

SIEMENS

Ingenuity for life



Simply switch
over now

From MICROMASTER to SINAMICS

usa.siemens.com/sinamics



More power, more functions

SINAMICS—the new generation of drives from Siemens

As a manufacturing plant or machine builder, you're well aware that the requirements placed upon drives and motors are continually increasing—and you're used to obtaining components from us with which you can completely fulfill these needs. It's also just as true to say: when our components provide more power and overall performance, as well as an increased functionality, then this opens up new possibilities for you to improve your factories, systems and products. It also means that you can offer your customers more—and expand your position in the marketplace.

However, in one generation of devices, this can only be implemented to a certain degree with justifiable costs. At some point, constraints are reached that can no longer be resolved using the existing technology—and a new approach must be found.

This point has been reached with our well-proven MICROMASTER drives. Therefore, we've decided to replace MICROMASTER with drives from the current SINAMICS family.

This offers you some decisive advantages—when switching over from MICROMASTER to SINAMICS, you have drives with significantly increased power and functionality to address even more applications. With our new generation of drives, you're equipped for the future.

System-based advantages of SINAMICS

You will become faster



Simple engineering with graphical commissioning, trace (oscilloscope function) and integration in the TIA Portal

- Faster commissioning
- Easier to diagnose and troubleshoot
- Simple to connect to the control system



Parameters are cloned instead of programmed

- Simple data exchange using a memory card
- Straight-forward series commissioning
- Simplified device replacement when service is required



Commissioning Wizard with optimized user prompting

- Intuitive operator panel
- Optimized application settings
- Simplified, error-free commissioning

You will become more flexible and perform better



Wide range of hardware versions for various applications

- Push-through mounting for simplified cabinet cooling
- Modular design for reduced spare parts inventory (G120/G120P)
- Distributed installation without electrical cabinet in an IP55 design (for G120P)



Integrated DC link reactor

- Lower costs and less space as an input reactor is not required
- Allows longer motor cables to be used



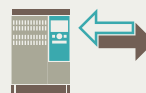
Standard USB interface to connect a PC

You will become safer and more efficient



SINAMICS with Safety Integrated

- Integrated and certified safety functions as standard without requiring any additional components
- Safety-related communication via PROFI-safe
- Depending upon the drive, "Safe Torque Off (STO)", "Safe Stop (SS1)", "Safe Brake Control (SBC)", "Safely Limited Speed (SLS)", "Safe Speed Monitoring (SSM)" as well as "Safe Direction of Rotation (SDI)" can be used



Simple connection to the automation system and improved control response

- The PROFIBUS or PROFINET fieldbus interface is integrated in SINAMICS already
- Rugged open-loop and closed-loop control response for drives with low dynamic requirements—as well as demanding drives with speed and torque control



Consequential cost reduction

- Integrated functionality, for example Safety Integrated, integrated DC link reactor, energy-saving functions etc.



High energy efficiency

- ECO mode in partial load operation or integrated energy recovery without requiring any additional modules



Positioning technology function integrated in the drive (EPos)

- No additional positioning modules and encoder interfaces are required

The added value of SINAMICS drives

MICROMASTER 4 family

MM420



3AC 480V

1/3 AC 230V

SINAMICS G family

G120C



G120 (modular design)



An overview of additional functions:

Power range	up to 132 kW/150 hp (LO)	up to 55 kW/75 hp (LO)
Safety Integrated	STO	STO
Extended Safety Integrated functions (version)	—	SS1, SBC, SLS, SSM, SDI
PROFINET communication	•	•
Graphical commissioning, trace, TIA Portal	•	•
Parameters are copied using an SD card	•	•
Integrated DC link reactor	from 18.5 kW/25 hp	from 11 kW/15 hp
Push-through design (depending upon the power module)	—	•
Degree of protection IP55 (depending upon the power module)	—	—
Rugged and dynamic control response	•	•
Integrated positioning function (depending upon the control unit)	—	•
Integrated energy recovery (depending upon the power module)	—	—
Extended pump, fan and compressor functions	—	—



3AC 480V




3AC 480V
1/3 AC 230V
3AC 600V



up to 560 kW/ 400 hp (LO)
STO (from 22 kW/30 hp)
—
•
•
•
from 22 kW/30 hp up to 132 kW/150 hp
•
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—
•

up to 132 kW/150 hp (LO)
STO
—
•
•
•
from 18.5 kW/25 hp
•
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•
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—

up to 55 kW/75 hp (LO) (230V); 250 kW/400 hp (LO) (460V); 132 kW/150 hp (LO)(575V)
STO
SS1, SBC, SLS, SSM, SDI
•
•
•
from 11 kW/15 hp (230V)/18.5 kW/25 hp up to 132 kW/150 hp
•
—
•
•
—



I wish to simply implement safety functions without having to purchase and connect additional external components.

