STARTER drive/commissioning software

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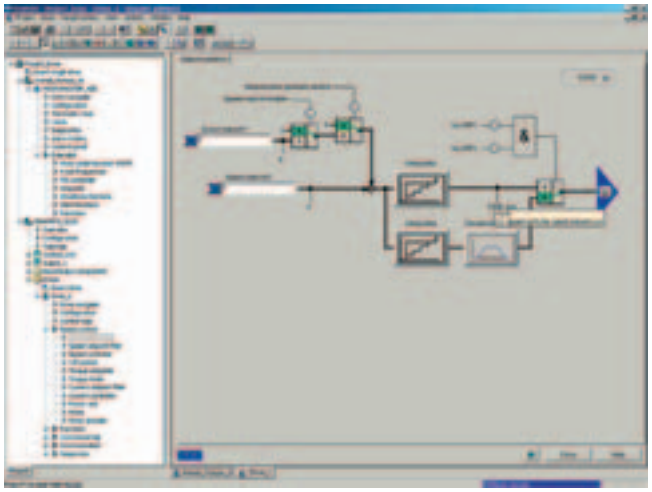
Overview



The easy-to-use STARTER drive/commissioning software can be used for:

- commissioning,
- optimization and
- diagnostics.

This software can be operated either as a standalone PC application or can be integrated into the SCOUT engineering system (on SIMOTION) or STEP 7 (with Drive ES Basic). The basic functions and handling are the same in both cases.

In addition to the SINAMICS drives, the current version of STARTER also supports MICROMASTER 4 devices and inverters for the SIMATIC ET 200S FC distributed I/O system.

The project wizards can be used to create the drives within the structure of the project tree.

First-time users are supported by solution-based dialog menu, whereby a standard graphics-based display maximizes clarity when setting the drive parameters.

First commissioning is guided by wizards, which make all the basic settings in the drive. This enables a drive to be up and running after only setting a small number of parameters within the drive configuration process.

The individual settings required are made using graphics-based parameterization screenforms, which also display the mode of operation.

Examples of individual settings that can be made include:

- terminals
- bus interface
- setpoint channel (e.g. fixed setpoints)
- speed control (e.g. ramp-function generator, limits)
- BICO interconnections
- diagnostics

Experts can gain rapid access to the individual parameters via the expert list and do not have to navigate dialogs.

In addition, the following functions are available for optimization purposes:

- self-optimization
- trace (depending on drive)

Diagnostics functions provide information about:

- control/status words
- parameter status
- operating conditions
- communication states

Performance

- Easy to use: only a small number of settings need to be made for successful first commissioning: axis turning
- Solution-based dialog-based user guidance simplifies commissioning
- Self-optimization functions reduce manual effort for optimization.
- The built-in trace function provides optimum support during commissioning, optimization and troubleshooting.

Minimum hardware and software requirements

PG or PC with Pentium™ II 400 MHz (Windows™ 2000), Pentium™ III 500 MHz (Windows™ XP)

256 MB RAM (512 MB recommended)

Monitor resolution, 1024 × 768 pixels

Windows™ 2000 SP3, XP Professional SP1

Microsoft Internet Explorer 5.01

Integration

A PROFIBUS Communication Module and a connection cable are required to make the communication link between the PG/PC and a Control Unit.

For example, PROFIBUS Communication Module CP 5512 (PCMCIA type 2 card + adapter with 9-pole SUB-D socket for connection to PROFIBUS). For Windows 2000/XP Professional and PCMCIA 32)
Order No.: 6GK1551-2AA00

and connection cable between CP 5512 and PROFIBUS
Order No.: 6ES7901-4BD00-0XA0

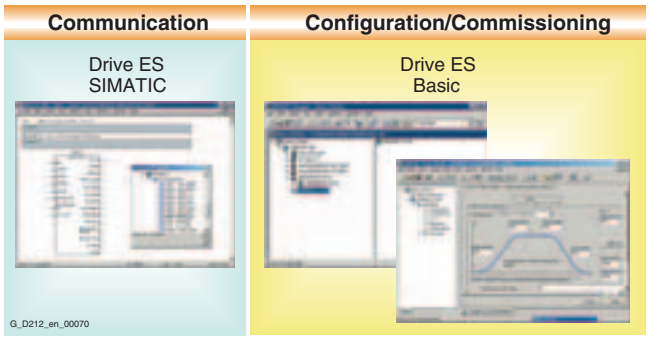
PC converter connection sets are available for MICROMASTER 4, SINAMICS G110 and SINAMICS G120 for a safe point-to-point connection to the PC.
Order No. for MICROMASTER 4: 6SE6400-1PC00-0AA0
(the scope of supply includes a 9-pole SUB-D connector and an RS 232 standard cable, 3 m (9.8 ft))

