

System overview

SINAMICS S210 servo drive system

Order overview

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SIMOTICS S-1FK2 servomotor							SINAMICS S210 servo converter supply voltage 200 ... 240 V 1 AC			MOTION-CONNECT motor connection cable	
Static torque	Maximum torque	Maximum speed	Rated power	Rated torque	Rotor moment of inertia	Article No.	Max. motor power	Frame size	Article No.	Article No.	
M_0	M_{max}	n_{max}	P_N	M_N	J_{Mot}		P_N				
Nm (lbf-ft)	Nm (lbf-ft)	rpm	kW	Nm (lbf-ft)	kg cm ²		kW				
High Dynamic for highly dynamic applications							SINAMICS S210 servo converters			One Cable Connection	
Shaft height 20 – rated speed n_{rated} 3000 rpm											
0.16 (0.12)	0.56 (0.41)	8000	0.05	0.16 (0.12)	0.0245	1FK2102-0AG	0.1	FSA	6SL3210-5HB10-1UF0	6FX	
0.32 (0.24)	1.11 (0.82)	8000	0.1	0.32 (0.24)	0.036	1FK2102-1AG	0.1	FSA	6SL3210-5HB10-1UF0	6FX	
Shaft height 30 – rated speed n_{rated} 3000 rpm											
0.64 (0.47)	1.95 (1.44)	8000	0.2	0.64 (0.47)	0.093	1FK2103-2AG	0.2	FSA	6SL3210-5HB10-2UF0	6FX	
1.27 (0.94)	4.05 (2.99)	7300	0.4	1.27 (0.94)	0.139	1FK2103-4AG	0.4	FSB	6SL3210-5HB10-4UF0	6FX	
Shaft height 40 – rated speed n_{rated} 3000 rpm											
1.27 (0.94)	3.85 (2.84)	7400	0.4	1.27 (0.94)	0.35	1FK2104-4AK	0.4	FSB	6SL3210-5HB10-4UF0	6FX	
2.4 (1.77)	7.6 (5.61)	7100	0.75	2.4 (1.77)	0.56	1FK2104-5AK	0.75	FSC	6SL3210-5HB10-8UF0	6FX	
Compact for high precision applications							SINAMICS S210 servo converters			One Cable Connection	
Shaft height 30 – rated speed n_{rated} 3000 rpm											
0.64 (0.47)	1.85 (1.36)	8000	0.2	0.64 (0.47)	0.2	1FK2203-2AG	0.2	FSA	6SL3210-5HB10-2UF0	6FX	
1.27 (0.94)	3.75 (2.77)	7800	0.4	1.27 (0.94)	0.35	1FK2203-4AG	0.4	FSB	6SL3210-5HB10-4UF0	6FX	
Article No. supplements							Prefabricated MOTION-CONNECT cable				
Holding brake							MOTION-CONNECT 500				
Without brake							0				
With brake							1				
Degree of protection							MOTION-CONNECT 800PLUS				
IP64 (without shaft sealing ring)							5				
IP65 (with shaft sealing ring)							8				
Shaft extension, feather key							Length code (max. 50 m (164 ft))				
Plain shaft							0 m (0 ft)				
Shaft with feather key							A				
Plain shaft $\varnothing 11 \times 23$ mm (0.43 x 0.91 in) (only for 1FK2 . 03 and IP64)							10 m (32.8 ft)				
							B				
							20 m (65.6 ft)				
							C				
							30 m (98.4 ft)				
							D				
							40 m (131 ft)				
							E				
							50 m (164 ft)				
							F				
Encoder							0 m (0 ft)				
AS20DQC (absolute encoder 20-bit singleturn)							A				
AM20DQC (absolute encoder 20-bit + 12-bit multiturn)							B				
							C				
							2 m (6.56 ft)				
							3 m (9.84 ft)				
							D				
							4 m (13.1 ft)				
							E				
							5 m (16.4 ft)				
							F				
							6 m (19.7 ft)				
							G				
							7 m (23 ft)				
							H				
							8 m (26.2 ft)				
							J				
							9 m (29.5 ft)				
							K				
							0 m (0 ft)				
							0				
							0.1 m (0.33 ft)				
							1				
							0.2 m (0.66 ft)				
							2				
							0.3 m (0.98 ft)				
							3				
							0.4 m (1.31 ft)				
							4				
							0.5 m (1.64 ft)				
							5				
							0.6 m (1.97 ft)				
							6				
							0.7 m (2.30 ft)				
							7				
							0.8 m (2.62 ft)				
							8				

