Serial interface (RS 232 (V.24))				
Serial cable (printer cable)		See catalog ST80.1		C7 — printer
IM361				
IM361 cable		-		C7 — Additional I/O (S7-300)
C7-635 I/O connections				
Connectors for C7-635 I/O Cable cross section		16-pin 6-pin 4-pin 0.2 to 2.5 mm^2		C7 — External sensing elements/ actuators

3.7 Coding Connector Parts to Prevent Incorrect Usage

You can order a connector set with coding profiles and coding tabs as an accessory for the C7-635 (see accessories in Section 2.2).

Caution

It is highly recommended that you code the connectors, as unintentionally using the wrong connector may damage the device.

Coding the Connectors

The coding profiles ① and coding tabs ② (see Figure 3-18) enable you to code connectors without loss of pole to prevent incorrect usage. Use the following procedure:

1. Insert coding profile ① on connector part ❶ into the slots provided.
2. Insert coding carrier ② on the main housing ❷ into the corresponding recesses.

A coding profile and a coding tab facing one another prevent the connector part from being inserted.

If a coding profile and coding carrier do not face one another, the connector part can be inserted without difficulty.

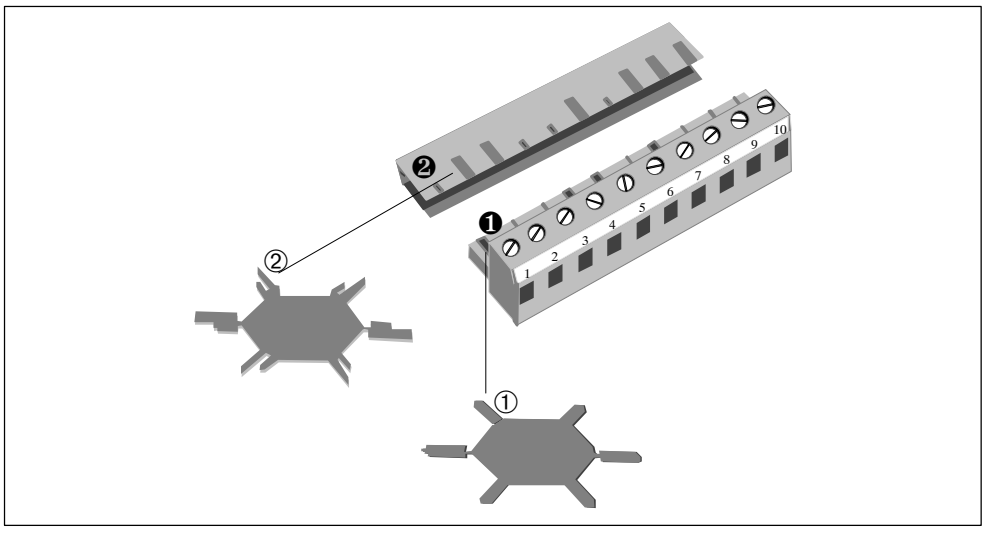


Figure 3-18 Preventing Incorrect Usage of Connectors