





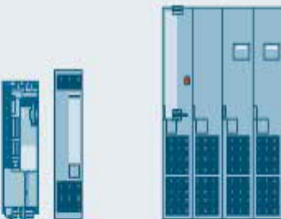








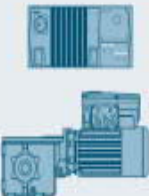



Selection tools for SINAMICS

Low Voltage Standard Drives Portfolio

SIEMENS
Ingenuity for life

Low voltage						
Standard performance converters				Industry specific converters		
						
V20	G120C	G120	G130 / G150	G120X	G180	S120
0.12 – 30 kW	0.55 – 132 kW	0.55 – 250 kW	75 – 2700 kW	0.75 – 630 kW	2.2 – 6600 kW	0.55 – 6840 kW

							Medium voltage
High performance converters			Servo converters		Distributed converters		For demanding applications with high power ratings
							
	S150	DCM (DC)	V90	S210	S120M	G110D / G120D / G110M	GL150 / SL150 SM120 CM / SM150 / GM150 GH150 / GH180
	75 – 1200 kW	6 kW – 30 MW	0.05 – 7 kW	0.05 – 7 kW*	0.25 – 1.1 kW	0.37 – 7.5 kW	2.8 – 85 MW 0.8 – 58 MW 0.15 – 28.5 MW

All SINAMICS drives are implemented in a complete range of tools to enable easy selection and configuration of the drive system

SIEMENS
Ingenuity for life

TIA-selection tool



Starting point for all device configurators

DT- Configurator



Allows **efficient selection and configuration** of your drive

SIZER



Supports step-by-step configuration of the mechanical & electrical system

SinaSave

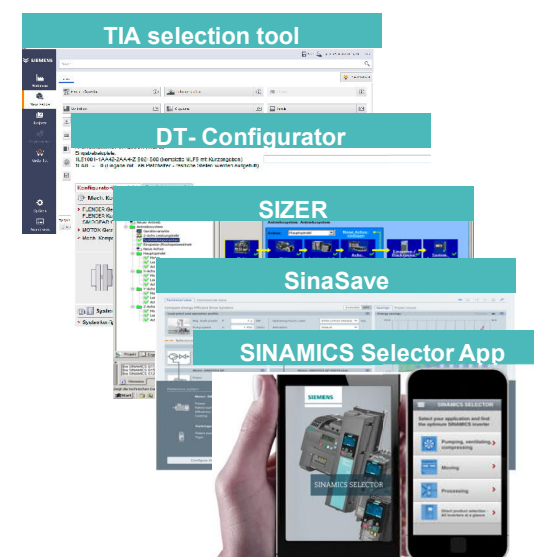


Determines energy saving potential and ROI of your application

SINAMICS Selector App



Allows quick and easy selection of inverters on your mobile



Wide range of tools allow easy selection and configuration of the drive system

TIA Selection tool



TIA Selection Tool

Save Log on to Siemens Industry Mail

Search

Series

Smart Assistant

Plant configuration	Industry solutions	Library
Controllers	IO systems	Panels
Industrial PCs	Drive technology	Industrial controls
Software	Industrial Communication	Connection system
SITOP Power Supply and DC UPS	SIMATIC Ident	Energy distribution and measurement
Internet of Things	Condition Monitoring Systems	Other devices
Safety Evaluation		

TIA Selection Tool cloud

Comparison of TIA Selection Tool versions Start directly in browser

Unrestricted © Siemens 2019

TIA Selection tool – Drive technology



TIA Selection Tool

Welcome

New Device

Projects

Configuration

Order list

Options

Project view

Save

Log on to Siemens Industry Mall

...