Order overview (continued)

Accessories for SINAMICS S210 servo converters

Description	Article No.
SINAMICS SD card (optional) 512 MB The parameter assignment, firmware and licenses for a converter can be stored on this memory card	
• Empty	6SL3054-4AG00-2AA0
• With firmware V5.1	6SL3054-4FB00-2BA0
PROFINET patch cable For the networking of concatenated converters	
• 0.3 m (0.98 ft)	6XV1870-3QE30
• 0.5 m (1.64 ft)	6XV1870-3QE50
Line filter (optional) ¹⁾ European standard 61008-3 Category C2 can also be achieved for cable lengths up to 25 m (82 ft) with this line filter. Category C3 is reached with cable lengths up to 50 m (164 ft).	6SL3203-0BB21-8VA0

Accessories for SIMOTICS S-1FK2 servomotors

Description	For motor	Article No.
Shaft sealing ring (optional) To achieve degree of protection IP65 for retrofitting or as spare part	1FK2 . 02	1FK2902-0GC00
	1FK2 . 03	1FK2903-0GC00
	1FK2 . 04	1FK2904-0GC00

Accessories for MOTION-CONNECT connection system

OCC extension cables

Description	For motor	Article No. (See SINAMICS S210 drive system table for length codes)
Pre-assembled OCC extension cable MOTION-CONNECT 500	1FK2102 and 1FK2 . 03	6FX5002-8QE04-1■■■■
	1FK2104	6FX5002-8QE08-1■■■■
Pre-assembled OCC extension cable MOTION-CONNECT 800PLUS	1FK2102 and 1FK2 . 03	6FX8002-8QE04-1■■■■
	1FK2104	6FX8002-8QE08-1■■■■
Pre-assembled OCC extension cable MOTION-CONNECT 500 With connector supplied on the converter side ²⁾	1FK2102 and 1FK2 . 03	6FX5012-8QE04-1■■■■
	1FK2104	6FX5012-8QE08-1■■■■
Pre-assembled OCC extension cable MOTION-CONNECT 800PLUS With connector supplied on the converter side ²⁾	1FK2102 and 1FK2 . 03	6FX8012-8QE04-1■■■■
	1FK2104	6FX8012-8QE08-1■■■■

OCC components for customers to fabricate themselves

Description	For motor	Article No. (See SINAMICS S210 drive system table for length codes)
Sold by the meter OCC line MOTION-CONNECT 500 ²⁾	1FK2102 and 1FK2 . 03	6FX5008-1BE04-1■■■■
	1FK2104	6FX5008-1BE08-1■■■■
Sold by the meter OCC line MOTION-CONNECT 800PLUS ²⁾	1FK2102 and 1FK2 . 03	6FX8008-1BE04-1■■■■
	1FK2104	6FX8008-1BE08-1■■■■
Motor-side M12 SPEED-CONNECT connector ²⁾	1FK2102 and 1FK2 . 03	6FX2003-0LU64
Motor-side M17 SPEED-CONNECT connector ²⁾	1FK2104	6FX2003-0LU54
M12 SPEED-CONNECT connector with male thread for extension cable ²⁾	1FK2102 and 1FK2 . 03	6FX2003-0LA64
M17 SPEED-CONNECT connector with male thread for extension cable ¹⁾	1FK2104	6FX2003-0LA54
Converter-side Siemens IX signal connector ¹⁾	–	6FX2003-0DE01
Shield clamp (Packing unit: 10 items)	–	6FX2003-7EX10

Control cabinet bushings

Description	For motor	Article No.
Mounting flange	1FK2102 and 1FK2 . 03	6FX2003-7JX00
	1FK2104	6FX2003-7HX00

Recommended SIMATIC S7 controller

Further information about SIMATIC S7-1500 and SIMATIC S7-1500 T-CPU controllers is in Catalog ST 70 and on the internet at www.siemens.com/simatic-s7-1500

¹⁾ The line filter does not have UL approval.

²⁾ Available soon.