

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7042-5AF71-1FH0

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)	2.6 Nm	Shaft height	48		
Rated current	1.9 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)	1.8 A	Axial runout tolerance	0.08 mm		
Stall current (100 K)	2.2 A	Vibration severity grade	Grade A		
Moment of inertia	3.450 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	1.40 Nm/A	Temperature monitoring	KTY84 temperature sensor in the stator winding
		Voltage constant at 20° C	89.0 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
		Winding resistance at 20° C	5.15 Ω	Color of the housing	without
		Rotating field inductance	29.0 mH	Holding brake	with holding brake
		Electrical time constant	5.60 ms	Shaft extension	Plain shaft
		Mechanical time constant	2.37 ms	Encoder system	Encoder AM22DQ: absolute encoder 22 bits (resolution 4194304, encoder-internal 2048 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	5.4 kg		



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Optimum operating point

Optimum speed	3000 rpm
Optimum power	0.8 kW

Limiting data

Max. permissible speed (mech.)	9000 rpm
Max. permissible speed (inverter)	6500 rpm
Maximum torque	10.5 Nm
Maximum current	7.4 A

Holding brake

Holding brake version	Permanent-magnet brake
Holding torque	4.0 Nm
Power supply voltage	DC 24 V \pm 10 %
Coil current	0.5 A
Opening time	70 ms
Closing time	30 ms
Highest braking work	150 J

Recommended Motor Module

Rated inverter current	3 A
Maximum inverter current	6 A
Maximum torque	8.40 Nm