Search

Series Drive technology

Smart Assistant

Search term: Name/Article number

Dimensioning and configuring drive systems

Drive dimensioning (> 48 V with SIZER integrated in the TIA Selection Tool)

Drive dimensioning (>48V with SIZER 3 – additional installation required)

SIMATIC MICRO-DRIVE drive dimensioning (<= 48V)

Automatic door control system (SIDOOR)

Configuring products (DT configurator)

Motors (SIMOTICS) with DT configurator

Frequency converter (SINAMICS) with DT configurator

TIA Selection tool – Configuration within TIA



TIA Selection Tool

Project > Group_1 > Axis

Save Log on to Siemens Industry Mall

Search

Properties Portfolio selection Motion control

Motor

Motor solution

- ☒ Standard asynchronous motor solution
- ☐ Servo motor solution
- ☐ Reluctance motor solution

Gearbox

☐ Gearbox Gearbox type

☒ Standard gearbox

Gearbox/motor coupling

- ☒ Direct
- ☐ Via adapter

Technology requirements

Fieldbus interface	PROFINET
Drive concept	Cabinet mounted single-axis drive system
Generator operation	Any
Safety Integrated Functions	
Motion control requirements	Any
Speed control mode (converter)	Speed-controlled with encoder
Direct machine encoder required	Any

Load requirements

No load available

Possible solutions

Motor series

<input checked="" type="checkbox"/> (Select all)	Rated power range
<input checked="" type="checkbox"/> SIMOTICS GP/SD 1LE1 - IEC	0.0700 – 300 kW
<input checked="" type="checkbox"/> SIMOTICS GP/SD 1LE1 - Eagle Line	0.140 – 300 kW
<input checked="" type="checkbox"/> SIMOTICS GP/SD 1LE1 - APAC Line	0.570 – 300 kW

Frequency converter series

<input type="checkbox"/> (Select all)	Rated power range
<input type="checkbox"/> SINAMICS G120 PM240-2	0.550 – 250 kW
<input type="checkbox"/> SINAMICS G120 PM250	7.50 – 90.0 kW
<input checked="" type="checkbox"/> SINAMICS G130	75.0 – 800 kW
<input type="checkbox"/> SINAMICS S120 AC/AC	0.550 – 250 kW

Next >

TIA Selection tool – configuration with DT-Configurator



TIA Selection Tool

Project > Group_1 > SINAMICS converter (Frequency converter (SINAMICS) with DT configurator)

Save Log on to Siemens Industry Mall

Drive Technology Configurator (DT Configurator)

SIEMENS Ingenuity for life

Guided converter selection low voltage
Guided Inverter Selection

The selection is incomplete. Please select all orange items.

Filter (e.g. "power")

KB version: 7.42

Selection tool for typical applications

Use

☐ pumping/ventilating/compressing

☐ Moving

☐ Processing

☐ Machining

Motion type

☐ Continuous motion

☐ Discontinuous motion

Performance

typical Application examples

Line data

Number of phases

Line frequency

Line voltage

Inverter dimensioning

Motor current $0.10 \leq$ ≤ 3960.00 A

Determining the motor current

Motor power kW

Torque Nm

Speed 1/min

Efficiency %

Power factor

Inverter specification

Standard ☐ IEC ☐ NEMA

Motor type

Installation type

Degree of protection (minimum requirement) IP00

Cooling

Energy recovery

No. of axes Single axis

Communication No requirement

EMC Directive EN61800-3

Open-loop / closed-loop control

☐ Positioning functions

Encoder evaluation at the inverter

Available product series

Product series

- SINAMICS V20
- SINAMICS V90
- SINAMICS G110D
- SINAMICS G120
- SINAMICS G120C
- SINAMICS G120D
- SINAMICS G110M
- SINAMICS G120P
- SINAMICS G120P Cabinet
- SINAMICS G120X
- SINAMICS G130
- SINAMICS G150
- SINAMICS G180
- SINAMICS S110
- SINAMICS S120 AC/AC
- SINAMICS S150
- SINAMICS DCM
- SINAMICS S210
- SINAMICS NEMA G150
- SINAMICS NEMA S150
- SINAMICS NEMA DCM

Reset configuration Continue Cancel

Direct selection using Drives Technology Configurator

<https://mall.industry.siemens.com/mall/en/WW/Catalog/Products/10034285>



[Log in](#) [Additional actions](#) [Support](#) [Language](#)

Drives Technology Configurator

Search for (e.g. 1LE1004-1AA43-4AA4-Z B02+S00)

1 Converters

2 Converters for standard applications

3 Product Family

⇅ SINAMICS V20

⇅ SINAMICS G110

⇅ SINAMICS G120C

⇅ SINAMICS G120

⇅ SINAMICS G130

⇅ SINAMICS G150

List of products

Projectdata

+ Add products

Load product list

Actions

Direct selection using Drives Technology Configurator

Search entries



Additional actions List of products Support Language

🏠 / SINAMICS G150

6SL3710-1GE32-1AA3-Z on request
M54 List price Your price 40 day(s)
Standard delivery time 348.00 kg
Weight PM300: Active product
Product lifecycle

✔ The configuration is complete. You can order this product.

