

Data sheet for SIMOTICS S-1FK7

No image available for this configuration.

MLFB-Ordering data

1FK7042-5AK71-1UG2

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	IP65 and DE flange IP67		
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)		
		Temperature monitoring	KTY84 temperature sensor in the stator winding		
		Electrical connectors	Connectors for signals and power rotatable		
		Color of the housing	without		
		Holding brake	without holding brake		
		Shaft extension	Plain shaft		
		Encoder system	Resolver R15DQ: resolver 15 bits (resolution 32768, internal multi-pole)		
		Torque constant	0.69 Nm/A		
		Voltage constant at 20° C	44.0 V/1000*min ⁻¹		
		Winding resistance at 20° C	1.20 Ω		
Rotating field inductance	6.7 mH				
Electrical time constant	5.60 ms				
Mechanical time constant	2.27 ms				
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

Optimum speed 5000 rpm

Optimum power 1.0 kW

Limiting data

Max. permissible speed (mech.) 9000 rpm

Max. permissible speed (inverter) 9990 rpm

Maximum torque 10.5 Nm

Maximum current 15.3 A

Recommended Motor Module

Rated inverter current 5 A

Maximum inverter current 10 A

Maximum torque 6.80 Nm