



## Inquisitive?

The ordering data is provided in Catalog D32.

If you have any questions, please contact your local Siemens sales organization – or visit our website [mall.industry.siemens.co](http://mall.industry.siemens.co)

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## Additional associated topics:

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## SINAMICS S210

The easy, high-performance  
and safe servo drive system

[siemens.com/sinamics-s210](https://www.siemens.com/sinamics-s210)

# Off to a fast start. Precise and reliable in operation.

Today, machinery construction OEMs are facing special challenges: The goal is to produce even more quickly at lower costs, while at the same time satisfying the highest quality demands. As a consequence, systems that couple maximum efficiency with simple engineering and intuitive operation are demanded.

The versatile SINAMICS S210 servo drive system is as compact and easy to handle as it is powerful: The single-axis SINAMICS S210 converter is connected to the SIMOTICS S-1FK2 servomotor, specifically developed for it, using just one space-saving cable – and it provides integrated safety functions as standard. Commissioning is completely intuitive using a web server or via the Totally Integrated Automation Portal (TIA Portal).

SINAMICS S210 presently addresses a power range from 50 to 7000 W. The system is mainly for dynamic, discontinuous applications in machinery construction. SINAMICS S210 fully leverages its strengths when the application involves precise positioning and motion control. Even with the highest dynamic performance, all motion sequences are executed with the utmost precision.

With its powerful performance, SINAMICS S210 is convincing in packaging machines as well as in handling systems, in woodworking and plastics processing as well as in digital printing.

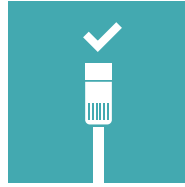


### Easy commissioning using a web server and One Button Tuning

- Integrated web server allows the drive to be commissioned and fully diagnosed without requiring any additional software
- The PLC can directly access the web server in the converter via PROFINET
- One Button Tuning with selectable dynamic levels to adapt the converter to the required machine dynamics allows the controller settings to be simply optimized
- Being prepared: Commissioning via TIA Portal

### Integrated safety functions

- As standard: STO (Safe Torque Off), SS1 (Safe Stop 1), SBC (Safe Brake Control)
- Via License: SS2 (Safe Stop 2), SOS (Safe Operating Stop), SLS (Safely Limited Speed), SSM (Safe Speed Monitor), SDI (Safe Direction), SBT (Safe Brake Test), SLA (Safely Limited Acceleration)
- Controlling the integrated safety functions via PROFIsafe, STO and SS1 also via terminal
- Integrated acceptance test simplifies testing safety functions



### Optimized connection system using OCC (one cable connection)

- Only one single cable is required to connect the motor and servo drive (to transfer energy, connect an encoder and control the brake)
- Time is shortened and space saved as only one cable has to be installed
- The motor is compact with a small rotatable connector for simple installation and mounting even when space is restricted
- Thin OCC for small bending radii ensures simple cable installation

### Can be used worldwide

- SINAMICS S210, SIMOTICS S-1FK2 and Motion Connect cables comply with all of the usually encountered certifications – and are also UL-certified/recognized (MOTION-CONNECT cables) for North America



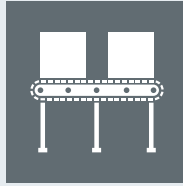
### SIMOTICS S-1FK2 motors for increased performance

- Low moment of inertia facilitates significantly higher cycle rates
- High resolution encoder with fast sampling for stable and precise closed-loop control
- Automatic converter parameterization using the electronic motor type plate

### Shorter engineering time with SIMATIC S7-1500 / T-CPU

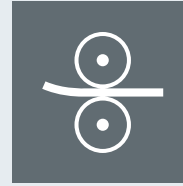
- Motion control functions of the control, e.g. positioning or cams, facilitate engineering that is perfectly coordinated with the converter
- Tested application example for connecting the servo drive system to a SIMATIC control available at [www.siemens.com/sinamics-applications](http://www.siemens.com/sinamics-applications)





### Moving

- Rotary indexing tables, feed and removal equipment, storage and retrieval machines, adjustment axes ...



### Processing

- Crosscutters, flying saws, winders, Delta pickers, handling machines, labeling machines, cardboard box erectors ...

## Technical data of the SINAMICS S210 servo drive system

Type	Servo drive system
Application	Discontinuous processing/moving
Power range	1AC 230 V: 0.05 – 0.75 kW; 3AC 400 V: 0.4 – 7 kW (also for 3AC 230 V)
Torque range	1AC 230 V: 0.16 Nm to 2.4 Nm 3AC 400 V: 1.3 Nm to 50 Nm*
DC link coupling	For 3AC 400 V devices
Communication	PROFINET / PROFIsafe
Safety functions	STO, SS1, SBC (SS2, SOS, SLS, SSM, SDI, SBT, SLA)
Commissioning / engineering	Web server / Startdrive
TIA Portal Integration	GSD / full integration
EMC filter	Integrated (1AC 230 V: Class C2 / 3AC 400 V: Class C3)
Standards	CE, cULus (others being prepared)
Motor connection system	One cable connection (OCC) with SPEED-CONNECT fast connection system and compact, rotatable connector Permissible cable length: 50 m
Typical control	SIMATIC S7-1500 / SIMATIC S7-1500 T-CPU / SIMOTION
Mechanical design	Single-axis converter, compact design
Motor versions	Version with low moment of inertia (High-Dynamic) and with shaft heights 20 to 40 mm, 48 to 63 mm Version with average rotor moment of inertia (compact) in shaft heights 30 to 40 mm, 48 to 100 mm
Motor options	Brake, multiturn or singleturn encoder, keyway, shaft sealing ring

\* Being prepared