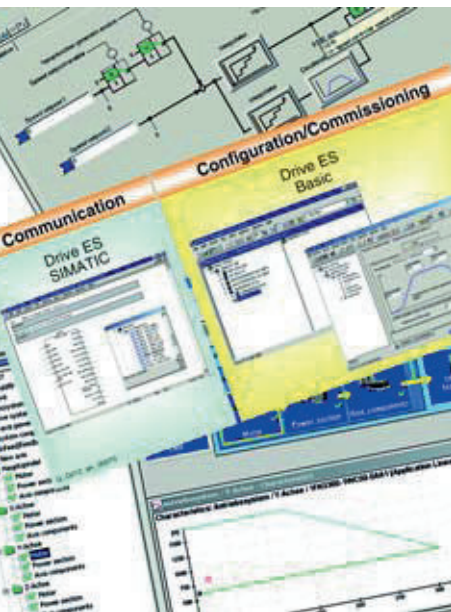


Engineering Tools



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SINAMICS G110, SINAMICS G120, SINAMICS G120D

Engineering Tools

SD configurator selection aid

Overview



The interactive catalog CA 01 – the offline mall of Siemens Automation and Drives (A&D) – on CD 2 “Configuring” contains over 100000 products with approximately 5 million potential drive system product variants.



The SD configurator has been developed to facilitate selection of the correct motor and/or inverter from the wide spectrum of A&D SD products. It is integrated as a “selection help” in this catalog. The SD configurator is used to help locate the correct drive solution and delivers both the correct order number and relevant documentation.

SIEMENS

Data sheet for three-phase Squirrel-Cage-Motors
Datenblatt für Drehstrom-Käfigläufermotoren

Ordering data / Bestelldaten:
1LE1001-1AD52-2AA4

client-order no. / Kunden-Auftrags-Nr.:
offer-no. / Angebots-Nr.:
order-no. / Best-Nr.:
Siemens-Auftrags-Nr.:

consignment-no. / Kom.-Nr.:
project / Anlage:
item-no. / Item-Nr.:

Electrical data / Elektrische Daten:		general data / Allgemeine Daten:	
rated motor voltage / Bemessungsspannung	230V/400V 50Hz, 400V/690V 50Hz	frame size / Baugröße	100L
frequency / Frequenz	50 Hz	type of construction / Bauform	IM B3
rated motor power / Bemessungsleistung	1,10 kW	weight in kg, without optional accessories / Gewicht in kg, ohne optionale Ausbauten	25,0 kg
rated motor speed / Bemessungsdrehzahl	725 1/min	frame material / Gehäusematerial	Aluminum / Aluminium
rated motor torque / Bemessungsmoment	14,0 Nm	degree of protection / Schutzart	IP 55
rated motor current / Bemessungsstrom	2,2 A	method of cooling, TEFC / Kühlmeth. TEFC	IC 411
starting- / rated motor current / Anzugs- / Bemessungsstrom	3,8 / 2,2 A	vibration class / Vibrationsklasse	A (Standard)
breakdown / rated motor / Anzugs- / Bemessungsmoment	2,9 / 1,7	isolation / Isolierung	105(F) / 130(B) / 155(F) nach 130(B)
starting- / rated motor torque / Anzugs- / Bemessungsmoment	1,7 / 1,7	duty type / Betriebsart	S1 = continuous operation / S1 = Dauerbetrieb
efficiency class / Wirkungsgradklasse	non-applicable / nicht anwendbar	direction of rotation / Drehrichtung	bidirectional / bidirektional
efficiency / Wirkungsgrad	100%/50Hz, 87,0 % non-applicable / nicht anwendbar, 75%/50Hz, 64,5 % 100%/60Hz, 58,0 %	terminal box / Klemmenkasten:	
power factor / Leistungsfaktor	0,57	material of terminal box / Klemmenkastenmaterial	Aluminum / Aluminium
motor protection / Motorschutz	without (Standard) / ohne (Standard)	type / Typ	TB1 F00
terminal box position / Klemmenkastenlage	terminal box - on top / Klemmenkasten - oben	terminal screw thread / Sechskant-Schraubgewinde	M4
Mechanical data / Mechanische Daten:		max. cable cross-sectional area / Max. Leiterquerschnitt	4,0 mm²
noise 50 Hz/60Hz / Schallleistungspegel (LWA) 50 Hz/60Hz	66,00 dB / 0,00 dB	cable diameter from ... to / Kabeldurchmesser von ... bis ...	11,0 mm - 21,0 mm
moment of inertia / Trägheitsmoment	0,019000 kg m²	cable entry / Kabelanschlüsse	2xM12x1,5
bearing AS / Lager AS	6206 Z2C3	cable gland / Kabelverschraubung	2 plugs / 2 Stecker / Steckerkopf
bearing BS / Lager BS	6206 Z2C3	special configurations / Sonderausführung:	
rolling bearing / Wälzlager	pre-stressed bearing / Vorspanntes Lager BS		
drain holes / Abwasserlöcher	No		
regreasing device / Nachschmierschicht	No		
type of lubrication / Schmiermittel	Esso Unorex N3		
re-lubrication interval at 40°C / Fettschmiedauer: 40°C	20000 h		
quantity of grease for re-lubrication at 40°C / Fettmenge Nachschmierung: 40°C	+ 9		
external earthing / Äußere Erdungsstern	No		
paintwork / Anstrich	Special finish in RAL 7030 stone gray / Sonderanstrich RAL 7030 steingrau		
explosion protection / Explosionsschutz:			
type of protection / Zündschutz	without (Standard) / ohne (Standard)		
site conditions / Umgebungsbedingungen:			
ambient temperature / Umgebungstemperatur	-20,0 °C - +40,0 °C		
altitude above sea level / Höhe über Meeresspiegel	1000 m		
standards and specifications / Normen und Vorschriften	IEC, DIN, ISO, VDE, EN		

