AMIKON TECHNICAL DOCUMENTATION

Installation Instructions

Siemens 6ES7315-1AF03-0AB0

MPI Program Processing Module

TYPE	WORK RAM	LOAD RAM	NETWORK
CPU 315	48 KB	80 KB	MPI

For qualified personnel only. Isolate the equipment and follow the complete manufacturer and site safety procedures. This reference does not replace the approved project design or the full installation manual.

01 PREPARATION AND WIRING CHECKS

- Use qualified personnel and isolate all supplies before wiring.
- Keep the documented 40 mm top and bottom clearances.
- Bond the mounting rail to protective ground with low impedance.
- Use the legacy CPU315 connection-comb branch, not the MMC-CPU plug branch.
- Verify nominal 24 V DC within the 20.4-28.8 V permitted range.
- Check program backup and distinguish battery backup from clock-only accumulator backup.

02 ORIGINAL WIRING REFERENCE

Original source PDF pages 95, 94, 2, 84, 92. The following pages retain the original Siemens drawings and printed page numbers.

Siemens original documentation and product reference

The figure below illustrates the procedures described above.

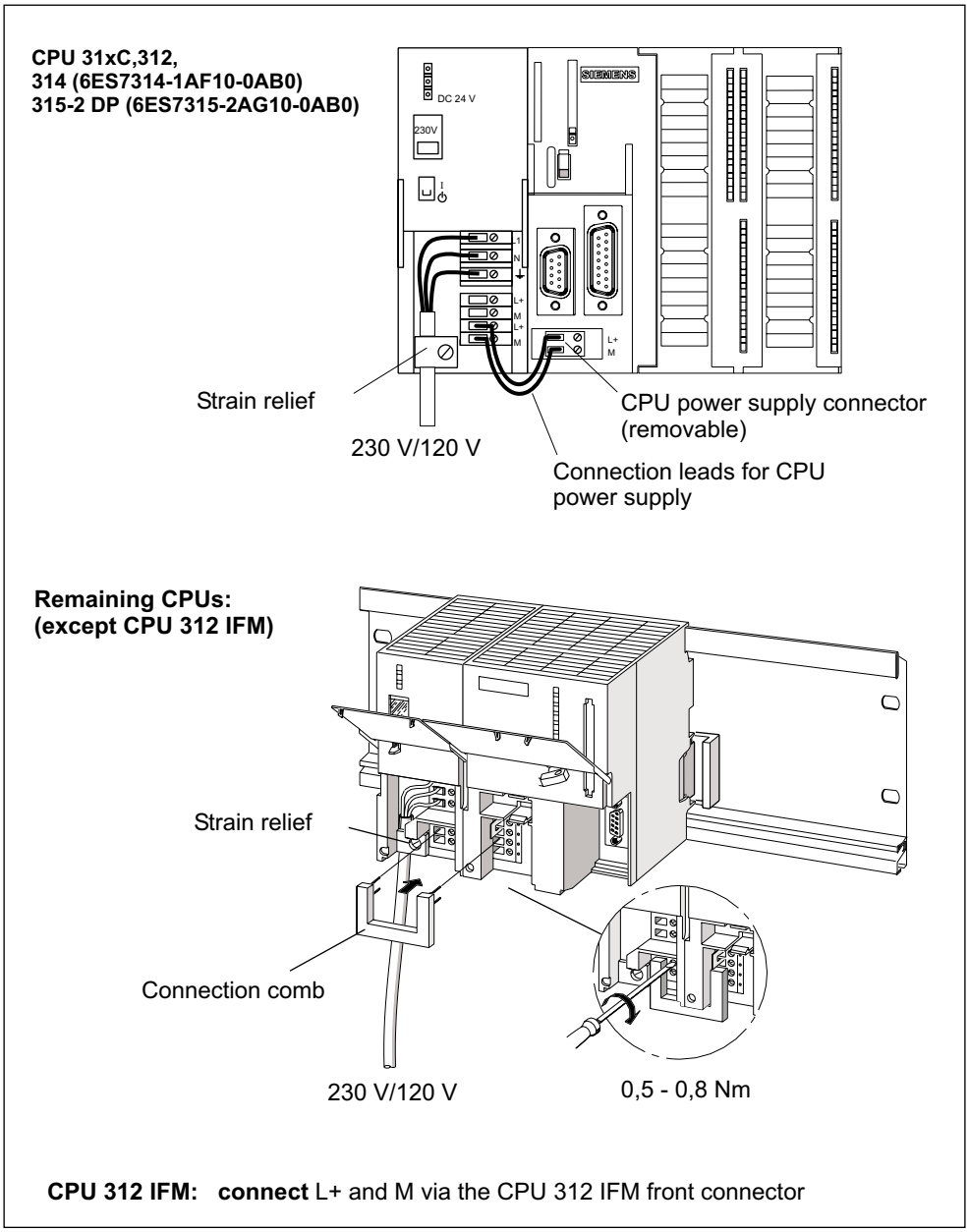

Figure 7-3 Wiring the power supply module and the CPU

Note

The PS 307 power supply module is equipped with two additional DC 24 V connections (L+ and M) for the supply of I/O modules.

7.4 Wiring the power supply module and the CPU

Requirement

The modules are mounted on the rail.

Connection comb (not CPU 312 IFM and CPUs with MMC)

You can connect some of the CPUs to the PS 307 power supply module using the connection comb included with the module.

PS and CPU wiring

Note

The PS 307 power supply module is equipped with two additional DC 24 V connections (L+ and M) for the supply of I/O modules.

Note

On the 31xC, 312, 314 (6ES7314-1AF10-0AB0) and 315-2 DP (6ES7315-2AG10-0AB0) CPUs, the power supply connector is a plug and can be removed.



