

Product announcement

## SIMOTICS S-1FS2

Sales and delivery release of SIMOTICS S-1FS2 servomotors for food and beverage applications and pharmaceutical industries

July 2021

SIMOTICS S-1FS2 servomotors with stainless steel housings are ideal for use in areas with very high hygiene and cleanliness requirements thanks to their specific product properties.

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### Areas of application

- |   |                               |
|---|-------------------------------|
| ■ Food industry: meat and fish processing | ■ Beverage filling            |
| ■ Packaging and handling applications     | ■ Pharmaceutical applications |

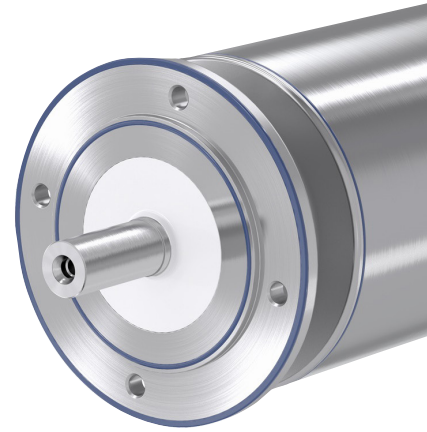
### Availability of SIMOTICS S-1FS2

July 2021	Motors in shaft heights 40, 52 and 63 are now available for sales and delivery
End of July 2021	Optional MC400 extension cables 6FX40... for SIMOTICS S-1FS2 with connection option Q1_ are scheduled to be available
August 2021	Shaft height 80 is scheduled for availability
Fall 2021*	Offline engineering via StartDrive is possible starting from V17, update 1 to be released.

\*Until then, online commissioning is possible via the web server integrated in the SINAMICS S210 servo system.

## Major features of SIMOTICS S-1FS2 servomotors

- Wide range of power ratings: three frame sizes in the power range 0.45 to 2kW with torques from 3.1 to 14Nm
- High dynamics due to low inherent inertia and high overload capacity, such as for pick-and-place applications
- Optional holding brake, stainless steel shaft available with and without feather key
- One cable connection (OCC) for easier installation and cleaning
- Various connection versions available: cable tail for converter direct connection or MOTION CONNECT coupling
- High-resolution 22-bit multi-turn encoder as standard encoder (AM22DQC)
- Very high degree of protection IP66/IP67 for the entire motor, IP69k (30bar) for the motor housing
- Suitable for CIP processes ("Cleaning in Place") with commercially available cleaning agents
- High-quality materials ensure very high robustness, long service life and maximum compatibility with the requirements of the food industry: housing made of 1.4404 stainless steel, EPDM seals, bearing grease with NSF H1 approval
- Designed according to EHEDG guidelines, certification for EHEDG EL Class I AUX is in preparation



## SIMOTICS S-1FS2 ordering information

SIMOTICS S-1FS2																		
S-1FS2...				M0 [Nm]	M <sub>n</sub> [Nm]	M <sub>max</sub> [Nm]	I <sub>0</sub> [A]	I <sub>max</sub> [A]	w/o brake inertia J [kg*cm <sup>2</sup> ]	with Brake inertia J [kg*cm <sup>2</sup> ]	rated n <sub>n</sub> [1/min]	short time n <sub>max</sub> [1/min]	rated power [W]	pitch circle [mm]	centering spigot [mm]	shaft diameter [mm]		
1FS2104-6AF	<input type="checkbox"/>	7-	<input type="checkbox"/> MZO	<input type="checkbox"/> Q	<input type="checkbox"/>	3.1	2.55	10	2,85	10,9	0.72	0.8	3000	7200	800	90	70	19
1FS2105-6AF	<input type="checkbox"/>	7-	<input type="checkbox"/> MZO	<input type="checkbox"/> Q	<input type="checkbox"/>	7.6	4.1	24	6,6	24	2.8	3.58	3000	6000	1290	115	95	19
1FS2106-6AF	<input type="checkbox"/> 0	7-	<input type="checkbox"/> MZO	<input type="checkbox"/> Q	<input type="checkbox"/>	14	6.2	42	12	44	9	-	3000	6000	1950	130	110	24
1FS2106-6AE	<input type="checkbox"/> 1	7-	<input type="checkbox"/> MZO	<input type="checkbox"/> Q	<input type="checkbox"/>	14	6.9	42	12	44	-	10.6	2500	6000	1810	130	110	24

holding brake

without brake ☐ 0

with brake ☐ 1

shaft end

plain ☐ 0

with feather key ☐ 1

cable outlet

for direct S210 connection ☐ 0

for use with MC 6FX... ☐ 1

cable length

A 0.5m

... 11m

1FS2 cable outlet length codes			
Q0 / Q1	Code	length /m	
	A	0,5	
	B	1	
	C	1,5	
	D	2	
	E	2,5	
	F	3	
	G	3,5	
	H	4	
	J	4,5	
	K	5	
	L	5,5	
	M	6	
	N	6,5	
	P	7	
	Q	7,5	
	R	8	
	S	8,5	
	T	9	
	U	9,5	
	V	10	
	W	10,5	
	X	11	

