

Data sheet for SIMOTICS S-1FK7



MLFB-Ordering data1FK7033-4CK71-1UG0

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

Item no. :
Consignment no. :
Project :

Engineering data		Mechanical data	
Rated speed (100 K)	6000 rpm	Motor type	Permanent-magnet synchronous motor
Number of poles	6	Motor type	High Dynamic
Rated torque (100 K)	0.9 Nm	Shaft height	36
Rated current	1.6 A	Cooling	Natural cooling
Static torque (60 K)	1.08 Nm	Radial runout tolerance	0.035 mm
Static torque (100 K)	1.30 Nm	Concentricity tolerance	0.08 mm
Stall current (60 K)	1.70 A	Axial runout tolerance	0.08 mm
Stall current (100 K)	2.10 A	Vibration severity grade	Grade A
Moment of inertia	0.250 kgcm²	Connector size	1
Efficiency	88.0 %	Degree of protection	IP64
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
Torque constant	0.62 Nm/A	Temperature monitoring	Pt1000 temperature sensor
Voltage constant at 20° C	39.5 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
Winding resistance at 20° C	3.51 Ω	Color of the housing	Standard (Anthracite RAL 7016)
Rotating field inductance	22.0 mH	Holding brake	without holding brake
Electrical time constant	6.30 ms	Shaft end	Plain shaft
Mechanical time constant	0.68 ms	Encoder system	Resolver R15DQ: resolver 15 bits (resolution 32768, internal multi-pole)
Thermal time constant	25 min		
Shaft torsional stiffness	7300 Nm/rad		
Net weight of the motor	3.0 kg		



Figure similar

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Optimum operating point		Recommended Motor Module	
Optimum speed	6000 rpm	Rated inverter current	3 A
Optimum power	0.6 kW	Maximum inverter current	9 A
Limiting data		Maximum torque	4.30 Nm
Max. permissible speed (mech.)	10000 rpm		
Max. permissible speed (inverter)	10000 rpm		
Maximum torque	4.3 Nm		
Maximum current	7.6 A		