Warning

You can come into contact with live wires if the power supply module and any additional load power supply units are connected to the mains. You should therefore disconnect the S7-300 from the power supply before starting the wiring. Only use ferrules with insulating collars to press-fit onto the ends of the cables. Once you have wired the modules, close all the front panels. You can then switch on the S7-300 again.

1. Open the front panel to the PS 307 power supply module and CPU.
2. Open the strain relief clamp on the PS 307.
3. Strip the power cable to a length of 11 mm and connect it to L1, N and to the ground conductor terminal of the PS 307.
4. Screw-tighten the strain relief clamp again.
5. **You have two options for wiring the CPU, depending on which one you are using:**
   - For the**CPUs 31xC, 312, 312 IFM** (on which the power connection is on the front connector of the integral peripheral), **314** (6ES7314-1AF10-0AB0), and **CPU 315-2 DP** (6ES7315-2AG10-0AB0), the power supply connector is a plug and may be removed. Strip the connecting cables for the CPU power supply to a length of 11 mm.

     Connect the lower terminals M and L+ on the PS 307 to terminals M and L+ on the CPU.
   - **CPU 313/314/314 IFM/315/315-2 DP/316-2 DP/318-2 DP:** Insert the connection comb and screw-tighten it.
6. Close the front panel.

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.

Note
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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Disclaimer 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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Installing the rail

1. When you mount the rails, allow sufficient space for mounting modules and heat elimination (at least 40 mm above and below the modules. See the figure below).
2. Mark up the mounting holes on the mounting surface. Drill the holes to a diameter of 6.5 $^{+0,2}$ mm.
3. Screw on the rail (M6 screws).

Note

Take care to create a low-impedance connection between the rail and a mounting surface which is a grounded metal plate or equipment mounting plate. In the case of varnished or anodized metals, for instance, use a suitable contacting agent or contact washers.

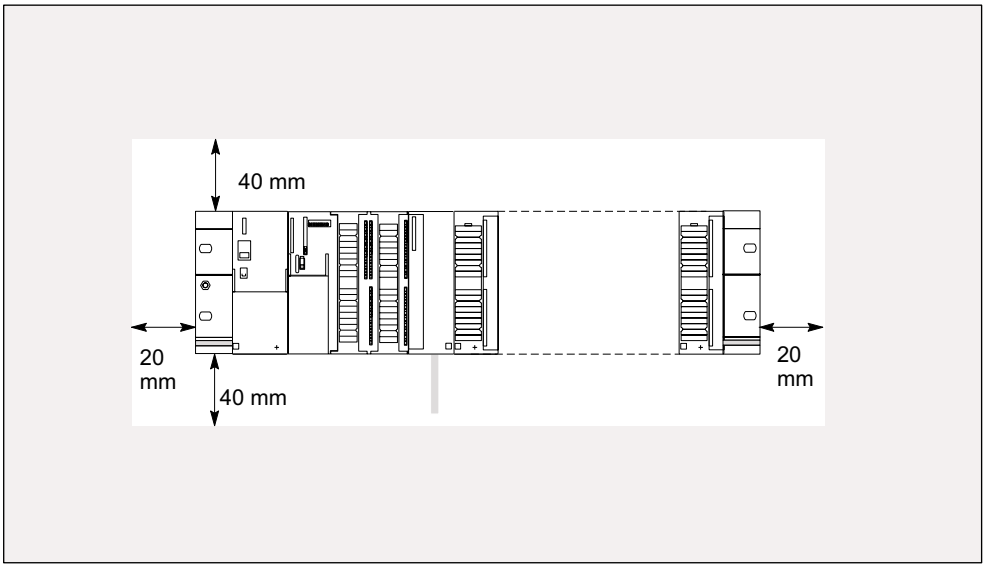

Figure 6-2 Free space required for an S7-300 installation

7.2 connecting the protective conductor to the rail

Requirement

The rail is fixed to the mounting surface.

Connecting the protective conductor

1. Connect the protective conductor to the rail,
   using the M6 protective conductor bolt.

   Minimum cross-section of the protective conductor: 10 mm^2.

The figure below shows how the protective conductor must be bonded to the rail.

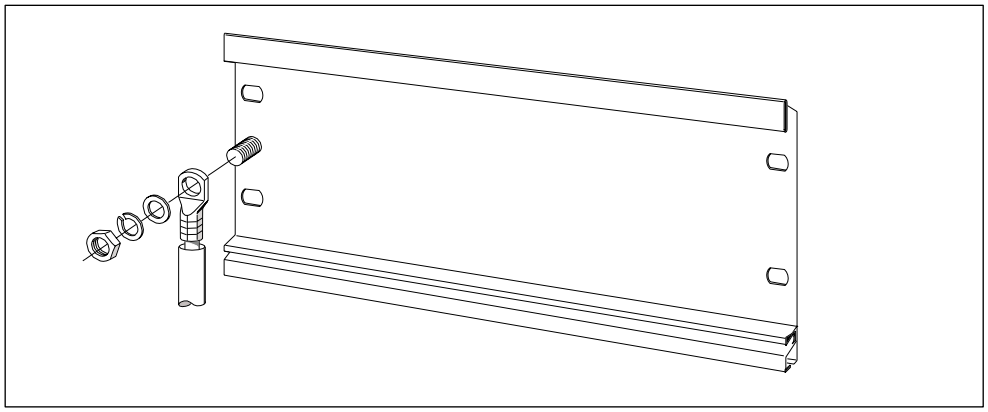

Figure 7-1 connecting the protective conductor to the rail

Note

Always ensure a low-impedance connection of the protective conductor. You can achieve this by bonding a cable with low impedance and as short as possible to a large contact surface. For example, if the S7-300 is mounted on a hinged frame you must use a flexible ground strap.