The SINAMICS S210 Servo Drive System is a single axis AC/AC drive with enhanced features, connectivity and performance for motion control applications in the midrange segment.

Designed for high dynamic motion control applications which you find for example in the packaging or handling area.

The new servo drive system comprises the SINAMICS S210 servo drive, the SIMOTICS S-1FK2 servo motor in a compact or high dynamic version and a dedicated “One-Cable-Connection” between motor and drive.

Works perfectly together with a SIMATIC S7 controller like a S7-1500 or S7-1500T to perform motion control tasks like positioning, synchronous axis, gearing …

Highlights
• PN IRT
• Safety Integrated: Basic and Extended functions via PROFIsafe
• Dedicated S-1FK2 motors (compact and high dynamic) with One-Cable-Connection
• Integrated Webserver and “One Button Tuning”
• UL Certification
• Integrated category C2 EMC-Filter
### Basic: SINAMICS V90 Servo Drive System
- Single axis AC/AC drive with basic functionality and connectivity for standard numeric and motion controllers

### Midrange: SINAMICS S210 Servo Drive System
- Single axis AC/AC drive with high dynamic and performance for motion applications in the mid range segment.

### High-End: SINAMICS S120 Servo Drive
- Modular DC/AC multi axis system with most advanced drive based technology and connectivity to high end numeric and motion controllers
The scalable SINAMICS Drives Portfolio
for „Discontinuous Motion“

- Energy Recovery
- Multiaxis, Direct Drives
- DCC / TEC
- DC Coupling
- Startdrive Integration + Webserver
- Basic & Extended Safety incl. PROFINet
- TIA Portal Integration
- Safety: STO via terminal
- PROFINET, serial com., e.g. Modbus, PTI
- Servo Control

V90 + 1FL6
S210 + 1FK2
S120 / S120M + 1FK7, 1FT7, 1PH8, 1FG1

1 in preparation
2 + additional SIMOTICS
SINAMICS S210 Servo Drive System
The compact high performance single axis servo drive system

- Compact design - High Performance
- Simple installation with One Cable Connection for the motor
- Optimal together with SIMATIC controller
- Easy commissioning with integrated Webserver
- Ready for world wide markets
- Integrated Safety Functionality

SIEMENS
Ingenuity for life.
SINAMICS S210 Servo Drive System
The drive for high dynamic performance applications

Packaging, Printing, Converting, Plastics
• Packaging machines
• Printing machines
• Labeling machines
• …

Handling, Moving…
• Pick and Place machines
• Rotary tables
• Stacking machines
• …

General Machine Building
• Assembling machines
• Chip sorting machines
• Bonding machines
• …
Added Value with SINAMICS S210 Servo Drive System

System advantages

- The certified integrated safety functions help to ensure to realize a practicable protection of personnel and machinery
- Simple engineering and high performance with PROFINET,
  Safety on the same bus, PROFInenergy
- *) Integrated engineering and data management via TIA-Portal.
  Standard operating philosophy. One project file, therefore consistency is always ensured.

*) in preparation
**Top highlights SINAMICS S210 & SIMOTICS S-1FK2**

The new midrange servo drive system

<table>
<thead>
<tr>
<th>Feature / Function</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Dedicated S-1FK2 motors (Compact or high dynamic)</td>
<td>• Increased performance</td>
</tr>
<tr>
<td>• PROFINET IRT (250 µs)</td>
<td>• Fulfills high demands for safety</td>
</tr>
<tr>
<td>• Safety integrated functions via PROFIsafe</td>
<td>• Easy engineering</td>
</tr>
<tr>
<td>• Integrated Webserver</td>
<td>• Safes time on installation</td>
</tr>
<tr>
<td>• “One Button Tuning”</td>
<td>• Ready for various markets</td>
</tr>
<tr>
<td>• TIA Portal (via GSD)</td>
<td></td>
</tr>
<tr>
<td>• One-Cable-Connection (OCC)</td>
<td></td>
</tr>
<tr>
<td>• Integrated C2 EMC-Filter</td>
<td></td>
</tr>
<tr>
<td>• 1AC 230V (200-240V) 0.05 - 0.75kW</td>
<td></td>
</tr>
<tr>
<td>• UL Certification</td>
<td></td>
</tr>
</tbody>
</table>

*Full integration in preparation*
Reference Easysnap
The one hand opening technology

Customer:
Easysnap Technology S.r.l. (Italy)

Industry: Packaging

Benefits for the customer:

• **Product:** Performance and Dimensions of the S210 drive system is very important for the customer. In the future this will **reduce the required cabinet dimensions**.