Order No. for SINAMICS G110 and SINAMICS G120:
6SL3255-0AA00-2AA1
(the scope of supply includes a 9-pole SUB-D connector and an RS 232 standard cable, 3 m (9.8 ft), and the STARTER startup tool on CD-ROM)

Selection and ordering data

Description	Order No.
STARTER commissioning tool for SINAMICS and MICROMASTER English/German/French/Italian	**6SL3072-0AA00-0AG0**

Overview



Drive ES is the engineering system used to integrate Siemens drive technology into the SIMATIC automation world easily, efficiently and cost-effectively in terms of communication, configuration and data management. The STEP 7 Manager user interface provides the basis for this procedure.

Various software packages are available for SINAMICS:

- **Drive ES Basic**
  for first-time users of the world of Totally Integrated Automation and the option for routing beyond network limits along with the use of the SIMATIC teleservice.
  Drive ES Basic is the basic software program for setting the parameters of all drives online and offline.
  Drive ES Basic enables both the automation system and drives to be handled via the SIMATIC Manager user interface.
  Drive ES Basic is the starting point for common data archiving for complete projects and for extending the use of the SIMATIC teleservice to drives. Drive ES Basic provides the configuration tools for the new Motion Control functions slave-to-slave communication, equidistance and isochronous operation with PROFIBUS DP.
- **Drive ES SIMATIC**
  simple parameterization of the STEP 7 communication instead of programming.
  In order to use Drive ES SIMATIC, STEP 7 must be installed. It features a SIMATIC function block library, thereby making the programming of the PROFIBUS interface in the SIMATIC CPU for the drives easy and secure. There is no need for separate, time-consuming programming of the data exchange between the SIMATIC CPU and the drive.
  All Drive ES users need to remember is:
  Copy – Modify – Download – Ready.
  Customized, fully-developed function blocks are copied from the library into user-specific projects.
  Frequently-used functions are set to run in program format:
  - Read out complete diagnostics buffer automatically from the drive
  - Download complete parameter set automatically from the SIMATIC CPU into the drive – e.g. when a device has to be replaced.
  - Load part parameter sets (e.g. for recipe and product change) automatically from the SIMATIC CPU
  - Read back, i.e. update, complete parameterization or part parameter sets are uploaded from the drive into the SIMATIC CPU.
- **Drive ES PCS 7**
  integrates drives with the PROFIBUS interface into the SIMATIC PCS 7 process control system.
  Drive ES PCS 7 can only be used with SIMATIC PCS 7 Version 5.2 and higher. Drive ES PCS 7 provides a function block library with function blocks for the drives and the corresponding faceplates for the operator station, which enables the drives to be operated from the PCS 7 process control system.

For further information please visit us on the Internet at:

http://www.siemens.com/drivesolutions

Selection and ordering data

Description	Order No.
Drive ES Basic V 5.4 • Configuration software for the integration of drives into Totally Integrated Automation • Requirement: STEP 7 V5.3 and higher, SP3 • Supply format: on CD-ROM Ger., Eng., Fr., Sp., It. with electronic documentation	
Single-user license	**6SW1700-5JA00-4AA0**
Multi-user license, 60x	**6SW1700-5JA00-4AA1**
Update service for single-user license	**6SW1700-0JA00-0AB2**
Update service for multi-user license	**6SW1700-0JA00-1AB2**
Upgrade from V 5.x to V 5.4	**6SW1700-5JA00-4AA4**
Drive ES SIMATIC V 5.4 • Function block library for SIMATIC for the parameterization of communication with the drives • Requirement: STEP 7 V5.3 and higher, SP3 • Supply format: on CD-ROM Ger., Eng., Fr., Sp., It. with electronic documentation	
Single-user license, incl. 1 x runtime license	**6SW1700-5JC00-4AA0**
Runtime license	**6SW1700-5JC00-1AC0**
Update service for single-user license	**6SW1700-0JC00-0AB2**
Upgrade from V 5.x to V 5.4	**6SW1700-5JC00-4AA4**
Drive ES PCS 7 V 6.1 • Function block library for PCS 7 for the integration of drives • Requirement: PCS 7 V 6.1 and higher • Supply format: on CD-ROM Ger., Eng., Fr., Sp., It. with electronic documentation	
Single-user license, incl. 1 x runtime license	**6SW1700-6JD00-0AA0**
Runtime license	**6SW1700-5JD00-1AC0**
Update service for single-user license	**6SW1700-0JD00-0AB2**
Upgrade from V 5.x to V 6.1	**6SW1700-6JD00-0AA4**

SIMOTION SCOUT engineering software

Overview

The SCOUT engineering software enables the solution of Motion Control, PLC and technology tasks in the SIMOTION Motion Control system and supplies all tools for this purpose, such as programming and parameterization, testing and commissioning, as well as diagnostics.