I want to fully utilize the advantages of Ethernet-based communication—such as the high-performance, simple cabling and fast replacement of devices, i.e. just like PROFINET offers.

To address my special application requirements, I'd like to have functions and macros already integrated in the drive that make it easier for me to configure my application during the commissioning phase.

As I'm also using a SIMATIC-S7 controller, it's important that I can engineer my control and drive technology quickly, simply and in a standard fashion via the TIA Portal.

For my series commissioning and in the case of service, I'm looking for a simple and quick way of copying parameters from one drive device to the other, e.g. using a pluggable memory card.

To make my system even more efficient, I'd like to be able to use the integrated energy saving function. This will allow me to save energy in standby mode and in partial load operation—and it can also offer energy recovery functionality.

Switch now from MICROMASTER to SINAMICS

It's quite simple

Three simple steps can help you to make the switch from MICROMASTER to SINAMICS

1 Go to the website.

www.siemens.com/tool-micromaster

2 Enter the order number of your MICROMASTER device into the tool—the alternative article list is displayed.

You can find the order number on the rating plate or in your last order.

Please enter your MICROMASTER article number here:

Please enter your MICROMASTER article number in the following format: 1-XXXXX-XXXX-XXXX

3 Select the suggested SINAMICS drive to address your specific requirements—using the “Article number list” button, go directly to the Siemens Industry Mall and order your drive.

Your current solution		Your new solution	
MICROMASTER 420 www.siemens.com/100-000-0000		SINAMICS G120C [Our Recommendation]	SINAMICS G120C [Alternative 1]
Line voltage 3 AC 380–480	Rated output current 4.0 A	Line voltage 3 AC 380–480	Output current – base load current (I _N) 4.1 A

or

- Determine the output current of your MICROMASTER (this is specified on the rating plate or in the data sheet).
- Then select the appropriate drive from the SINAMICS portfolio in the Motion Control Drives Catalog D31 or via the Siemens Drive Technology Configurator—www.siemens.com/dt-configurator

Example:

MICROMASTER 420 Order No.	Without filter	Rated output current
6SE6420-2UD21-5AA1	Line voltage 3 AC 380–480	4.0 A

SINAMICS G120C Article No.	Without filter	Output current – base load current (I _N)
6SL3210-1KE15-8UB2	Line voltage 3 AC 380–480	4.1 A

MICROMASTER 430 Order No.	Without filter	Rated output current
6SE6430-2UD31-5CA0	Line voltage 3 AC 380–480	32 A

SINAMICS G120P (in an IP20 design) Article No. (PM230P-2 Power Module)	Without filter	Output current – base load	Article No. (CU230P-2 HVAC Control Unit)
6SL3210-1NE23-2UG1	Line voltage 3 AC 380–480	32 A	+ 6SL3243-0BB30-1HA3

MICROMASTER 440 Order No.	Without filter	Rated output current (CT)	+ 6SE6400-1PB00-0AA0
6SE6440-2UC25-5CA1	Line voltage 3 AC 200–240	22 A	

SINAMICS G120 modular Article No. (PM240-2 Power Module)	Without filter	Output current – base load current (I _N)	Article No. (CU240E-2 DP Control Unit) with Safety Integrated functions and PROFIBUS communication.
6SL3210-1PC22-8ULO	Line voltage 3 AC 380–480	22 A	+ 6SL3244-0BB12-1PA1

Additional information and detailed technical data for the SINAMICS series is provided in our Motion Control Drives Catalog D31.

Questions relating to our products or your order

Siemens Industry Online Support:
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Product catalogue and online ordering system
www.siemens.com/industrymall

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