Input Options 1 Options 2 Documentation / Test

KB version: 58.22

Environmental

Site altitude	1000 m	↕ ↕ i
Ambient temperature	40 °C	↕ ↕ i
Protection class	IP54 (M54)	↕ ↕ i

Design

Type of construction	cabinet device	↕ i
Design	<input checked="" type="radio"/> A <input type="radio"/> C (compact)	↕ i

Search with output current (motor data)

Base-load current LO	96 ≤	<input type="text" value="190"/>	≤ 1414 A	↕ ↕ i
Base-load current HO	83 ≤	<input type="text"/>	≤ 166 A	↕ ↕ i

Line data

Frequency	50 Hz	↕ ↕ i
Voltage	400 V	↕ ↕ i

Search with power/torque (motor data)

Power	<input type="text"/>	kW	↕ ↕ i
Torque	<input type="text"/>	Nm	↕ ↕ i
Speed	<input type="text"/>	↕ ↕ i	
Power factor cos phi	<input type="text"/>		↕ ↕ i
Efficiency	<input type="text"/>	%	↕ ↕ i

Documentation and reporting

SIEMENS
Ingenuity for life

Documentation and reporting
✕

Choose languages for the data sheet

1 English ▼

/

--- ▼

2

Project data for the datasheet

Download selection of document types

☐ Datasheets (PDF)

☐ Dimension drawings (DXF)

Selection of download format

☒ All in a ZIP file
 ☐ All in a single PDF file
 ☐ All in a single RTF file

Start generation

Component documentation

☐ SINAMICS G150 (6SL3710-1GE32-1AA3-Z M54)

☐ Datasheet (PDF)

☐ Datasheet (RTF)

☐ Dim draw DXF (takes approx 1 min)

[linkEC Declaration of Conformity](#)

[linkSpares On Web](#)

[linkManual / operating instructions](#)

© Siemens AG | Application information

Copyright © Siemens AG 2008
 Copyright vorbehalten für alle Rechte.
 Alle Rechte vorbehalten.

		Datum: 26.10.2020		SIEMENS AG 1. Pr. LB Nürnberg Vo
		Bearb.: System		
Stand:	26.10.2020	System	Oper.	
Zust.	Änderung	Datum	Name	Norm. u. ARTUS-Symbol Urspr./Ers.f./Ers.d.

Documents

Reset configuration

+ Add product

SIEMENS

Data sheet for SINAMICS G150

MLFB-Ordering data: **6SL3710-1GE32-1AA3-Z**
M54

Client order no.:

Order no.:

Offer no.:

Remarks:

Item no.:

Consignment no.:

Project:

	Rated data
Input	
Supply frequency	47...63 Hz
Input supply voltage	400 V ±10%
Rated input current	229 A
Max. current	335 A
Pulse number	6
Regenerative capability	No (ZQ)

Output:	
Output voltage	400 V
Rated output (LO) in kW	110 kW
Rated power (HO) in kW	90 kW
Rated output current	196 A
Rated output current (LO)	191 A
Rated output current (HO)	166 A
Output current Max	307 A
Pulse frequency (default setting)	2 kHz

Basic data:	
Power losses ΔP	2.9 kW
Power loss including options	2.9 kW
Sound pressure level L_{pA} (1 m)	67 dB
Conductor cross section, max. (IEC)	4 x 240 mm ²
Degree of protection	IP54
Dimensions (H x W x D)	2400 mm x 800 mm x 600 mm
Weight approx.	460 kg
Frame size	F
Type	A
Color, paint shade	RAL7035

Converter losses to EN 50598-2*	
Efficiency class	IE2
Comparison with the reference converter (90% / 100%)	-52.47 %

The graph shows the losses for the power (in per cent) of the relative torque generating current (I) over the relative motor speed frequency (f). The values are valid for the fan version of the converter including low choke without option components.

