

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data 1FK7060-5AH71-1FA5



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

Item no. :
Consignment no. :
Project :

Engineering data		Mechanical data	
Rated speed (100 K)	4500 rpm	Motor type	Permanent-magnet synchronous motor
Number of poles	8	Motor type	Compact
Rated torque (100 K)	3.7 Nm	Shaft height	63
Rated current	4.1 A	Cooling	Natural cooling
Static torque (60 K)	5.00 Nm	Radial runout tolerance	0.040 mm
Static torque (100 K)	6.0 Nm	Concentricity tolerance	0.10 mm
Stall current (60 K)	5.10 A	Axial runout tolerance	0.10 mm
Stall current (100 K)	6.20 A	Vibration severity grade	Grade A
Moment of inertia	7.950 kgcm²	Connector size	1
Efficiency	90.0 %	Degree of protection	IP65 and DE flange IP67
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
Torque constant	0.95 Nm/A	Temperature monitoring	KTY84 temperature sensor in the stator winding
Voltage constant at 20° C	60.5 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
Winding resistance at 20° C	0.73 Ω	Color of the housing	Standard (Anthracite RAL 7016)
Rotating field inductance	7.0 mH	Holding brake	without holding brake
Electrical time constant	9.60 ms	Shaft end	Feather key
Mechanical time constant	1.93 ms	Encoder system	Encoder AM22DQ: absolute encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)
Thermal time constant	30 min		
Shaft torsional stiffness	42000 Nm/rad		
Net weight of the motor	7.0 kg		

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Optimum operating point		Recommended Motor Module	
Optimum speed	4500 rpm	Rated inverter current	9 A
Optimum power	1.7 kW	Maximum inverter current	18 A
Limiting data		Maximum torque	16.80 Nm
Max. permissible speed (mech.)	7200 rpm		
Max. permissible speed (inverter)	9500 rpm		
Maximum torque	18.0 Nm		
Maximum current	19.5 A		