

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7044-7AF71-1TH3

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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)	3.5 Nm	Shaft height	48
Rated current	4.0 A	Cooling	Natural cooling
Static torque (60 K)	3.00 Nm	Radial runout tolerance	0.040 mm
Static torque (100 K)	4.0 Nm	Concentricity tolerance	0.08 mm
Stall current (60 K)	3.40 A	Axial runout tolerance	0.08 mm
Stall current (100 K)	4.50 A	Vibration severity grade	Grade A
Moment of inertia	1.410 kgcm ²	Connector size	1
Efficiency	91.0 %	Degree of protection	IP64
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
Torque constant	0.86 Nm/A	Temperature monitoring	KTY84 temperature sensor in the stator winding
Voltage constant at 20° C	57.0 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
Winding resistance at 20° C	1.50 Ω	Color of the housing	Standard (Anthracite RAL 7016)
Rotating field inductance	20.0 mH	Holding brake	with holding brake
Electrical time constant	13.30 ms	Shaft extension	Plain shaft
Mechanical time constant	0.78 ms	Encoder system	Resolver 2-pole
Thermal time constant	45 min		
Shaft torsional stiffness	9500 Nm/rad		
Net weight of the motor	8.3 kg		

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Optimum operating point		Recommended Motor Module	
Optimum speed	3000 rpm	Rated inverter current	5 A
Optimum power	1.1 kW	Maximum inverter current	10 A
Limiting data		Maximum torque	8.80 Nm
Max. permissible speed (mech.)	8000 rpm		
Max. permissible speed (inverter)	10100 rpm		
Maximum torque	12.0 Nm		
Maximum current	14.8 A		
Holding brake			
Holding brake version	Permanent-magnet brake		
Holding torque	4.0 Nm		
Power supply voltage	DC 24 V ± 10 %		
Coil current	0.5 A		
Opening time	70 ms		
Closing time	30 ms		
Highest braking work	150 J		