The percentage values show the losses in relation to the rated apparent power of the converter

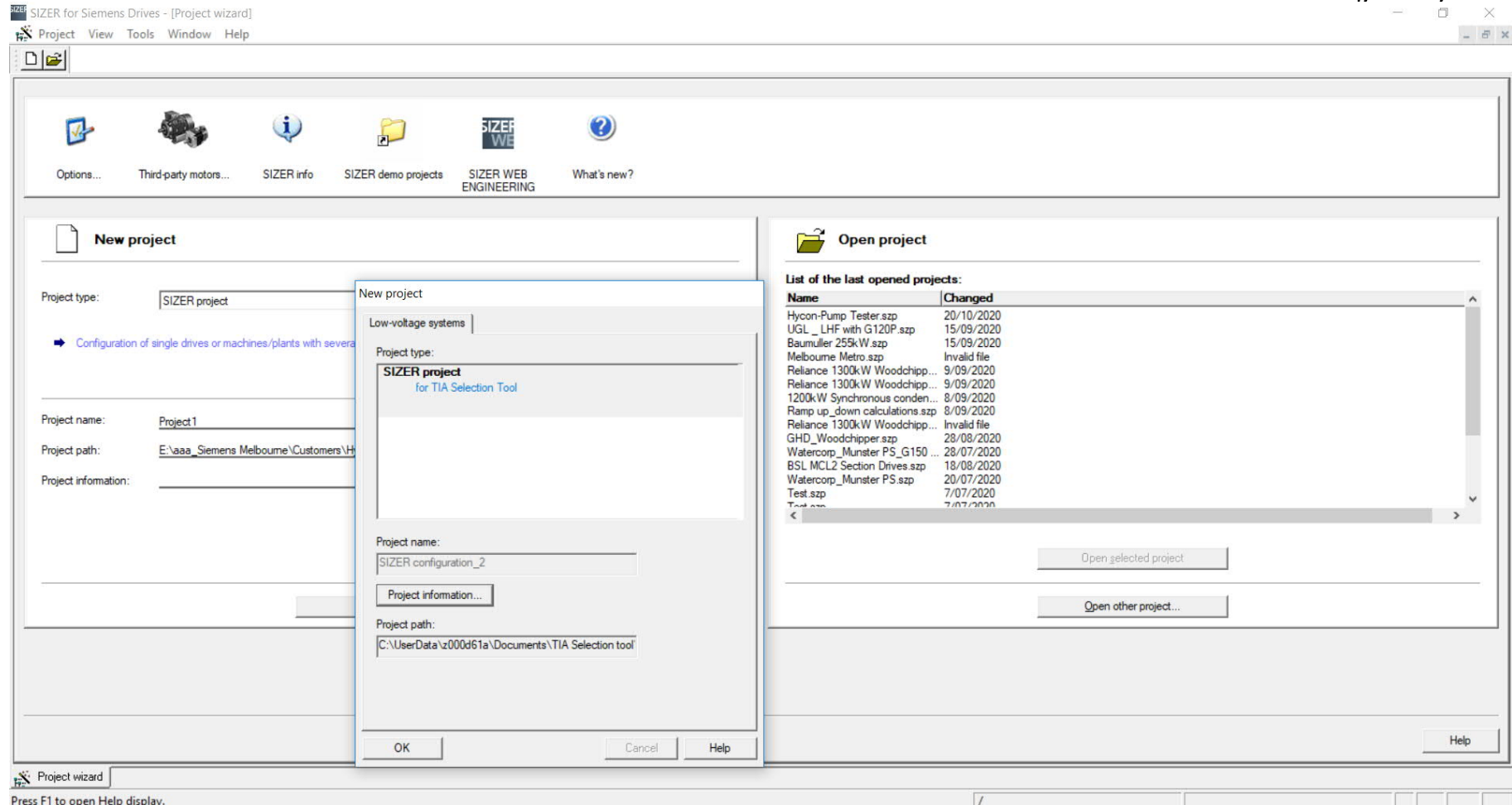
*The diagram shows the losses for the power (in per cent) of the relative torque generating current (I) over the relative motor speed frequency (f). The values are valid for the fan version of the converter including low choke without option components.

