

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 ¹⁾	Available gear ratios	1FK7-DYA compact geared motors Natural Cooling	No. 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}	$M_{2 \text{ rated}}$	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 (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 (0.0007)	0.83 (0.0007)
740	0.5 (0.67)	1 200	32 (283)	7.5 (66)	6.5 (57.5)	5	1FK7034-5AK71-1 ■ ■ ■ 3-Z A00	3	1.04 (0.0009)	1.12 (0.0007)
340	0.45 (0.60)	600	49 (434)	15 (133)	12.5 (110.6)	10	1FK7040-5AK71-1 ■ ■ ■ 3-Z A13	4	2.3 (0.0020)	3 (0.0027)
680	0.71 (0.95)	1 200	51 (451)	13 (115)	10 (88.5)	5	1FK7042-5AK71-1 ■ ■ ■ 3-Z A10	4	3.6 (0.0027)	4.3 (0.0032)
260	1.25 (1.68)	480	175 (1 549)	57 (505)	46 (407)	10	1FK7060-5AH71-1 ■ ■ ■ 3-Z A73	4	10.3 (0.0091)	12.5 (0.0111)
520	1.74 (2.33)	960	170 (1 505)	51 (451)	32 (283)	5	1FK7063-5AH71-1 ■ ■ ■ 3-Z A70	4	17.4 (0.0154)	19.6 (0.0173)
200	1.47 (1.97)	360	242 (2 142)	76 (673)	70 (620)	10	1FK7080-5AH71-1 ■ ■ ■ 3-Z A83	4	28.7 (0.0254)	31.8 (0.0281)
400	1.88 (2.52)	720	233 (2 062)	68 (602)	45 (398)	5	1FK7083-5AH71-1 ■ ■ ■ 3-Z A80	4	41 (0.0363)	49.6 (0.0439)

Encoder systems:

Incremental encoder sin/cos 1 V_{pp} 2 048 S/R
 Absolute encoder EnDat 2 048 S/R¹⁾ (not for 1FK703)
 Absolute encoder EnDat 512 S/R¹⁾ (only for 1FK703)
 Absolute encoder EnDat 32 S/R¹⁾ (not for 1FK703)
 Absolute encoder EnDat 16 S/R¹⁾ (only for 1FK703)
 Multipole resolver
 2-pole resolver

A
E
H
G
J
S
T

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, paint finish anthracite, color RAL 7016

3

To select the degree of protection, see Selection guides.

Selection and ordering data

Motor type (continued)	Weight		Static current	Maxi- mum current	SIMODRIVE 611 power module		Power cable with complete shield Motor connection and brake connection via power connector		
	(without brake)	(with brake)			Rated output current	Order No.	Power connector	Cable cross- section ³⁾	Pre-assembled cable
	<i>m</i>	<i>m</i>	I_0 at M_0 $\Delta T=100$ K	I_{max}	I_{rated}			Size	mm ²
	kg (lb)	kg (lb)	A	A	A				
1FK7032-5AK71-...	4.11 (9.1)	4.47 (9.9)	1.7	5	3	For ordering data, see Converter system	1	4 x 1.5	6FX ■ ■ 02-5 ■ A01 -....
1FK7034-5AK71-...	5.01 (11.05)	5.37 (11.84)	1.9	7.9	3		1	4 x 1.5	6FX ■ ■ 02-5 ■ A01 -....
1FK7040-5AK71-...	6.6 (14.6)	7.61 (16.8)	2.3	7.4	3		1	4 x 1.5	6FX ■ ■ 02-5 ■ A01 -....
1FK7042-5AK71-...	7.91 (17.4)	8.62 (19.0)	4.4	14.9	5		1	4 x 1.5	6FX ■ ■ 02-5 ■ A01 -....
1FK7060-5AH71-...	13.9 (30.7)	15 (33.1)	6.2	19	9		1	4 x 1.5	6FX ■ ■ 02-5 ■ A01 -....
1FK7063-5AH71-...	17.6 (38.8)	19 (41.9)	12	41	18		1	4 x 1.5	6FX ■ ■ 02-5 ■ A01 -....
1FK7080-5AH71-...	23.4 (51.6)	24.6 (54.2)	7.4	24	9		1	4 x 1.5	6FX ■ ■ 02-5 ■ A01 -....
1FK7083-5AH71-...	28.6 (63.1)	31.2 (68.8)	15	48	18		1	4 x 1.5	6FX ■ ■ 02-5 ■ A01 -....

Type of power cable:

MOTION-CONNECT 800
MOTION-CONNECT 700 (only with brake cores)
MOTION-CONNECT 500
MOTION-CONNECT 500 PLUS (only up to a cross-section of 6 mm²)

8 0
7 0
5 0
5 1

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_{2rated} is reduced by 10 %.

²⁾ In reference to the internal motor shaft.

³⁾ The current carrying capacity of the power cables complies with EN 60204-1 for installation type C under continuous operating conditions at an ambient air temperature of 40 °C (104 °F).