

SIEMENS



SINAMICS S120 Cabinet Modules



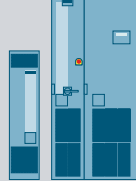
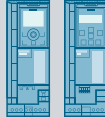

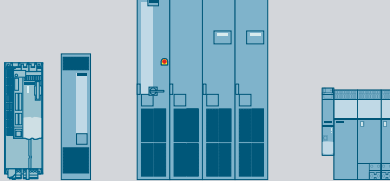
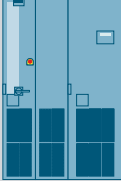
The modular and high-performance cabinet system
for demanding applications.

[siemens.com/sinamics-s120](https://www.siemens.com/sinamics-s120)


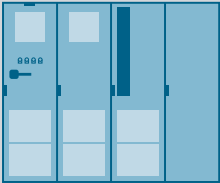




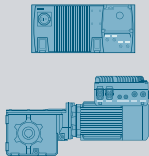
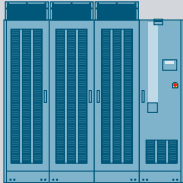
THE DRIVE FAMILY FOR FUTURE-PROOF DRIVE SOLUTIONS

SINAMICS – the optimum drive for every application

Low voltage

Standard performance converters				Industry specific converters		High performance converters	
							
V20	G120C	G120	G130 / G150	G120X	G180	S120	S150
0.12 – 30 kW	0.55 – 132 kW	0.55 – 250 kW	75 – 2.700 kW	0.75 – 630 kW	2.2 – 6.600 kW	0.55 – 6.840 kW	75 – 1.200 kW

SINAMICS offers the optimum drive for every drive task – and integrated and seamless engineering, parameterization, commissioning and operation.

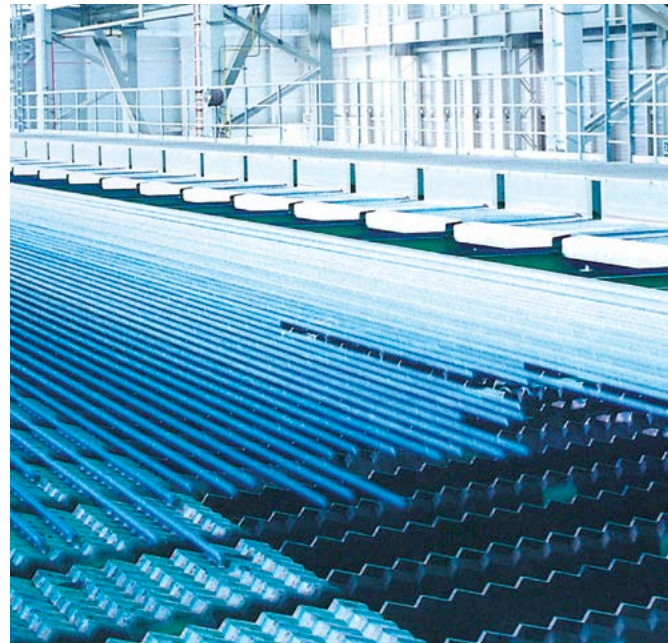
							Medium voltage		
	Grid converter	Servo converters			Distributed converters		For demanding applications with high power rating		
									
DCM (DC)	PCS	SIMATIC MICRO-DRIVE	V90	S210	S120M	G115D / G120D	GL150 / SL150	SM120 CM / SM150 / GM150	GH150 / GH180
6 kW – 30 MW	435 – 870 kW	0.1 – 1 kW	0.05 – 7 kW	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

SINAMICS – to tackle any drive task

- Wide range of power ratings from 0.12 kW to 85 MW
- Available in low-voltage as well as medium-voltage versions
- Standard and unified functionality as a result of the common hardware and software platform
- One standard engineering process using only two tools for all of the drives: SIZER for engineering and STARTER for parameterizing and commissioning
- High degree of flexibility and combinability
- Available as chassis or cabinet units

SINAMICS S120 CABINET MODULES – A FINELY SCALABLE MODULAR SYSTEM

Fast and reliably to the perfect drive



Individuality through modularity

SINAMICS S120 Cabinet Modules are drive converters that can be engineered for the particular drive application using a modular principle – so that almost any drive solution can be optimally implemented. This modular system is especially suited for multi-motors with central line supply infeed and common DC link busbars. For instance, these are typically found in paper machines, rolling mills, test stands, cranes and lifting equipment.

Simple planning, simple service

SINAMICS S120 Cabinet Modules are a completely new development. They are convincing in every phase of the product life cycle as a result of their cost-effectiveness and simplicity – from planning and procurement through installation and commissioning up to day-to-day operation and service. SINAMICS S120 Cabinet Modules offer an outstanding price-performance ratio and they can be integrated into any automation solution.