*Converted values

Special design	
IP54	IP54 degree of protection

Environmental conditions	
Installation altitude	1000 m
Coolant	Air
Air cooling requirements	0.17 m/s
Ambient temperature	0°C - +40°C

Configuration with SIZER V3.22



Configuration with SIZER V3.22



The latest version of SIZER can be downloaded from the following link:

<https://support.industry.siemens.com/cs/kr/en/view/54992004>

What's new in SIZER V3.22?

Drives / motor starters

New

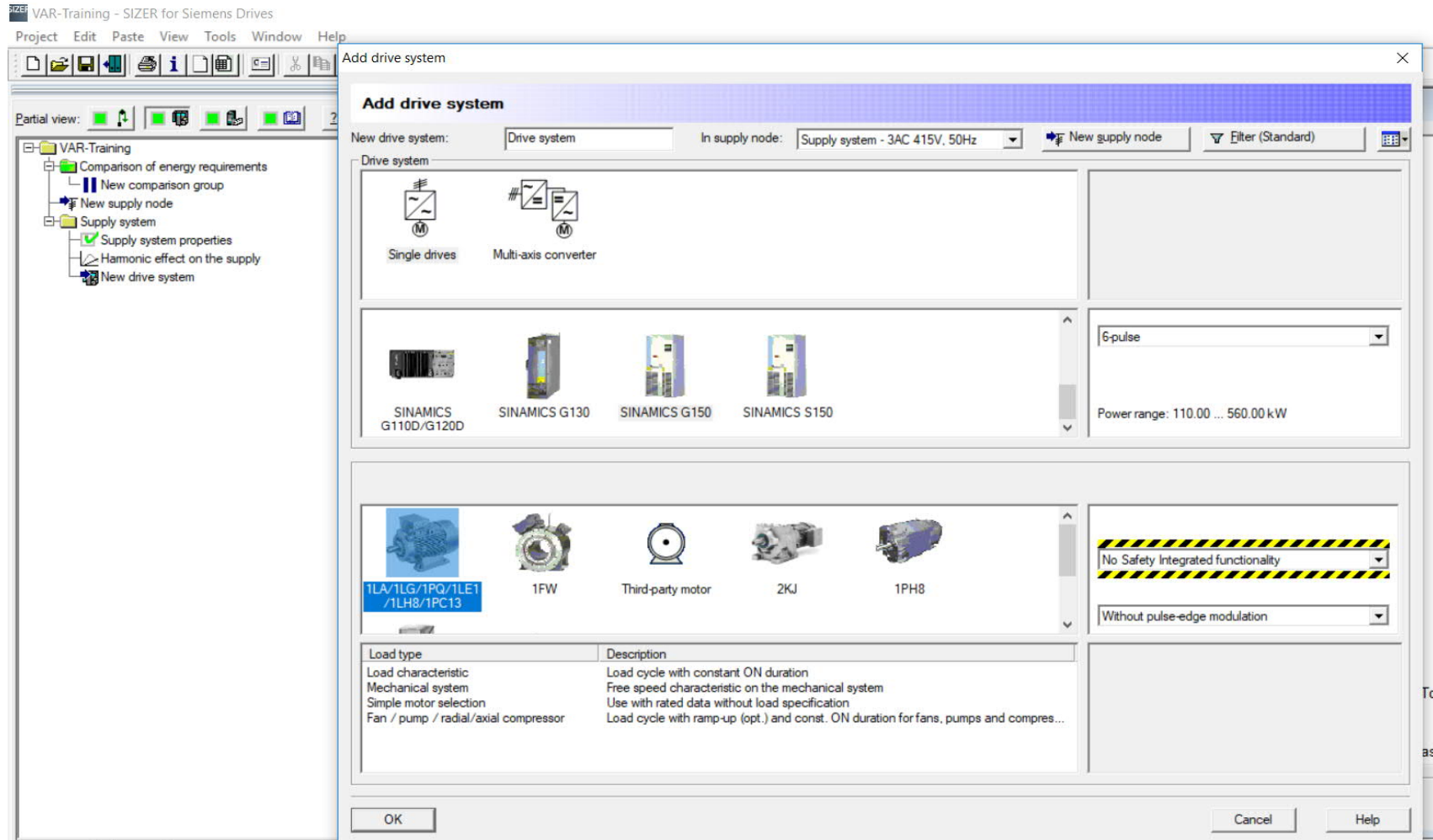
- Control Unit Adapter kit for SINAMICS G120 added

