



Ready to change, MICROMASTER to SINAMICS

HCM, 28th Mar 2019

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siemens.com/sinamics







MICROMASTER 4 family Scheduled milestones



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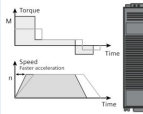




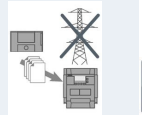

From MICROMASTER to SINAMICS

	MICROMASTER 420	SINAMICS G120C	
	<ul style="list-style-type: none"> • MICROMASTER 420, the universal • Power: 0,37 – 11kW 	<ul style="list-style-type: none"> • The compact and versatile inverter with optimum functionality • Power: 0,55 - 132 kW 	
	MICROMASTER 430	SINAMICS G120P	
	<ul style="list-style-type: none"> • The specialist for pumps and fans • Power: 7,5 - 250 kW 	<ul style="list-style-type: none"> • The specialist for pumps, fans and compressors • Power: 0,37 - 560 kW 	
	MICROMASTER 440	SINAMICS G120	
	<ul style="list-style-type: none"> • The all-rounder • Power: 0,37 - 250 kW 	<ul style="list-style-type: none"> • The modular inverter – space-saving, safe and rugged • Power: 0,55 - 250 kW 	

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SINAMICS advantages MICROMASTER 420

	3AC 400V <small>with/without Communication</small>	 G120C compact	 Extended power range	 Safety Integrated	 Graphic commissioning, Trace, TIA-Portal	
	1/3AC 200V <small>with/without Communication</small>	 G120 modular	 Parameter copy via SD-memory card	 Robust and dynamic control (U/f and vector)	 More detailed functions (internal)	
	1AC 200 3AC 400V <small>without Communication</small>	 V20 compact	 Extended power range	 Parameter copy via SD-memory card	 Parameter set without net voltage	 Parameter set via WEB Server

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SINAMICS advantages MICROMASTER 430

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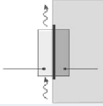



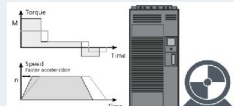






MM430

3AC 400V




G120P

 Push-through versions	 IP55 versions	 Graphic commissioning, Trace, TIA-Portal
 Parameter copy via SD-memory card	 Robust and dynamic control (U/f and vector)	 More detailed functions (internal)
 Extended pump/ fan/ compressor functions	 Extended power range	 Safety Integrated (>= 22kW)

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SINAMICS advantages MICROMASTER 440

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MM440

**Kompakt
3AC 400V**




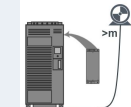


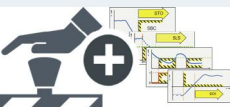

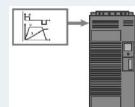


**G120C
compact**

**Modular
1/3AC 200V
3AC 400V
3AC 600V**



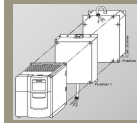
**G120
modular**

 Parameter copy via SD-memory card	 Safety Integrated	 Graphic commissioning, Trace, TIA-Portal
 Integrated DC choke (starting > 18,5kW)	 Profinet communication	 More detailed functions (internal)
 Extended Safety Integrated functions	 Integrated energy recovery	 Integrated positioning functionality Modules

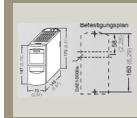
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SINAMICS Remarks for retrofit

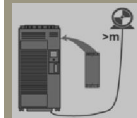
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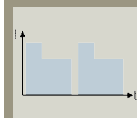
Partly no footprint options for SINAMICS available
→ See options at catalog D31 or [Drive Options Partner program](#)



Drilling and housing dimensions are partly different compare to MICROMASTER
→ See technical data at D31 catalog



Maximum cable length partly different compare to MICROMASTER
→ See technical data at D31 catalog



Values regarding overload capability, current and power ratings partly different compare to MICROMASTER
→ See technical data at D31 catalog, SIZER tool or order number conversion tool

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SINAMICS G system features Top-Highlights

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Engineering

■ Integrated into TIA Portal by means of StartDrive

- Interactively guided commissioning by the operator panel
- Menu-prompted commissioning and diagnosis by Starter/StartDrive Tool
- Integrated trace function
- Memory card for serial commissioning



Firmware

■ Safety Integrated, also via bus! (PROFIsafe)

- Integrated fieldbus interfaces for Profibus and Profinet
- Energy efficiency by means of integrated software functions
- Integrated technology functions
- Sensorless vector control (SLVC)



i
Detailed firm
ware functions
(internal)

Hardware

■ Standard USB interface for PC connection!

