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

Additional associated topics:
www.siemens.com/simatic
www.siemens.com/motion-connect
www.siemens.com/safety

Follow us on:
twitter.com/siemensindustry
youtube.com/siemens

Published by
Siemens AG 2018
Digital Factory
Motion Control
P.O. Box 3180
91050 Erlangen, Germany

Subject to change without prior notice.
Article No. DFMC-B10068-00-7600
Printed in Germany
Dispo 21500
WÜ/1000173743 WS 11180.7

The information provided in this brochure contains merely general descriptions or characteristics of performance which in case of actual use do not always apply as described or which may change as a result of further development of the products. An obligation to provide the respective characteristics shall only exist if expressly agreed in the terms of contract. All product designations may be trademarks or product names of Siemens AG or supplier companies whose use by third parties for their own purposes could violate the rights of the owners.

In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial security concept. Siemens’ products and solutions only form one element of such a concept. For more information about industrial security, please visit siemens.com/industrialsecurity.
SIEMENS
Ingenuity for life

SINAMICS S210
The easy, high-performance and safe servo drive system

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
## Technical data of the SINAMICS S210 servo drive system

<table>
<thead>
<tr>
<th>Type</th>
<th>Servo drive system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application</td>
<td>Discontinuous processing/moving</td>
</tr>
<tr>
<td>Power range</td>
<td>1AC 230 V: 0.05 – 0.75 kW; 3AC 400 V: 0.4 – 7 kW (also for 3AC 230 V)</td>
</tr>
</tbody>
</table>
| 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