

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data 1FK7061-7AF71-1SB0-Z
N05



Client order no. :
Order no. :
Offer no. :
Remarks :

Item no. :
Consignment no. :
Project :

Engineering data		Mechanical data	
Rated speed (100 K)	3000 rpm	Motor type	Permanent-magnet synchronous motor
Number of poles	6	Motor type	High Dynamic
Rated torque (100 K)	5.4 Nm	Shaft height	63
Rated current	5.3 A	Cooling	Natural cooling
Static torque (60 K)	4.90 Nm	Radial runout tolerance	0.040 mm
Static torque (100 K)	6.4 Nm	Concentricity tolerance	0.10 mm
Stall current (60 K)	4.80 A	Axial runout tolerance	0.10 mm
Stall current (100 K)	6.10 A	Vibration severity grade	Grade A
Moment of inertia	3.740 kgcm²	Connector size	1
Efficiency	93.0 %	Degree of protection	IP64
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
Torque constant	1.00 Nm/A	Temperature monitoring	KTY84 temperature sensor in the stator winding
Voltage constant at 20° C	66.0 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
Winding resistance at 20° C	0.74 Ω	Color of the housing	without
Rotating field inductance	20.0 mH	Holding brake	with holding brake
Electrical time constant	27.00 ms	Shaft end	Feather key
Mechanical time constant	0.75 ms	Encoder system	Multi-pole resolver (number of pole pairs corresponds to number of pole pairs of the motor)
Thermal time constant	45 min		
Shaft torsional stiffness	37000 Nm/rad		
Net weight of the motor	11.2 kg		

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Optimum operating point		Recommended Motor Module	
Optimum speed	3000 rpm	Rated inverter current	9 A
Optimum power	1.7 kW	Maximum inverter current	18 A
Limiting data		Maximum torque	17.30 Nm
Max. permissible speed (mech.)	6000 rpm	Special design	
Max. permissible speed (inverter)	8700 rpm	N05	Non-standard shaft end (dimensions as for 1FT5 motors)
Maximum torque	17.3 Nm		
Maximum current	17.5 A		
Holding brake			
Holding brake version	Permanent-magnet brake		
Holding torque	13.0 Nm		
Power supply voltage	DC 24 V ± 10 %		
Coil current	0.8 A		
Opening time	100 ms		
Closing time	50 ms		
Highest braking work	380 J		