• **Digitalization:** Significant benefits seen in digitalization is related to the data collection and analytics. For example the **predictive maintenance via Mindsphere**. For the future it is planned to start with **virtual commissioning and presentation of the machine via the digital twin**.

• **Siemens Brand:** The customer is interested to use Siemens because the Siemens brand is strongly present in the machine market and some of their customers ask to equip the machine with Siemens products.

Packaging machine to fill liquid products into sachets (320PC/min)
• SINAMICS S210 Servo Drive System
• SINAMICS S120 Servo Drive (C/D Type) with SIMOTICS S-1FK7
• SIMATIC S7-1500T controller
• SIMATIC ET200SP

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# Technical Data

<table>
<thead>
<tr>
<th>SINAMICS S210 (6SL3210-5H...)</th>
<th>SIMOTICS S-1FK2 (1FK21...) HD (1FK22...) CT</th>
<th>One Cable Connection (6FX5002-8QN...) (6FX8002-8QN...)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Voltage: 1AC 200-240V</td>
<td>• Torque: 0.16-2.4Nm</td>
<td>• Individual cable lengths up to 50m can be ordered</td>
</tr>
<tr>
<td>• Power: 100W-750W</td>
<td>• Power: 50W-750W</td>
<td>• SPEED- CONNECT fast connection system with rotatable motor connector</td>
</tr>
<tr>
<td>• PN IRT (250 µs), current cont. 62.5 µs, PROFI safe</td>
<td>• High Dynamic (HD) or Compact (CT) in shaft height 20, 30, 40mm</td>
<td>• Flexible cables with small bending radii</td>
</tr>
<tr>
<td>• Safety functions: STO, SS1, SBC, ext safety: SS1, SS2, SOS, SLS, SSM, SDI, SBT, SLA</td>
<td>• Encoder: 22 Bit Abs. Single or Multiturn</td>
<td>• Trailing cable version available</td>
</tr>
<tr>
<td>• Removable terminals</td>
<td>• Protection Degree: IP64, optional IP65</td>
<td>• Small and compact M12 connector for motor SH20/30mm (only 25mm in height)</td>
</tr>
<tr>
<td>• Side-by-side mounting</td>
<td>• Plain or feather key shaft</td>
<td>• Extension cables and mounting flange available</td>
</tr>
<tr>
<td>• 300% overload</td>
<td>• With or without holding brake</td>
<td></td>
</tr>
<tr>
<td>• Integrated C2 EMC-Filter</td>
<td>• Ready to use in North-America (cURus)</td>
<td></td>
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<tr>
<td>• Integrated break resistor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• DI: 1 F-DI (2 DI), 2 DI for measuring probes</td>
<td></td>
<td></td>
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<tr>
<td>• Integrated WEB-Server</td>
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</tbody>
</table>

- **SINAMICS S210** servo drive system easy, high performant and safe
- **SIMOTICS S-1FK2** HD or Compact (CT) for applications requiring high dynamic performance or compactness.
- **One Cable Connection** offers flexible cable lengths and easy installation.
Motion Control
via SIMATIC S7 & SIMOTION controller and PROFINET

SINAMICS S210 follows as the high dynamic drive!
SINAMICS S210 servo drive system, off to a fast start. Precise and reliable in operation. Perfect together with SIMATIC.

Advantages of S210 servo drive system

• Compact in dimensions
• High performance of drive and motor
• Fast installation of drive and motor via one cable connection (OCC)
• Easy commissioning using the web server and “One Button Tuning”
• Integrated safety functions
• Optimal together with SIMATIC controller

Drives, motors and controllers. All from a single source. Matching perfectly.
SINAMICS S210 Servo Drive System
The new high dynamic Servo Drive System from Siemens

www.siemens.com/sinamics-s210

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