

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7042-5AK71-1KG3

No image available for this configuration.

Figure similar

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	8	Motor type	Compact		
Rated torque (100 K)	1.5 Nm	Shaft height	48		
Rated current	2.5 A	Cooling	Natural cooling		
Static torque (60 K)	2.50 Nm	Radial runout tolerance	0.040 mm		
Static torque (100 K)	3.0 Nm	Concentricity tolerance	0.08 mm		
Stall current (60 K)	3.60 A	Axial runout tolerance	0.08 mm		
Stall current (100 K)	4.40 A	Vibration severity grade	Grade A		
Moment of inertia	3.010 kgcm ²	Connector size	1		
Efficiency	89.0 %	Degree of protection	IP64		
<th colspan="2">Physical constants</th> <td>Design acc. to Code I</td> <td>IM B5 (IM V1, IM V3)</td>		Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
		Torque constant	0.69 Nm/A	Temperature monitoring	KTY84 temperature sensor in the stator winding
		Voltage constant at 20° C	44.0 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
		Winding resistance at 20° C	1.20 Ω	Color of the housing	Standard (Anthracite RAL 7016)
		Rotating field inductance	6.7 mH	Holding brake	without holding brake
		Electrical time constant	5.60 ms	Shaft extension	Plain shaft
		Mechanical time constant	2.27 ms	Encoder system	Encoder AM16DQ: absolute encoder 16 bits (resolution 65536, encoder-internal 32 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)
		Thermal time constant	30 min		
		Shaft torsional stiffness	16000 Nm/rad		
		Net weight of the motor	4.9 kg		

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Figure similar

Optimum operating point		Recommended Motor Module	
Optimum speed	5000 rpm	Rated inverter current	5 A
Optimum power	1.0 kW	Maximum inverter current	10 A
Limiting data		Maximum torque	6.80 Nm
Max. permissible speed (mech.)	9000 rpm		
Max. permissible speed (inverter)	9990 rpm		
Maximum torque	10.5 Nm		
Maximum current	15.3 A		