SIEMENS



The benefits of SINAMICS DCP at a glance

SINAMICS DCP

DC-DC Converters for industrial applications

siemens.com/sinamics-dcp

SINAMICS DCP
Optimal performance for industrial applications

In the DC-DC converter SINAMICS DCP, we've combined our DC technology expertise with the advantages of our proven SINAMICS family.

Ideal for energy supply

SINAMICS DCP (DC power converter) is a compact DC-DC converter for industrial drive applications. It is a stand-alone unit with its own control unit, power electronics and filter.

With the DCP 250 kW, voltages up to 1200 V can be achieved, as required for test stand applications in the automotive industry. The boost and buck converter allows an optimal adaptation of batteries or super capacitors to the drive train's DC link.
Integrated protective mechanisms prevent the connected batteries from being overcharged or deep-charged.

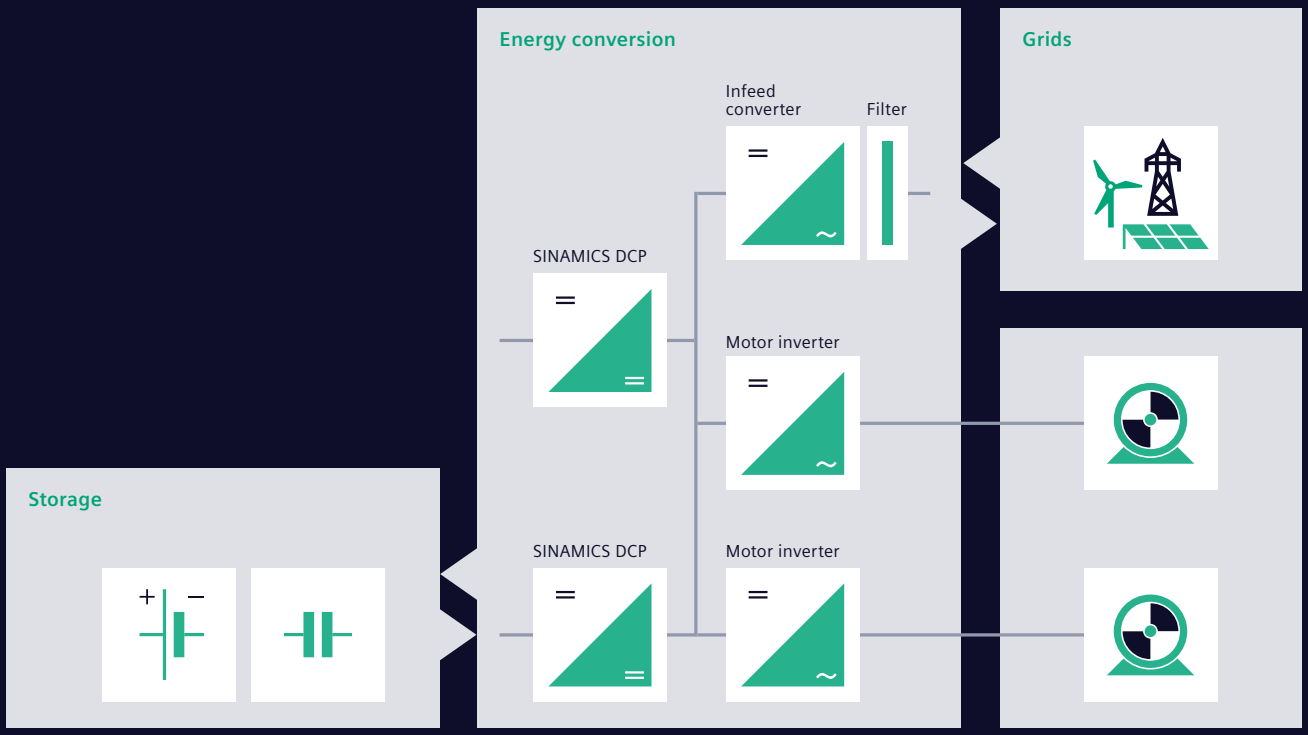
The high switching frequency allows small chokes, which enable a compact design of the device. This saves valuable space in the cabinet.

A variety of interfaces are available for integration in industrial networks. The PROFIBUS interface is standard.

SINAMICS DCP is commissioned just like other SINAMICS devices. A basic operator panel is installed for service purposes.



Flexible integration and a wide range of possible combinations



Possible connection versions





Features and benefits of SINAMICS DCP at a glance

- Low current and voltage ripple, thanks to high switching frequency in the power unit
- Wide voltage range
- Bidirectional operation
- Standalone operation using an integrated control unit
- Reactors integrated in the device
- Scalable power
- Small footprint
- Flexible integration into industrial networks via communication interfaces like PROFINET
- Expandable using additional SINAMICS components, like for example Active Line Modules
- Significant increase in efficiency, thanks to fans with a parameterizable switch-on temperature
- Parameterization protected from unauthorized access, thanks to built-in knowledge protection