Technical and ordering data are subject to change. There may be discrepancies between calculated at rating plate values. Technische Änderungen vorbehalten!

It can display operating instructions, factory test certificates, terminal box documentation, etc. and generates data sheets, dimension drawings and a start-up calculation for the relevant products. It can also be used to identify a suitable inverter for the selected motor.

3D models in a wide variety of 3D formats are also available.

6

6/2

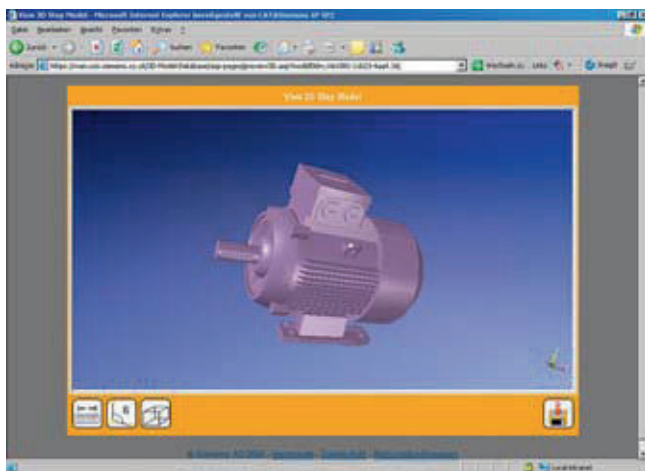
Siemens D 11.1 · 2008

SINAMICS G110, SINAMICS G120, SINAMICS G120D

Engineering Tools

SD configurator selection aid

Overview (continued)



The comprehensive help system not only explains the program functions, but also provides access to detailed technical background knowledge.

Product range

The SD configurator covers the product range of low-voltage motors (energy-saving and explosion-protected motors) with associated documentation and dimension drawings, low-voltage inverters in the MICROMASTER 4 range, SINAMICS G110 and G120 inverter chassis units, SINAMICS G120D distributed frequency inverters and the frequency inverters for the SIMATIC ET 200S FC and SIMATIC ET 200pro distributed I/Os.

Hardware and software requirements

- PC with 1.5 GHz CPU or faster
- Operating systems
 - Windows 98/ME
 - Windows 2000
 - Windows XP
 - Windows NT (Service Pack 6 and higher)
 - Windows VISTA
- At least 512 MB RAM user memory
- Screen resolution 1024 × 768, graphics with more than 256 colors/small fonts
- CD-ROM/DVD drive
- Windows-compatible sound card
- Windows-compatible mouse

Installation

You can install this catalog on your hard disk or network directly from the CD-ROM/DVD as a light or full version.

Selection and Ordering Data

Description	Order No.
Interactive catalog CA 01 on CD-ROM including selection help SD configurator, English	E86060-D4001-A110-C6-7600
Interactive catalog CA 01 on DVD including selection help SD configurator, English	E86060-D4001-A510-C6-7600

More information

The interactive catalog CA 01 can be ordered from the relevant Siemens sales office or via the Internet:

<http://www.siemens.com/automation/CA01>

Links to hints, tricks and downloads for functional or content updates can be found at this address.

