

SIEMENS

SIMATIC

Connection of the SINAMICS S120 to the Technology CPU

Technical update of S7-Technology V4.1 SP1

Product Information

Overview

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Introduction

The appendix of this document contains a technical update for the integration of SINAMICS S120 in the Technology CPU with S7-Technology V4.1 SP1.

Improved SINAMICS support

S7-Technology V4.1 SP1 comprises the following improvements:

- Integration of new STARTER functionality as permanent component of S7-Technology. The STARTER functionality integrated in S7-Technology V4.1 SP1 corresponds to the new STARTER V4.1.2
- Support for SINAMICS S120 drives up to firmware V2.6.x
For information about the support of the new STARTER functionality for firmware versions of SINAMICS drives, refer to the S7-Technology Online Help, "Available components and systems".
- Support for SINAMICS Support Packages (SSP)

SINAMICS Support Packages

Definition of the SINAMICS Support Package

S7-Technology V4.1 SP1 features the integrated commissioning tool STARTER V4.1 SP2 which supports the use of SINAMICS Support Packages (SSP). This allows users to make new drive firmware versions known to an existing STARTER/S7-Technology version without having to carry out a new installation and without the drive being actually available.

To provide support for SINAMICS versions not included in STARTER V4.1 SP2/S7-Technology V4.1 SP1, the SINAMICS Support Package must be installed. SINAMICS Support Packages can be downloaded from the Product Support pages on the Internet. Users are informed of new SSPs in Product Support as soon as a new SINAMICS version is released for delivery.

Note

The SSPs which exist at the time of the delivery release of S7-Technology V4.1 SP1 are automatically included in the installation of S7-Technology V4.1 SP1.

Content of the SINAMICS Support Package

An SSP contains only description files of the devices and drive objects. Install an SSP to add new drive objects and devices to an existing STARTER installation without modification of the STARTER/S7-Technology software installation.

After having completed installation, you can configure all the functions of the new SINAMICS version by means of the Expert list. All screens and wizards are available for the functions which are downward compatible.

An SSP can contain the following items:

- New drive objects
- New device versions
- New and changed parameters in the Expert list
- New and revised faults, alarms and messages
- New and revised sequential parameterizations
- Expansions of the component catalog (new motors, encoders, DRIVE-CLiQ components)
- Expansion of the configuration catalog (SD)
- Revised Online Help files (parameter help, function charts)

When a new STARTER/S7-Technology version is created and delivered it contains all released or compatible SSPs.

Installation

All SSPs released for a product version can be installed in any order.

Do not run STARTER/S7-Technology during SSP installation.

To install a new SSP from CD, follow these steps:

1. Place the SSP CD into the CD drive of your programming device/PC, or save and unpack the SSP you downloaded from Product Support.
2. Select and run setup.exe in Windows Explorer
3. Follow the installation instructions and restart the computer after successful installation.

After having successfully completed installation, you can open S7T Config to configure the SINAMICS versions you installed in offline mode, or to operate them in online mode (for example, by selecting "Accessible nodes").

The SINAMICS Support Packages you installed are displayed as "SSP SINAMICS ..." in SIMATIC > Product Information > Installed Software , "Components" tab.

Revisions of product information SINAMICS S120

The next sections contain supplements and revisions for the current document.

Special features for using an Active Line Module (chapter 3.8.2)

To enable an axis using the FB 401 "MC_Power", the infeed must already have been enabled at the drive system.

The enable signal is usually set at the Smart Line Module by means of an integral hardware contact of the module.

The enable signal for the Active Line Module, for the Basic Line Module, and for specific applications of the Smart Line Module must be transferred to the infeed via PROFIBUS in a control data frame. A corresponding block which you can integrate in the user program for handling the infeed enable is available for download on the Internet. This block is available for download at the following address:

<http://support.automation.siemens.com/WW/view/en/21971603>

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Expanding the PROFIBUS message frame (supplement to chapter 5.2)

S7-Technology V4.1 or higher supports the direct expansion of message frames in the SINAMICS configuration in S7T Config. Follow these steps:

1. Open the configuration of SINAMICS S120 in S7T Config.

PROFIdrive message frame | Version overview

The drive objects are supplied with data in the following sequence from the PROFIBUS message frame:
The input data corresponds to the send and the output data of the receive direction of the drive object.

Master view:

Object	Drive object	No.	Message frame type	Input data		Output data		S
				Length	Address	Length	Address	
1	Antrieb_1	2	SIEMENS telegram 105, PZD-10/10	10	260..279	10	260..279	A
2	Control_Unit	1	SIEMENS telegram 391, PZD-3/7	7	280..293	3	280..285	---

Without PZDs (no cyclic data exchange)

Buttons: Delete line, Insert line (dropdown), Configure message frame, Transfer to HW Config

Dropdown menu options: Message frame extension, PROFIsafe

2. Select the drive object.
3. Click "Insert line" and then select "Message frame extension".
4. Click "Configure message frame" to open the PROFIBUS screen form of the selected drive object. This screen form displays the control and status words of the message frame used.
5. Edit the message frame properties as required and then return to the SINAMICS configuration.
6. Click "Transfer to HW Config" to update HW Config.
7. Select "Save and compile" to activate your changes in the project.

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