Dimension 1FS2...				
		...104-6A	...105-6A	...106-6A
pitch circle	ØM	90	115	130
centering spigot	ØN	70	95	110
flange diameter	ØP	110	135	158
flange thickness	LA	8	8	10
hole	ØS	6.5	9	9
shaft	ØD x E	19x40	19x40	24x50
length	LB	215	272	265
length w/ brake	LB	259	299	317
weight w/o (w/ brake) <sup>*)</sup>	kg	7.2 (8.7)	13.3 (15)	18.6 (21)

Q1☐

Q0☐

<sup>\*)</sup> weight without cable



## System integration and constraints

SIMOTICS S-1FS2 can be operated on SINAMICS S210 servo-drive systems with firmware RT 5.2 SP3 HF3 or higher. Operation on SINAMICS S120 is not possible.

## Configuring and documentation

### TIA Selection Tool

- The SIMOTICS S-1FS2 servomotor is configurable with SINAMICS S210

[Click here](#)

### DT Configurator

- Selection/configuration, dimension drawings, CAD models and data sheets

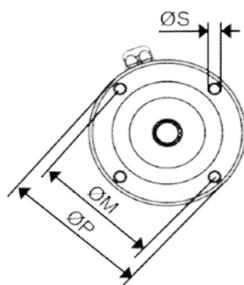
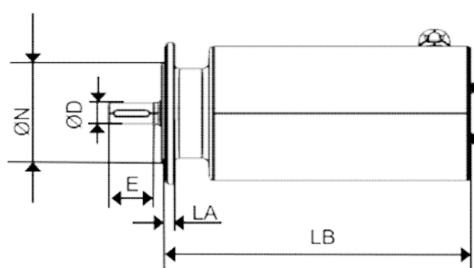
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Additional information available at Siemens Industry Online Support via Entry type

- Product note Entry ID: 109795323, Entry date: 05/20/2021

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SINAMICS S210			OCC cable outlet		
line voltage					
1AC 200-240V	3AC 200-240V	3AC 380-480V	Option Q0	Option Q1	Cross section
6SL3210-5HB10-8UF0	6SL3210-5HE11-0UF0	6SL3210-5HE11-0UF0	n/a	M17	0,75
	6SL3210-5HE12-0UF0	6SL3210-5HE12-0UF0	n/a	M17	0,75
	6SL3210-5HE17-0UF0	6SL3210-5HE17-0UF0	n/a	M23	1,5
	6SL3210-5HE17-0UF0	6SL3210-5HE17-0UF0	n/a	M23	1.5



MOTION CONNECT extension cable for use with SIMOTICS S-1FS2 with Q1

MOTION CONNECT											
MLFB	6FX	0	2	-	8	Q	N	-	1		
Cable type											
MC 400 <sup>1)</sup>		4									
MC 500		5									
MC 800		8									
IX connector											
with mounted IX connector			0								
without mounted IX connector			1								
Connector/cross section											
SPEED-CONNECT M17 / 0.75 mm <sup>2</sup>						0	8				
SPEED-CONNECT M23 / 1.5 mm <sup>2</sup>						1	1				
Length code (see table below)											

<sup>1)</sup>In preparation

Length code max. 50 m (164 ft)

Description	Article No. supplement
MOTION-CONNECT cable	6FX . 0 . 2_8Q . -1
0 m (0 ft)	A
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

Description	Article No. supplement
MOTION-CONNECT cable	6FX . 0 . 2_8Q . -1
0 m (0 ft)	A
1 m (3.28 ft)	B
2 m (6.56 ft)	C
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 (23.0 ft)	H
8 m (26.2 ft)	I
9 m (29.5 ft)	J

Description	Article No. supplement
MOTION-CONNECT cable	6FX . 0 . 2_8Q . -1
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

**Published by  
Siemens Industry, Inc.**

100 Technology Drive  
Alpharetta, GA 30005

Order No. DRPA-S1FS2-0721

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