Update

- Power unit 6SL3210-1KE24-4U.1 (G120C) has no filter. Filter status removed.
- Article number of the SINAMICS S120 Cabinet Module Booksize Base Cabinet updated.
- Booksize Motor Module 45 A and 60 A (6SL3120-1TE24-5AA3 and 6SL3120-1TE26-0AA3) has been removed
- 200A Booksize MoMo with 1FP reluctance motor made available
- DC link rectifier adapter for 100 mm wide modules, 6SL3162-2BE00-0AA0 for S120 Booksize 45 A and 60 A C-Type Motor Modules added
- Chassis-2 / Cabinet Modules-2 FS4+ (710 kW-800 kW) MoMo, AIM/ALM, MoMo & AIM/ALM added (see SIOS message <https://support.industry.siemens.com/cs/document/109761692>)
- The following SINAMICS S120 AC/AC devices in liquid cooling were removed: 6SL3315-1TE36-1AA7, 6SL3315-1TE37-5AA7, 6SL3315-1TG34-1AA7, 6SL3315-1TG34-7AA7, 6SL3315-1TE35-8AA7

SIZER – Selection of drive system, motor & load type (1)

SIEMENS
genuity for life



SIZER – Selection of power unit

VAR-Training - SIZER for Siemens Drives - [Workflow]

Project Edit Paste View Tools Window Help

Partial view: [Icons]

VAR-Training

- Comparison of energy requirements
 - New comparison group
 - New supply node
- Supply system
 - Supply system properties
 - Hammonic effect on the supply
 - New drive system
- Drive system
 - Properties
 - Motor
 - Power unit
 - Output components
 - System components