- Robust hardware by means of coated boards
- Pluggable terminals
- Input for motor temperature sensor
- Isolated digital inputs with own potential group



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SINAMICS Function and benefit

	Graphical mask, trace and TIA-Portal support the commissioning/ diagnose of the drive and the connection to the Simatic S7 controller	G120/ C/P		Safety Integrated (STO), supported profile: PROFIsafe. Because of certificated safety function STO, no additional external components are required	G120/ C		Elimination of an output reactor as a result of the integrated DC link reactor → longer motor cables possible	G120/ C/P
	Parameter cloning via SD-memory card → shortens commissioning time because parameter settings can be easily transferred from one unit to another.	G120/ C/P V20		Integrated basic positioning functionality → Modules can be eliminated, such as additional positioning modules, encoder interfaces, etc..	G120 CU250		Integrated energy recovery (Efficient Infeed Technology) → With the PM250, excess energy can be directly fed back into the line supply	G120 PM250
	The drive can be commissioned, and diagnosed by smartphone or laptop via Wi-Fi and integrated WEB-server	V20		Integrated application macros optimize application settings and shorten commissioning time	G120/ C/P V20		Different housing options → Push-through versions for lower temperature rise in the control cabinet (G120/G120P/V20), IP55 version for decentralized mounting (only G120P); modularity reduces spare part (only G120P).	G120/P V20
	Drive parameter can be set and stored in drive via battery powered parameter loader, even without connecting the drive on main power supply.	V20		Rugged open-loop and closed-loop control response for drives with low dynamic requirements – as well as for demanding drives with speed and torque control	G120/ C/P		Please find here more information's about supported functions at SINAMICS drives (internal)	G120/ C/P V20

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SINAMICS G Safety Integrated

System advantages

Integrated safety functions ✓

The drive controls the motor independently or in combination with a SPS - and keeps the process in a safe state

Safety functions without encoder ¹⁾ ✓

To implement certain safety functions neither a safety encoder nor several standard encoders will be required (e.g. for SLS Safe Limited Speed)

Safe Torque Off (STO) ✓

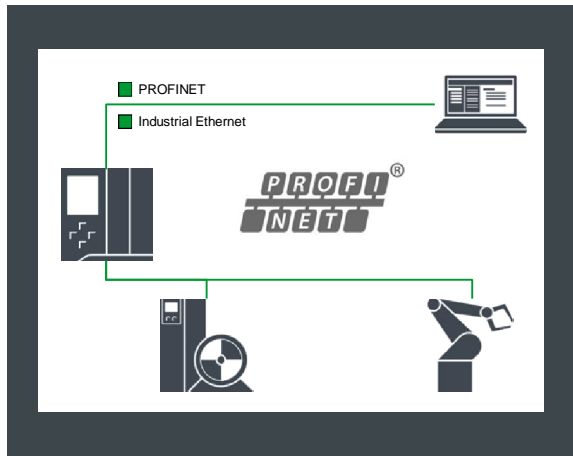
- STO is an integral part of our SINAMICS G drives
- Further safety functions optional

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SINAMICS G PROFINET

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System advantages



Highest flexibility. For customized system concepts

- Open standards
- Expandability



Higher efficiency. Secures the optimum utilization of your resources

- Simple cabling
- Fast device replacement
- Ruggedness/stability



High performance. Increases your productivity

- Speed
- High data rate
- Media redundancy



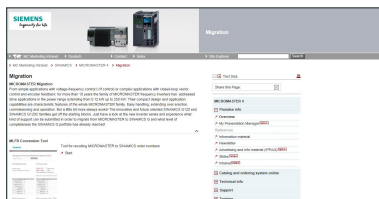
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MICROMASTER 4 migration Support

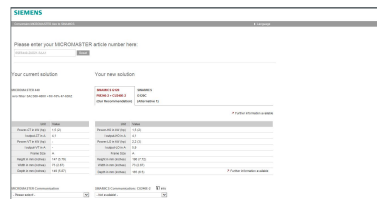
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Support by changing from MICROMASTER 4 to SINAMICS



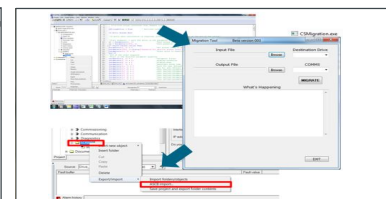
Documentation

Find available documentation via the [MICROMASTER 4 WEB-page](#). (FAQ`s, Parameter conversion list and so on.)



Order number conversion tool

Go on [MICROMASTER 4 migration WEB page](#) and type [MICROMASTER 4 order number](#) in [order number conversion tool](#) and see suggested alternative [SINAMICS drive](#).



Parameter migration tool

The Customer Support support you with the converting of [MICROMASTER 4 parameters](#) to [SINAMICS parameter](#)

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Thank your for your attention!

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