

Introduction

Orientation

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Benefits

The SIMOTICS FD motor series has been specifically developed for operation with SINAMICS converters. To supplement our portfolio in the low-voltage motor range, a water-cooled version for line operation has been created.

- The optimized efficiency results in lower operating costs.
- The high power density and compact design ensure low space requirements combined with low weight.
- An optimally harmonized and coordinated drive system is created as the motor is optimally matched to the converter. For instance, it has optimized noise levels, the converter does not have to be derated and the temperature rise is low.
- The cast-iron housing and bearing plates are extremely rigid and rugged and can therefore be subject to high stress levels. They have excellent vibration damping properties and are resistant to corrosion.
- The bearings are designed for maximum reliability, which results in good vibration characteristics, a long lifetime and low maintenance costs.
- The DURIGNIT IR 2000 insulation system with VPI or current UV impregnation results in high reliability, a long lifetime and high resistance to stress, for example, during starting or under overload conditions.
- Due to the low noise emission level, the stringent requirements of occupational health and safety are fulfilled without the need for any additional measures.
- Designed windings are available for easy selection for a large number of line voltages and converter versions.

Increased power

With SIMOTICS FD we have increased the power density so that we offer higher power for the same frame size.

Optimally harmonized for converter operation

The new motor series has been optimized for operation with SINAMICS G120P, G130, G150, S120, S120CM and S150 converters with regard to converter output currents and voltage utilization.

Through the use of optimized pulse patterns and the new non-ribbed housing, the SIMOTICS FD and converter system is noise optimized.

Higher degree of flexibility

As a result of the new motor design, SIMOTICS FD motors fulfill the most exacting customer requirements in terms of variance and mounted options. For instance, the optimized motor design allows terminal boxes to be added easily. Separately driven fans and mounted coolers can be mounted as required. Monitoring devices can also be added easily.

Improved design

The optimized housing in a modern design has an attractive appearance and enhances functionality as a result of the flexible, modular system. For instance, this is ensured by the optimized, easy-to-access terminal box with developed, with flexible terminal box position.

Wider range of applications

The motors are available in country and sector-specific versions, complying with the relevant regulations, standards and directives.

Application

With its numerous options, the SIMOTICS FD motor series can be used in all areas of industry. Paper, steel, energy, marine, chemical and water/wastewater are just some examples.

The wide field of applications that can be addressed includes the following:

- Pumps
- Fans
- Compressors
- Cranes
- Propeller drives, bow thrusters
- Paper machines
- Winches
- Centrifuges
- Handling lines
- Conveyor belts
- Rolling mills
- Extruders