Supply system: Supply system - 3AC 415V, 50Hz
Drive system: Drive system

Properties Motor **Power unit** Output components System components

Drive system SINAMICS G150

Ambient conditions 40 °C, 1000 m

Degree of protection increase No

Power unit Click here to dimension the power unit

Power unit

Select power unit

Required base-load current: 179.65 A

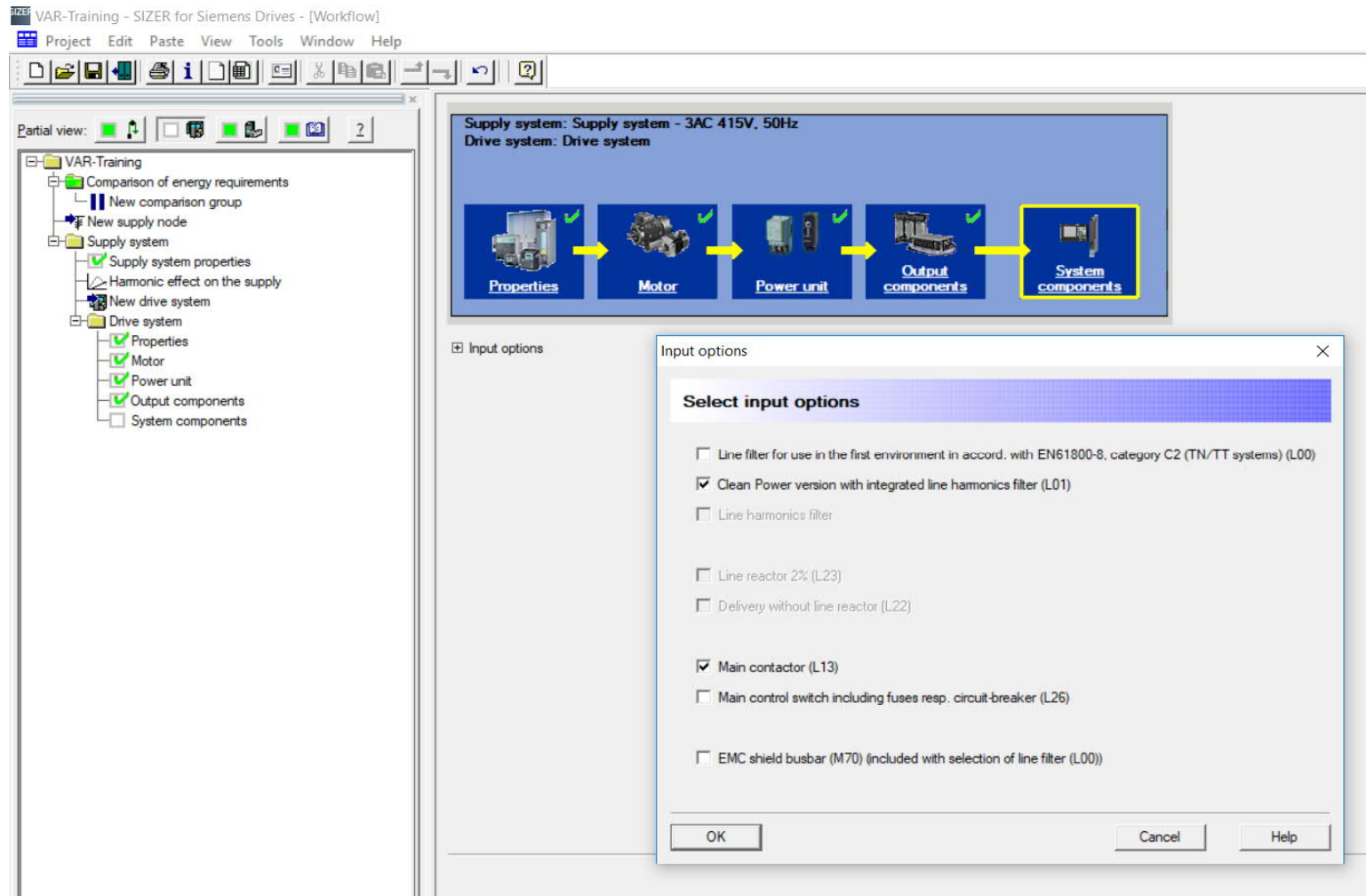
☒ Check of the varying load capability at low output frequencies

☒ Only display selectable components

Filter, reset sorting

Order designation	Type rating	Rated current	Available base-load current	Energy efficiency class
✓ 6SL3710-1GE32-6 A3	132.00 kW	260.00 A	215.80 A	-
✓ 6SL3710-1GE33-1 A3	160.00 kW	310.00 A	272.80 A	-
✓ 6SL3710-1GE33-8 A3	200.00 kW	380.00 A	330.60 A	-
✓ 6SL3710-1GE35-0 A3	250.00 kW	490.00 A	382.20 A	-

SIZER – selection of further options



SIZER – Harmonic effects on the supply

VAR-Training - SIZER for Siemens Drives - [Workflow]

Project Edit Paste View Tools Window Help

Partial view: [Icons]

VAR-Training

- Comparison of energy requirements
 - New comparison group
- New supply node
 - Supply system
 - Supply system properties
 - Harmonic effect on the supply
 - New drive system
 - Drive system
 - Properties
 - Motor
 - Power unit
 - Output components
 - System components

Supply system: Supply system - 3AC 415V, 50Hz
Drive system: Drive system

Properties Motor Power unit Output components System components

Harmonic effect on the supply

Calculation of the harmonic effects on the supply

☒ Calculate harmonic effect on the supply

Line-side pulse number: 6-pulse ☒ Line transformer

Limits according to standard: IEEE519

Primary voltage: 11.000 kV »

Secondary voltage: 415 V

Transformer power: 0.50 MVA »

Voltage drop: 6 % »

Short-circuit power: 2.00 MVA »

