

SIEMENS



SINAMICS S120

Cabinet Modules



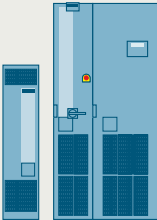
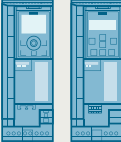

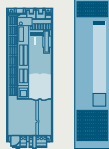

The modular and high-performance cabinet system for demanding applications
usa.siemens.com/sinamics-s120cm

FUTURE-PROOF DRIVE SOLUTIONS

SINAMICS—one family, one source, all applications

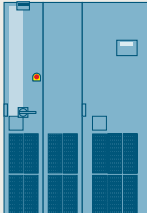

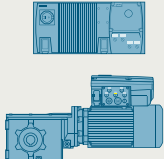





SINAMICS offers the optimum drive for every task—offering integrated and seamless engineering parameterization, commissioning and operation.

Low-voltage

Standard-performance drives				Industry-specific drives		High-performance drives		
								
V20	G120C	G120	G130 / G150	G120X	G180	S120		
0.12–30 kW 0.16–40 hp	0.55–132 kW 0.75–150 hp	0.55–250 kW 0.5–400 hp	75–2.700 kW 100–3600 hp	0.75–630 kW 1–700 hp	2.2–6.600 kW 3–9000 hp	0.55–6.840 kW 0.75–9000 hp		

SINAMICS to tackle any task

- Wide range of power ratings from fractional horsepower to 85 MW
- Available in low-voltage and 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 every drive we offer: SIZER for engineering and STARTER for parameterizing and commissioning
- High degree of flexibility and combinability
- Available as chassis or cabinet units

							Medium-voltage		
		Distributed drives	Servo drives				For demanding applications with high power ratings		
									
S150	DCM (DC)	G115D / G120D	SIMATIC MICRO-DRIVE	S120	S210	S120M	GL150 / SL150	SM120 CM / SM150 / GM150	GH150 / GH180
75–1.200 kW 100–1600 hp	6 kW–30 MW 8–40,000 hp	0.37–7.5 kW 0.5–10 hp	0.1–1 kW 0.25–1.4 hp	1.6–6.840 kW 2–9 hp	0.05–7 kW 0.06–10 hp	0.25–1.1 kW 0.3–1.5 hp	2.8–85 MW	0.8–58 MW	0.15–28.5 MW

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

Quick and easy to the perfect drive

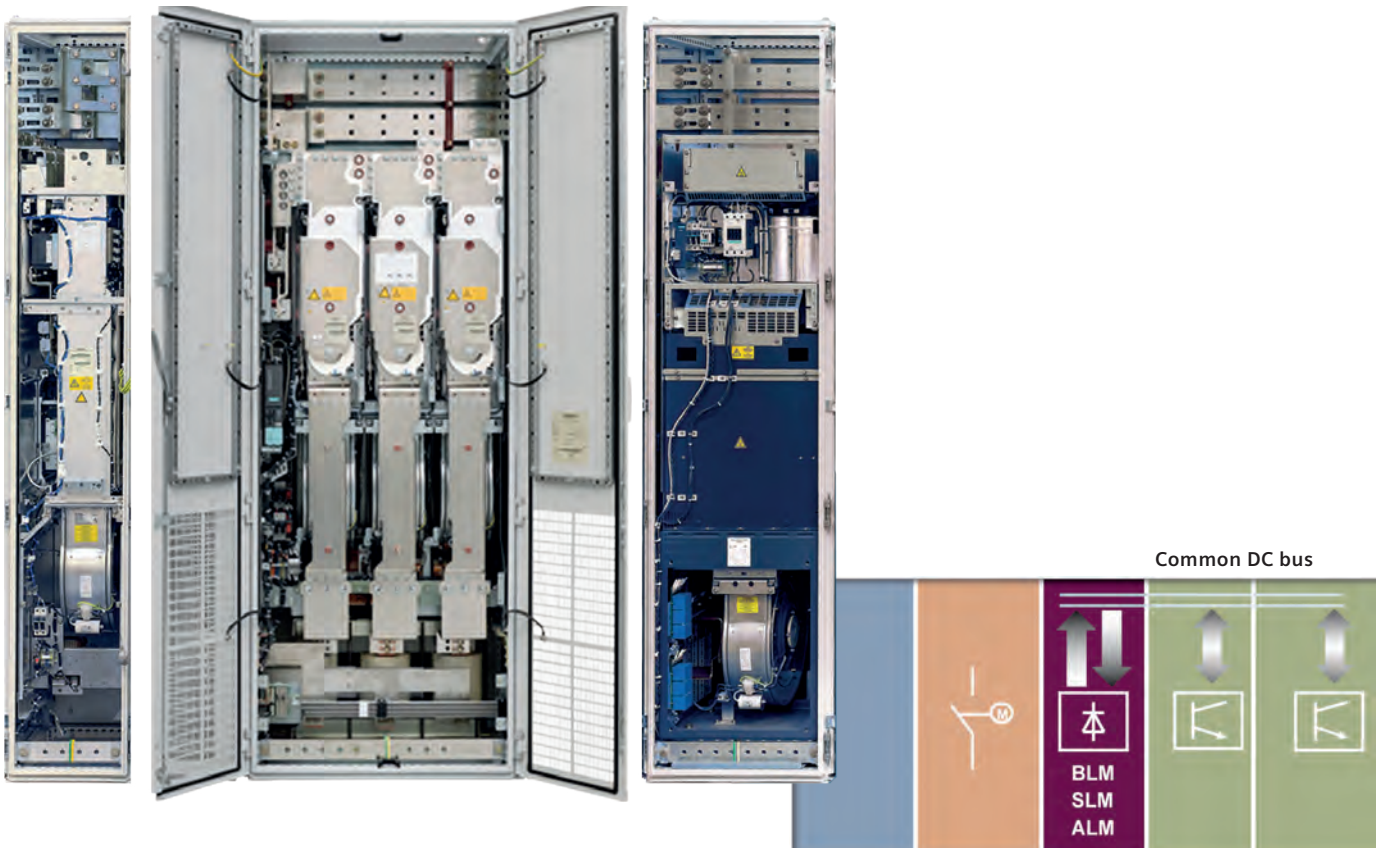
SINAMICS S120 Cabinet Modules—a finely scalable modular system