SINAMICS S120 Cabinet Modules at a glance

- Modular system of cabinet modules for every drive task
- High degree of flexibility through finely scalable power rating and performance
- Standardized interfaces
- Ready to power-up cabinet systems
- Extremely reliable
- Energy-efficient
- Maximum operating safety and reliability
- Very service-friendly
- Extremely compact and quiet
- Extensive range of options

The ideal module combination is easily configured

SINAMICS S120 Cabinet Modules – freely combinable modules

Line Connection Modules to connect to the line supply: These include the line-side components such as contactors, fuses and circuit breakers as well as line reactors for applications without regenerative feedback into the line supply

Line Modules for the infeed

Basic Line Modules	for 2-quadrant operation if regenerative feedback into the line supply is not required
Smart Line Modules	for 4-quadrant operation if it makes sense to regenerate braking energy back into the line supply
Active Line Modules	for 4-quadrant operation if, in addition to the regenerative feedback into the line supply, the line harmonics are to be reduced to a minimum and voltage fluctuations are to be compensated

Central Braking Modules to electrically brake the motor

Motor Modules to control the speed of the connected motor

Booksize version	for axes with low power ratings
Chassis version	for axes with high power ratings

Auxiliary Power Supply Modules for the auxiliary voltage

Prepared and shipped ready to be connected up

SINAMICS S120 Cabinet Modules have all of the connections and connecting elements required. Standardized interfaces for all of the versions of the drive units help when it comes to connecting up and analyzing. With a well-conceived configuration, they are ready to be connected up when supplied. The individual modules can already be combined in the factory to form prefabricated transport units with a total length of up to 2400 mm. Prepared in this way, they can be simply and easily combined in the plant to create a total system.

Installation is as simple as it gets as even large cable cross sections can be easily connected. If the comprehensive standard version isn't sufficient, then a whole raft of options is available that have been specifically developed to address the requirements of a multi-motor system. Whether with a unique DC link coupling or extended safety interfaces, SINAMICS S120 Cabinet Modules can be adapted to each and every requirement. Installation is also simplified as SINAMICS S120 Cabinet Modules are supplied in standard cabinets in a 200 mm grid dimension.



OPERATIONAL RELIABILITY OVER THE LONG TERM

Reliable and service-friendly



Rugged and straightforward for the highest degree of reliability

SINAMICS S120 Cabinet Modules are extremely reliable as a result of their rugged, straightforward design. A special mechanical design of the cabinet guarantees mechanical endurance and strength. This is supplemented, among other things, by the fact that all of the standard busbars as well as the electronic boards and modules are protected against environmental effects. This is achieved by consequentially using nickel-plated copper busbars as well as coated boards and modules. It goes without saying that all of the components – from the production of individual parts up to

ready-to-connect cabinets – are subject to exhaustive checks during the complete production process. This guarantees high functional safety during installation, commissioning and in operation.

Service-friendly design

The easily accessible individual modules and power components can be easily and quickly replaced; this further increases the plant and system availability. SINAMICS S120 Cabinet Modules have the highest level of service-friendliness and a compact design – especially due to the fact that functions are combined to form function blocks and modules.

Integrated operational safety and reliability

All of the SINAMICS S120 Cabinet Modules were developed according to the specifications of the zone concept. This is the reason that they provide the highest possible degree of operational reliability and safety. EMC measures have been consequentially implemented. Partitions to guide and route the airflow and to maintain temperature levels were designed with the help of computer-aided simulation.



SINAMICS S120 Cabinet Modules

Available voltage ranges and services:

	Air-cooled	Liquid-cooled
3 AC 380 ... 480 V	4.8 – 3.000 kW	110 – 3.000 kW
3 AC 500 ... 690 V	75 – 4.500 kW	90 – 5.700 kW

Line supply voltage $V_{\text{line supply}}$ /power ranges

3 AC 380 ... 480 V	1.6 ... 3000 kW 1.6 ... 4.500 kW
3 AC 500 ... 690 V	75 ... 4500 kW 75 ... 5.700 kW

Innovative liquid-cooling concept

For drives in poorly ventilated spaces and operating under harsh environmental conditions, for instance on board ships and industrial systems, the liquid-cooled version of the SINAMICS S120 is the ideal sector solution. The liquid cooling allows heat to be far more efficiently dissipated, so that room climate control is not required. Energy consumption can be significantly reduced as a result of the low energy consumption for liquid cooling

Low space requirement – simplified planning and mounting

The footprint of SINAMICS S120 Cabinet Modules is up to 50 % smaller than for conventional units. The cabinet widths decrease in a 200 mm grid. For degree of protection IP54, to further reduce maintenance costs – for example when changing filter elements – liquid-cooled cabinets can be used. In many applications, additional costs can be saved by recovering the heat. Here, for example, the hot cooling water can be used for process heat, heating or hot water.



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