

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7022-5AK21-1DB5

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	Compact		
Rated torque (100 K)	0.6 Nm	Shaft height	28		
Rated current	1.4 A	Cooling	Natural cooling		
Static torque (60 K)	0.70 Nm	Radial runout tolerance	0.035 mm		
Static torque (100 K)	0.8 Nm	Concentricity tolerance	0.08 mm		
Stall current (60 K)	1.50 A	Axial runout tolerance	0.08 mm		
Stall current (100 K)	1.80 A	Vibration severity grade	Grade A		
Moment of inertia	0.350 kgcm ²	Connector size	1		
Efficiency	86.0 %	Degree of protection	IP65 and DE flange IP67		
<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	0.46 Nm/A	Temperature monitoring	Pt1000 temperature sensor
		Voltage constant at 20° C	29.0 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
		Winding resistance at 20° C	4.20 Ω	Color of the housing	Standard (Anthracite RAL 7016)
		Rotating field inductance	9.1 mH	Holding brake	with holding brake
		Electrical time constant	2.20 ms	Shaft extension	Feather key
		Mechanical time constant	1.70 ms	Encoder system	Encoder IC22DQ: incremental encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + commutation position 11 bits
		Thermal time constant	18 min		
		Shaft torsional stiffness	3000 Nm/rad		
		Net weight of the motor	2.0 kg		

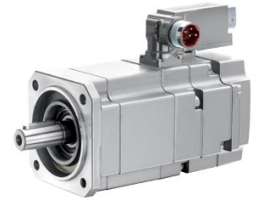


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Optimum operating point

Optimum speed	6000 rpm
Optimum power	0.4 kW

Limiting data

Max. permissible speed (mech.)	10000 rpm
Max. permissible speed (inverter)	9990 rpm
Maximum torque	3.4 Nm
Maximum current	8.0 A

Holding brake

Holding brake version	Permanent-magnet brake
Holding torque	1.0 Nm
Power supply voltage	DC 24 V \pm 10 %
Coil current	0.3 A
Opening time	30 ms
Closing time	20 ms
Highest braking work	8 J

Recommended Motor Module

Rated inverter current	2 A
Maximum inverter current	5 A
Maximum torque	2.00 Nm