Individuality through modularity

SINAMICS S120 Cabinet Modules are drive converters that can be engineered for a specific application using a modular principle. This modular system is especially suited for multi-motors with central line supply infeed and common DC bus. For example, these are typically found in industrial pumps, fans, compressors, paper machines, metal process lines, test stands, cranes, lifting equipment and more.

Simple planning, simple service

SINAMICS S120 Cabinet Modules offer simplicity and are very cost-efficient. From planning and procurement, through installation and commissioning, even to daily operation and service—SINAMICS S120 Cabinet Modules have become the most-accepted and reliable solution for many manufacturers around the globe. They offer an outstanding price-performance ratio and can be integrated into any automation solution.



The ideal module combination is **simple to configure**

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 from the AC line to the DC bus

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, shipped and ready for connection

SINAMICS S120 Cabinet Modules have all of the connections and connecting elements required. Standardized interfaces for every version of the drive units help when it comes to connecting and analyzing them. With a well-thought configuration, they are ready to be connected as soon as they are received. Individual modules can be combined already at the factory to form pre-fabricated transport units with a length of up to 2400 mm. When prepared in this manner, they can be combined in the plant quickly and easily to create a total system.

Installation is as simple as it gets—even large cable cross-sections can be connected easily. If the comprehensive standard version isn't sufficient, then a wide variety of options are 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.

Reliable and service-friendly— operational reliability over the long term

SINAMICS S120 Cabinet Modules

Available voltage ranges and services:

	Air-cooled	Liquid-cooled
3AC 380 ... 480V	4.8–3000 kW 7.5–4000 hp	110–3000 kW 150–4000 hp
3AC 500 ... 690V	7.5–4000 kW 100–6000 hp	150–4000 kW 125–7500 hp

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

3AC 380 ... 480 V	1.6 ... 3000kW	4–4000 hp
	1.6 ... 4500 kW	2–6000 hp
3AC 500 ... 690 V	75 ... 4500kW	100–6000 hp
	75 ... 5700 kW	100–7500 hp

Rugged and straightforward provides you the highest degree of reliability

SINAMICS S120 Cabinet Modules are extremely reliable thanks to their rugged, straightforward design. A special mechanical cabinet design guarantees the endurance and strength and 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 contaminants. This is achieved by using nickel-plated copper busbars along with coated boards and modules.

It goes without saying that all of the components are subject to exhaustive checks during the entire production process—from the production of individual parts up to ready-to-connect cabinets. This guarantees impressive system availability and high functional safety during installation, commissioning and operation.



Service-friendly design

SINAMICS S120 Cabinet Modules have a compact design and are extremely service-friendly. Individual modules and power components are easily accessible and can be quickly replaced—further increasing plant and system availability.

Integrated operational safety and reliability

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

Innovative liquid-cooling concept

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

Low space requirement—simplified planning and mounting

The footprint of SINAMICS S120 Cabinet Modules is up to 50% smaller than conventional units. Cabinet widths decrease in a 200 mm grid. For IP54 degree of protection, 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 heat. Here, the hot cooling water can be used for process heat, heating or hot water.





Digitalization solutions for low-voltage drives

Whether virtualization and simulation, dimensioning and project planning, connectivity, data analysis or services—digitalization opens up more efficiency and reliability in planning, operation and maintenance.

Get the most out of your drive data through digitalization. From digital twins, selection and engineering tools and connectivity solutions via analysis apps to data-based services—the Siemens digitalization portfolio for drives enables optimized development processes and needs-based maintenance planning and ensures higher productivity.

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