

SINAMICS G150

Drive converter cabinet units

SINAMICS G150 cabinet units

Overview



SINAMICS G150 drive converter cabinet units, versions A and C

With its SINAMICS G150 drive converter cabinet units, Siemens is offering a drive system on which all line-side and motor-side components as well as the Power Module are integrated extremely compactly into a specially designed cabinet enclosure. This approach minimizes the effort and expense required to configure and install them.

SINAMICS G150 has been specially tuned to the requirements of drives with quadratic and constant load characteristics, with medium performance requirements and without regenerative feedback.

The control accuracy of the sensorless Vector Control is suitable for most applications, and additional actual speed value encoders are therefore superfluous.

However, the SINAMICS G150 converters are optionally available with an encoder evaluator in order to handle applications that require an encoder for plant-specific reasons.

SINAMICS G150 drive converter cabinet units offer an economic drive solution that can be matched to customers' specific requirements by adding from the wide range of available components and options.

There are two versions of the drive converter cabinet units:

■ Version A

All available line connection components, such as the main switch, circuit-breakers, line contactor, line fuses, line filter, motor-side components, and additional monitoring devices, can be installed as required. This version is also available with power units connected in parallel.

■ Version C

This offers an extremely space-optimized structure without line-side components. This particularly slimline version can be used, for example, when line connection components are accommodated in a central low-voltage distribution panel (MCC) on the plantside.

The SINAMICS G150 drive converter cabinet units are available for the following voltages and power ranges:

Line voltage	Power range for single circuit (versions A and C)	Power range for parallel circuit (version A)
380 ... 480 V 3 AC	110 ... 560 kW	630 ... 900 kW
500 ... 600 V 3 AC	110 ... 560 kW	630 ... 1000 kW
660 ... 690 V 3 AC	75 ... 800 kW	1000 ... 1500 kW

Degrees of protection are IP20 (standard), and, as an option, IP21, IP23, IP43 and IP54.

Global use

SINAMICS G150 drive converter cabinet units are manufactured in compliance with relevant international standards and regulations, and are therefore suitable for global use (→ Technical specifications).

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75 kW to 1500 kW

Benefits

- Particularly quiet and compact converters due to the use of state-of-the-art IGBT power semiconductors and an innovative cooling concept.
- Individual modules and power components can be replaced quickly and easily, which ensures a higher level of plant availability. The design of replaceable components is based on the principle that they must be quick and easy to change. In addition, the "SparesOnWeb" Internet tool makes it easy to view the spare parts that are available for the system components ordered.
- Can be easily integrated in automation solutions due to a communications interface supplied as standard and various analog and digital interfaces.
- Easy commissioning and parameterization using interactive menus on the user-friendly AOP30 Advanced Operator Panel with graphical LCD and plain-text display, or from a PC using the STARTER commissioning tool (→ Tools and configuration)
- Preset software functions make it easier to tailor the converter to the individual plant. For example, the key functions for controlling pumps are stored as a preprogrammed macro in the drive.
- They have been designed as "zoned" units and therefore offer the highest possible standard of operational reliability. EMC measures have been rigorously implemented. With the help of simulated conditions, partitions have been designed to act as air guides and heat dissipation units.
- Special measures used in the construction of the cabinets ensure that they remain mechanically durable throughout their entire life cycle. All components, from individual parts to the ready-to-connect cabinet, undergo rigorous testing throughout the entire production process. This guarantees a high level of functional reliability during installation and commissioning, as well as in operation.

Application

Variable-speed drives are advantageous for all applications that involve moving, conveying, pumping or compressing solids, liquids or gases.

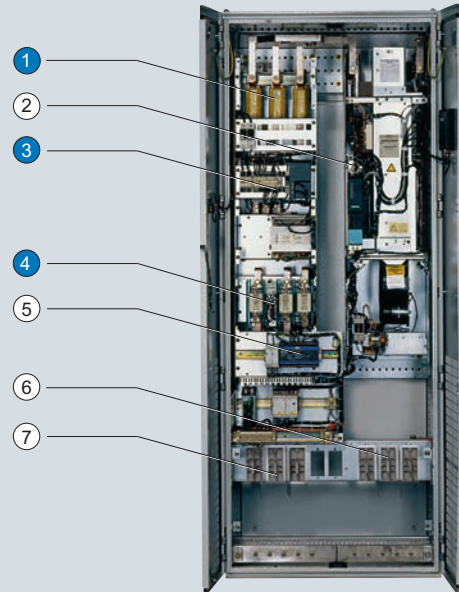
This means the following applications in particular:

- Pumps and fans
- Compressors
- Extruders and mixers
- Mills

Design

SINAMICS G150 drive converter cabinet units are characterized by their compact, modular, and service-friendly design.

A wide range of options is available depending on the cabinet version which permit optimum adaptation of the drive system to the respective requirements (→ Options).



- ① Line reactor (< 500 kW standard)
 - ② PROFIBUS connection
 - ③ Line contactor
 - ④ Main control switch with fuses
 - ⑤ Customer's terminal block
 - ⑥ Motor connection
 - ⑦ Line connection
- Standard version
● Options

Example of design of a SINAMICS G150 drive converter cabinet unit, version A