Technical data overview

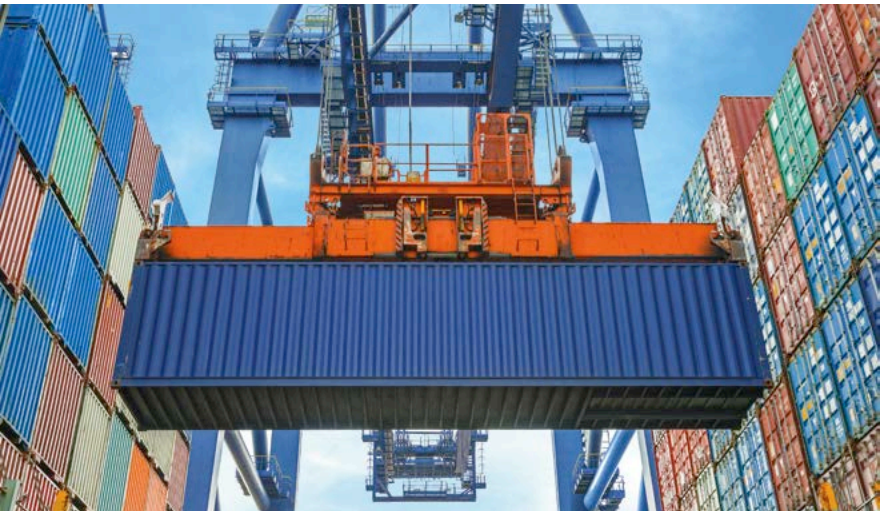
	30 kW DCP	120 kW DCP	DCP 250 kW
Continuous operation voltage range	0 V – 1.000 V DC*	0 V – 1.000 V DC*	0 V – 1.200 V**
Current	Constant 50 A to 600 V; above that, power limited to 800 V	Constant 200 A to 600 V; above that, power limited to 800 V	Constant 250 A to 1000 V; above that, power limited to 1200 V
Power	30 kW at 600 V	120 kW at 600 V	250 kW at 1000 V
Current ripple	< 3%		
Efficiency	> 98 %		
Temperature range	0° C – 40° C up to 55° C with derating		
Installation altitude	Up to 2,000 m without derating, up to 5,000 m with current/voltage derating		
Communication interfaces	PROFIBUS, PROFINET, EtherNet/IP, Modbus TCP, DriveCLiQ with OALINK connection to CU320-2		
Control type	Current, voltage, and power controlled		
Control unit	Integrated		
Electrical isolation	No		
Weight	Approx. 38 kg	Approx. 118 kg	
Dimensions	600 mm x 155 mm x 545 mm (including mounting)	900 mm x 205 mm x 500 mm	
Degree of protection	IP20	IP00	
Certifications/approvals	CE, cURus, RCM and UKCA		
Power connections	Only top or only bottom, or split for simple connection in cabinet		

* Derating from 800 VDC
** Derating from 1000 VDC

Software and hardware features

- Use as adjustable voltage source by voltage regulation
- Brief provision of power peaks, thanks to an overload capacity
- Highest process reliability by maintaining the DC link voltage
- Optimized efficiency, thanks to a temperature-controlled fan (DCP 120 kW only/DCP 250 kW)
- Optimal adaptation to the battery when charging is based on a parameterizable load characteristic
- Improved accuracy of current control by feeding in an externally measured current's actual value
- Sustained load capacity with 120 percent of the rated current in the appropriate environmental conditions

SINAMICS DCP
for industrial drive applications





Using braking energy
With SINAMICS DCP, braking energy can be provided from an energy storage system; it can then be used, for example, by cranes for the next hoisting operation.

Peak-shaving
Grid operators have to pay high tariffs for a peak load. Based on SINAMICS DCP, energy storage systems can be implemented that briefly provide a high overload so that this additional cost can be lowered.

Test stands in the automotive industry
With its high output voltage of 1200 V, the SINAMICS DCP 250 kW is future-proof and thus meets a specific requirement of the automotive industry.

Charging batteries
With the built-in charging characteristic, batteries can be charged gently, overcharging is avoided.

Published by
Siemens AG

Digital Industries
Motion Control
P.O. Box 31 80
91050 Erlangen, Germany

For the U.S. published by
Siemens Industry Inc.
100 Technology Drive
Alpharetta, GA 30005
United States

Article No. DIMC-B10057-01-7600
Dispo 21500
Printed in Germany
WÜ/1000173743 WS 0722 PDF
© Siemens AG 2022

For more information about SINAMICS DCP, visit **www.siemens.com/sinamics-dcp**

You can place an electronic order directly via the Internet by visiting the Industry Mall **www.siemens.com/automation/mall**

Subject to changes and errors.
The information given in this document only contains general descriptions and/or performance features which may not always specifically reflect those described, or which may undergo modification in the course of further development of the products.
The requested performance features are binding only when they are expressly agreed upon in the concluded contract.

For the secure operation of Siemens products and solutions, it is necessary to take suitable preventive action (e.g. cell protection concept) and integrate each component into a holistic, state-of-the-art industrial security concept. Third-party products that may be in use should also be considered. For more information about industrial security, visiter **http://www.siemens.com/industrialsecurity**