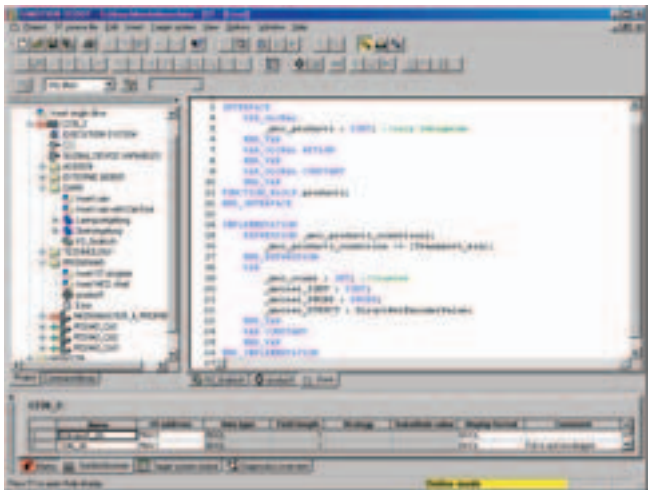
The SIMOTION D Control Units contain as standard a basic functionality (Kernel), which is programmable in accordance with IEC 61131.

Loadable technology packages provide further functionalities, such as positioning, synchronous operation, electronic cams and temperature channels.

These technology packages enable the creation of technological objects, which offer an easy and overall view of associated functions.

There are various technological objects, which are all created, configured and parameterized in the same way.

Additionally the technological objects comprise of a programming interface, making it possible to use the functionality out of the user program.



The high-level language Structured Text (ST) provides all language resources in the form of commands. This permits the generation of well-structured applications.

The basic commands implement all requirements for:

- data management,
- computing functions,
- control structures
- I/O operations

The addition of the technology packages for Motion Control increases the scope of commands by adding powerful, highly flexible Motion Control commands (e. g.: _pos(...) for position controlled axis positioning).

An ST source file basically consists of continuous text. This text can be divided and structured in sections, which represent logical sections of an ST source file.

These sections can consist of the following:

- Program assigned to a runtime task
- Function block with a dedicated memory
- Function without a dedicated memory

Functions and function blocks are not assigned to a runtime task. They are called from programs.

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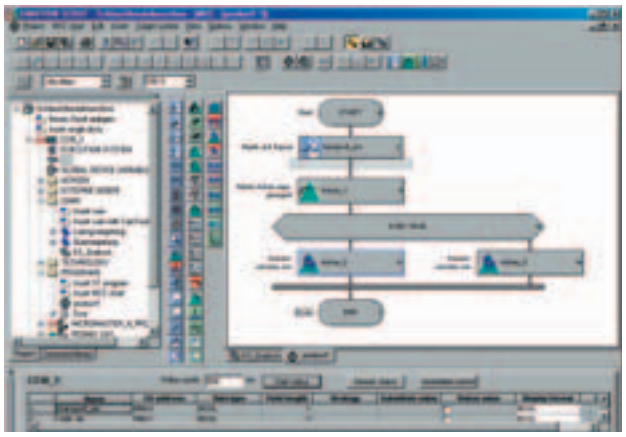

Motion Control Chart (MCC) can be used to formulate the processes of a machine graphically with simple and logical tools. The result is one or more flowcharts showing the chronological sequence of the individual actions.

Above all, MCC supports the simple description of the motion sequences of machines with many axes with the help of powerful Motion Control commands (e. g. reference axis, position axis, synchronize or desynchronize cam, and many more).

Different commands are available for controlling the machine, e. g. if conditions must be fulfilled, I/O signals can be read or set, calculations can be formulated and different control structures such as condition (IF), cases (CASE) and loops (WHILE, REPEAT UNTIL) can be programmed.

Several MCC programs may be created to describe different process situations. For example, you can create one MCC program to bring the machine to a defined initial state when it is powered on, a second MCC program for the normal production sequence, and a third MCC program to specify what the machine is to do in the event of a fault.

All commands are available in tool bars (sorted according to functions) and are automatically inserted in the flowchart at the selected point with a click. By clicking on different elements, individual dialogs for further parameterization are opened. Of course, it is also possible to include individual comments to document the sequence.

Further information

Further information on characteristics of the SCOUT engineering software, as well as of hardware platforms, runtime software and ordering data of the SIMOTION Motion Control system can be found in Catalog PM10.