

Data sheet for SIMOTICS S-1FK7

No image available for this configuration.

MLFB-Ordering data

1FK7080-5AF71-1KB3

Figure similar

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	8	Motor type	Compact		
Rated torque (100 K)	6.8 Nm	Shaft height	80		
Rated current	4.4 A	Cooling	Natural cooling		
Static torque (60 K)	6.60 Nm	Radial runout tolerance	0.050 mm		
Static torque (100 K)	8.0 Nm	Concentricity tolerance	0.10 mm		
Stall current (60 K)	4.00 A	Axial runout tolerance	0.10 mm		
Stall current (100 K)	4.80 A	Vibration severity grade	Grade A		
Moment of inertia	18.100 kgcm ²	Connector size	1		
Efficiency	92.0 %	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	1.61 Nm/A	Temperature monitoring	KTY84 temperature sensor in the stator winding
		Voltage constant at 20° C	102.5 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
		Winding resistance at 20° C	1.04 Ω	Color of the housing	Standard (Anthracite RAL 7016)
		Rotating field inductance	14.0 mH	Holding brake	with holding brake
		Electrical time constant	13.50 ms	Shaft extension	Feather key
		Mechanical time constant	1.78 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	40 min		
		Shaft torsional stiffness	126000 Nm/rad		
		Net weight of the motor	12.5 kg		

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Figure similar

Optimum operating point

Optimum speed 3000 rpm

Optimum power 2.1 kW

Limiting data

Max. permissible speed (mech.) 6000 rpm

Max. permissible speed (inverter) 5600 rpm

Maximum torque 25.0 Nm

Maximum current 18.0 A

Holding brake

Holding brake version Permanent-magnet brake

Holding torque 22.0 Nm

Power supply voltage DC 24 V ± 10 %

Coil current 0.9 A

Opening time 200 ms

Closing time 60 ms

Highest braking work 1400 J

Recommended Motor Module

Rated inverter current 5 A

Maximum inverter current 10 A

Maximum torque 16.60 Nm