☐ Allow for linear load

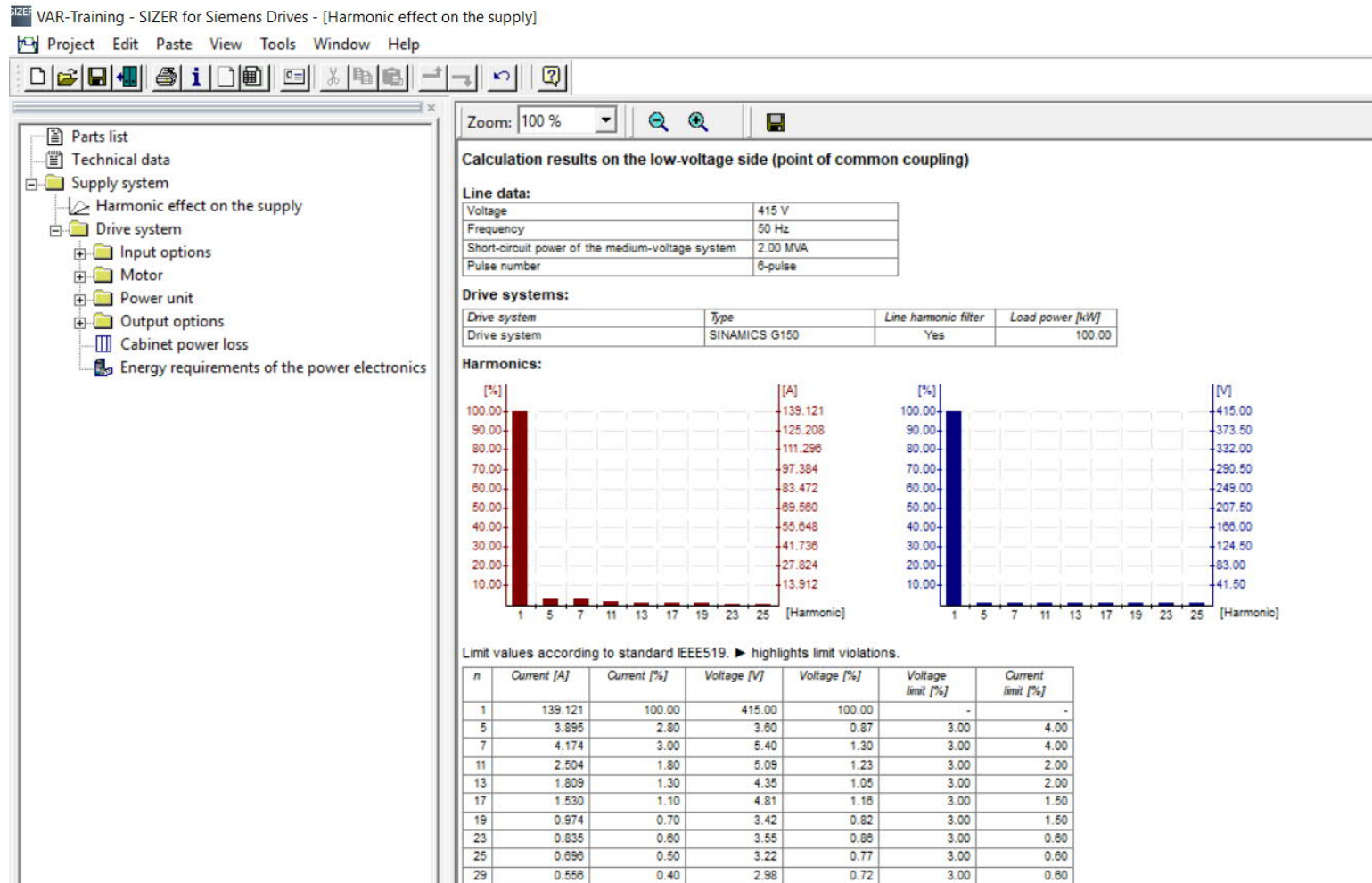
Drive systems:

Drive system	Type	LHF	P-Eff [kW]	Specify	P-Specification [k...	Take into acco...
Drive system	SINAMICS G150	<input checked="" type="checkbox"/>	109.90	<input checked="" type="checkbox"/>	100	<input checked="" type="checkbox"/>

Harmonic effects on the supply can be calculated!

OK Cancel Help

SIZER – Harmonic effects on the supply



SIZER – Selection of drive system, motor & load type (2)

SIEMENS
Ingenuity for life