For technical advice and hotline support, you can also contact our hotline for catalog CA 01:

Tel.: +49 (0) 180 50 50 22 2

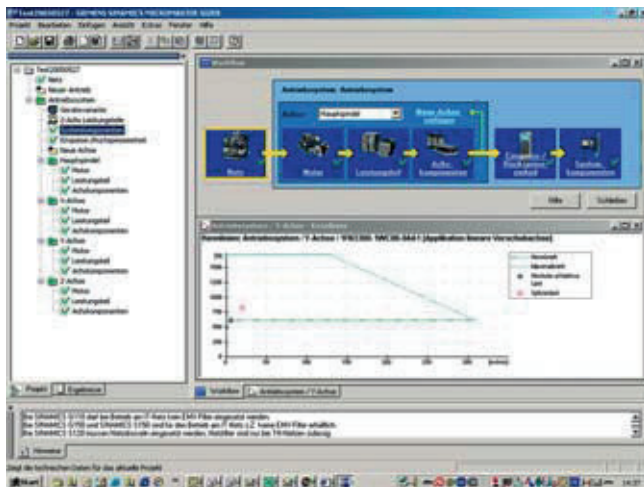
Email: adsupport@siemens.com

SINAMICS G110, SINAMICS G120, SINAMICS G120D

Engineering Tools

Sizer configuration tool

Overview



The SIZER configuration tool provides an easy-to-use means of configuring the SINAMICS and MICROMASTER 4 drive families, as well as the SINUMERIK solution line CNC control and SIMOTION Motion Control. It provides support when setting up the technologies involved in the hardware and firmware components required for a drive task. SIZER supports the complete configuration of the drive system, from simple individual drives to complex multi-axis applications.

SIZER supports all of the engineering steps in one workflow:

- Configuring the power supply
- Motor and gearbox design, including calculation of mechanical transmission elements
- Configuring the drive components
- Selecting the required accessories
- Selecting the line-side and motor-side power options, e.g. cables, filters, and reactors

When SIZER was being designed, particular importance was placed on high usability and a universal, function-based approach to the drive task. The extensive user guidance makes using the tool easy. Status information keeps you continually informed of the progress of the configuration process.

The SIZER user interface is available in German and English.

The drive configuration is saved in a project. In the project, the components and functions used are displayed in a hierarchical tree structure.

The project view permits the configuration of drive systems and the copying/inserting/modifying of drives already configured.

The configuration process produces the following results:

- A parts list of the components required (export to Excel, use of the Excel data sheet for import to VSR)
- Technical specifications of the system
- Characteristic curves
- Comments on system reactions
- Location diagram of drive and control components and dimension drawings of motors

These results are displayed in a results tree and can be reused for documentation purposes.

User support is provided by the technological online help menu, which provides the following information:

- Detailed technical data
- Information about the drive systems and their components
- Decision-making criteria for the selection of components
- Online help in German and English

Minimum system requirements

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

256 MB RAM (512 MB RAM recommended)

At least 2.3 GB of free hard disk space

An additional 100 MB of free hard disk space on Windows system drive

Screen resolution 1024 × 768 pixels

Windows 2000 SP2 / XP Professional SP1 / XP Home Edition SP1

Microsoft Internet Explorer 5.5 SP2

Selection and Ordering Data

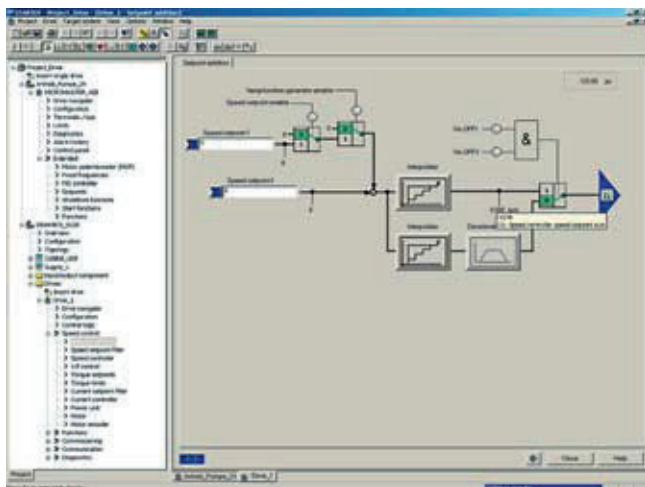
	Order No.
SINAMICS MICROMASTER SIZER configuration tool English/German	6SL3070-0AA00-0AG0

SINAMICS G110, SINAMICS G120, SINAMICS G120D

Engineering Tools

STARTER commissioning tool

Overview



The easy-to-use STARTER commissioning tool can be used to:

- Start up
- Optimize and
- Diagnose

This software can be operated either as a stand-alone 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 regardless.

