

Synchronous motors

Geared motors

1FK7-DYA compact geared motors

Selection and Ordering Data

Rated speed	Rated power	Maximum speed	Maximum torque	Static torque	Rated torque	Available gear ratio	Compact geared motor 1FK7-DYA Natural cooling		Number of pole pairs	Rotor moment of inertia ²⁾ (without brake) (with brake)		
$n_{2 \text{ rated}}$	P_2	$n_{2\text{max}}$	$M_{2\text{max}}$	M_{20}	$M_{2 \text{ rated}}^{1)}$	i	Order No.	Order code		J	J	
rpm	kW (HP)	rpm	Nm (lb _f -in)	Nm (lb _f -in)	Nm (lb _f -in)					10 ⁻⁴ kgm ² (10 ⁻³ x lb _f -in-s ²)	10 ⁻⁴ kgm ² (10 ⁻³ x lb _f -in-s ²)	
370	0.37 (0.50)	600	32 (283)	11 (97)	9.5 (84.1)	10	1FK7032-5AK71-1 ■ ■ 3-Z A03		3	0.75 (0.66)	0.83 (0.73)	
740	0.5 (0.67)	1200	32 (283)	7.5 (66)	6.5 (57.5)	5	1FK7034-5AK71-1 ■ ■ 3-Z A00		3	1.04 (0.92)	1.12 (0.99)	
340	0.45 (0.60)	600	49 (434)	15 (133)	12.5 (111)	10	1FK7040-5AK71-1 ■ ■ 3-Z A13		4	2.3 (2.04)	3 (2.66)	
680	0.71 (0.95)	1200	51 (451)	13 (115)	10 (88.5)	5	1FK7042-5AK71-1 ■ ■ 3-Z A10		4	3.6 (3.19)	4.3 (3.81)	
260	1.25 (1.68)	480	175 (1549)	57 (505)	46 (407)	10	1FK7060-5AH71-1 ■ ■ 3-Z A73		4	10.3 (9.12)	12.5 (11.1)	
520	1.74 (2.33)	960	170 (1505)	51 (451)	32 (283)	5	1FK7063-5AH71-1 ■ ■ 3-Z A70		4	17.4 (15.4)	19.6 (17.3)	
200	1.47 (1.97)	360	242 (2142)	76 (673)	70 (620)	10	1FK7080-5AH71-1 ■ ■ 3-Z A83		4	28.7 (25.4)	31.8 (28.1)	
400	1.88 (2.52)	720	233 (2062)	68 (602)	45 (398)	5	1FK7083-5AH71-1 ■ ■ 3-Z A80		4	41 (36.3)	49.6 (43.9)	
Encoder systems for motors without DRIVE-CLiQ interface:			Incremental encoder sin/cos 1 V _{pp} , 2048 S/R Absolute encoder EnDat 2048 S/R ¹⁾ (not for 1FK703) Absolute encoder EnDat 512 S/R ¹⁾ (only for 1FK703) Absolute encoder EnDat 32 S/R ¹⁾ (not for 1FK703) Absolute encoder EnDat 16 S/R ¹⁾ (only for 1FK703) Multi-pole resolver 2-pole resolver					A E H G J S T				
Encoder systems for motors with DRIVE-CLiQ interface:			Incremental encoder 22 bit Absolute encoder, 22 bit single-turn +12 bit multi-turn ¹⁾ (not for 1FK703) Absolute encoder, 20 bit single-turn +12 bit multi-turn ¹⁾ (only for 1FK703) Absolute encoder, 16 bit single-turn +12 bit multi-turn ¹⁾ (not for 1FK703) Absolute encoder, 15 bit single-turn +12 bit multi-turn ¹⁾ (only for 1FK703) 14 bit resolver 15 bit resolver					D F L K V U P				
Shaft extension: Fitted key and keyway Fitted key and keyway			Shaft and flange accuracy: Tolerance N Tolerance N			Holding brake: Without With			U V			
Degree of protection:			IP64, anthracite finish RAL 7016					3				

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Motor type (continued)	Weight		Static current	Maxi- mum current	SINAMICS S120 Motor Module		Power cable with complete shield		
	(without brake)	(with brake)			Rated output current ⁴⁾	Booksized format	Motor terminal (and brake terminal) via power connector		
	<i>m</i>	<i>m</i>			<i>I</i> _{rated}	Order No.	Power con- nector	Motor cable cross- section ³⁾	Order No. Pre-assembled cable
	kg (lb)	kg (lb)	A	A	A		Size	mm ²	
1FK7032-5AK71-...	4.11 (9.1)	4.47 (9.9)	1.7	5	3	6SL312 - - TE13 - 0AA3	1	4 x 1.5	6FX 002-5 S01-....
1FK7034-5AK71-...	5.01 (11.0)	5.37 (11.8)	1.9	7.9	3	6SL312 - - TE13 - 0AA3	1	4 x 1.5	6FX 002-5 S01-....
1FK7040-5AK71-...	6.6 (14.6)	7.61 (16.8)	2.3	7.4	3	6SL312 - - TE13 - 0AA3	1	4 x 1.5	6FX 002-5 S01-....
1FK7042-5AK71-...	7.91 (17.4)	8.62 (19.0)	4.4	14.9	5	6SL312 - - TE15 - 0AA3	1	4 x 1.5	6FX 002-5 S01-....
1FK7060-5AH71-...	13.9 (30.7)	15 (33.1)	6.2	19	9	6SL312 - - TE21 - 0AA3	1	4 x 1.5	6FX 002-5 S01-....
1FK7063-5AH71-...	17.6 (38.8)	19 (41.9)	12	41	18	6SL312 - - TE21-8AA3	1	4 x 1.5	6FX 002-5 S01-....
1FK7080-5AH71-...	23.4 (51.6)	24.6 (54.2)	7.4	24	9	6SL312 - - TE21 - 0AA3	1	4 x 1.5	6FX 002-5 S01-....
1FK7083-5AH71-...	28.6 (63.1)	31.2 (68.8)	15	48	18	6SL312 - - TE21-8AA3	1	4 x 1.5	6FX 002-5 S01-....

Cooling:

Internal air cooling
External air cooling

0
1

Motor Module:

Single Motor Module
Double Motor Module

1
2

Type of power cable:

MOTION-CONNECT 800
MOTION-CONNECT 500

8
5

Without brake cores
With brake cores

C
D

For length code as well as power and signal cables, see Connection system MOTION-CONNECT.

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¹⁾ If the absolute encoder is used, $M_{2 rated}$ is reduced by 10%.

²⁾ In reference to the motor shaft.

³⁾ The current carrying capacity of the power cables complies with IEC 60204-1 for installation type C under continuous operating conditions at an ambient air temperature of 40 °C (104 °F), designed for I_0 (100 K), PVC/PUR-insulated cable.

⁴⁾ With default setting of the pulse frequency.