

Synchronous motors

Gearboxes

Series LP+ planetary gearbox, single-stage for 1FK7 motors

Selection and Ordering Data

Motor Natural cooling	Planetary gearbox Single-stage Torsional backlash ≤ 12 arcmin		Available gear ratios <i>i</i> =		Input speed, max. S3-60%	Output torque, max. S3-60%		Output shaft radial force, max. ¹⁾	Moment of inertia Gearbox
Type	Type	Weight of gearbox, approx. kg (lb)	5	10	<i>n</i> _{G1} rpm	<i>M</i> _{G2} at <i>i</i> = 5 Nm (lb _f ft)	<i>M</i> _{G2} at <i>i</i> = 10 Nm (lb _f ft)	<i>F</i> _r N (lb _f)	<i>J</i> _G at <i>i</i> = 5/10 10 ⁻⁴ kgm ² (10 ⁻³ x lb _f -in-s ²)
1FK7022	LP 050-M01	0.75 (1.7)	✓	–	8000	12 (9)	11 (8)	650 (146)	0.055 (0.05)
1FK7022	LP 070-M01	2 (4.4)	–	✓	6000	35 (26)	32 (24)	1450 (326)	0.28 (0.25)
1FK7032			✓	✓					
1FK7033			✓	✓					
1FK7034			✓	✓					
1FK7040	LP 090-M01	4 (8.8)	✓	✓	6000	90 (66)	80 (59)	2400 (540)	1.77 (1.57)
1FK7042			✓	✓					
1FK7043			✓	✓					
1FK7044			✓	✓					
1FK7060	LP 120-M01	8.6 (19)	✓	✓	4800	220 (162)	200 (148)	4600 (1034)	5.42 (4.80)
1FK7061			✓	✓					
1FK7063			✓	✓					
1FK7064			✓	–					
1FK7080	LP 155-M01	17 (38)	✓	✓	3600	450 (332)	350 (258)	7500 (1686)	25.7 (22.8)
1FK7083			✓	✓					
1FK7085			✓	–					
1FK7086			✓	–					
1FK7100			✓	✓					
1FK7101			✓	–					
1FK7103			✓	–					
1FK7105			✓	–					
Order code • Gearbox shaft with fitted key			V40	V42					

Ordering data: **1FK7...-A.71-...3-Z****V** ■ ■**G**
Hwithout holding brake
with holding brake

Order No. of the motor with identifier "-Z" and
order code for mounting the planetary gearbox assigned to the motor
Preconditions for mounting planetary gearboxes:
Plain motor shaft extension and IP64 degree of protection, anthracite paint finish

Continuous duty S1

Continuous duty is permissible at the rated speed and rated torque. The gearbox temperature may not exceed 90 °C (194 °F).

Planetary gearbox Single-stage Torsional backlash ≤ 12 arcmin	Rated input speed	Rated output torque	
Type	n_{rated1} rpm	M_{rated2} at $i = 5$ Nm (lb _f -ft)	M_{rated2} at $i = 10$ Nm (lb _f -ft)
LP 050-M01	4000	5.7 (4.2)	–
LP 070-M01	3700	18 (13)	16.5 (12.2)
LP 090-M01	3400	45 (33)	40 (30)
LP 120-M01	2600	110 (81)	100 (74)
LP 155-M01	2000	320 (236)	190 (140)

✓ Possible

– Not possible

1) In reference to the output shaft center at 100 rpm.