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.

Beginners are supported by solution-based dialog guidance, 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 ensures that even though only a small number of parameter settings have been made, the drive configuration has already progressed far enough to permit axis movement.

The individual settings required are made using graphics-based parameterization screen forms, 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)
- Closed-loop 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 (depending on drive)
- 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-oriented 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 device or PC with Pentium III 1 GHz (Windows 2000), Pentium III 1 GHz (Windows XP)

512 MB RAM (1 GB RAM recommended)

Screen resolution 1024 × 768 pixels, 16-bit color depth

Free hard disk memory: 1.6 GB, 2.3 GB for SCOUT stand-alone

Windows XP Professional SP2

Microsoft Internet Explorer 6.0

Integration

Depending on the system configuration, the Control Unit (CU) or the complete inverter can communicate with the programming device (PG) or PC by means of a serial interface, via PROFIBUS or PROFINET.

PC inverter connection kits are available for MICROMASTER 4, SINAMICS G110 and SINAMICS G120 for a safe point-to-point connection to the PC.

Selection and Ordering Data

	Order No.
STARTER commissioning tool for SINAMICS and MICROMASTER German / English / French / Italian	6SL3072-0AA00-0AG0
PC inverter connection kit for SINAMICS G110/G120 the scope of supply includes a 9-pin Sub-D connector, an RS232 standard cable (3 m) and the STARTER startup tool on CD-ROM.	6SL3255-0AA00-2AA1

More information

The commissioning tool STARTER is also available on the Internet under

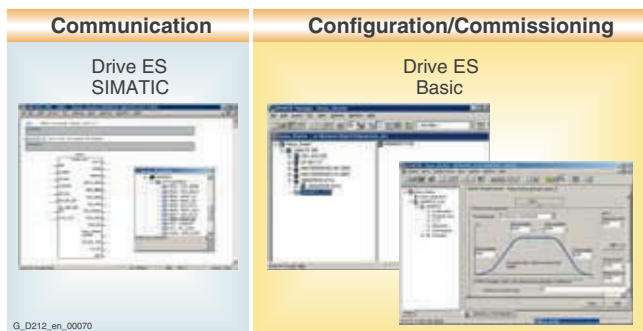
<http://support.automation.siemens.com/WW/view/en/10804985/133100>

SINAMICS G110, SINAMICS G120, SINAMICS G120D

Engineering Tools

Drive ES engineering system

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 and 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 processes the automated system and drives on the interface of the SIMATIC Manager. 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 engineering tools for the new motion control functions – peer-to-peer data traffic, equidistance and isochronous operation with PROFIBUS DP.
- **Drive ES SIMATIC**
Simply parameterize 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 – Load – Finished.
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
 - Complete parameter sets are automatically downloaded into the drive from the SIMATIC CPU – e.g. when a device has to be replaced.
 - Part parameter sets (e.g. for recipe and product change) are automatically downloaded into the drive from the SIMATIC-CPU
 - Complete parameterization or part parameter sets are uploaded from the drive into the SIMATIC-CPU, i.e. updated.
- **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

	Order No.
Drive ES Basic V 5.4	
• Configuration software for the integration of drives into Totally Integrated Automation	
• Requirement: STEP 7 V 5.3 and higher, SP 3	
• Supply format: on CD-ROM de, en, fr, es, it with electronic documentation	
Single-user license	6SW1700-5JA00-4AA0
Multi-user license, 60 pieces	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 V 5.3 and higher, SP 3	
• Supply format: on CD-ROM de, en, fr, es, it with electronic documentation	
Single-user license incl. 1 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	
• Supply format: on CD-ROM de, en, fr, es, it with electronic documentation	
Single-user license incl. 1 runtime license	6SW1700-6JD00-1AA0
Runtime license	6SW1700-5JD00-1AC0
Update service for single-user license	6SW1700-0JD00-0AB2
Upgrade from V 5.x to V 6.1	6SW1700-6JD00-1AA4