

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7042-2AK71-1BH0



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)	3.5 A	Axial runout tolerance	0.08 mm
Stall current (100 K)	4.4 A	Vibration severity grade	Grade A
Moment of inertia	3.200 kgcm ²	Connector size	1
Efficiency	89.0 %	Degree of protection	IP64
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
Torque constant	0.68 Nm/A	Temperature monitoring	Pt1000 temperature sensor
Voltage constant at 20° C	44.5 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
Winding resistance at 20° C	1.15 Ω	Color of the housing	Standard (Anthracite RAL 7016)
Rotating field inductance	8.6 mH	Holding brake	with holding brake
Electrical time constant	7.50 ms	Shaft extension	Plain shaft
Mechanical time constant	2.15 ms	Encoder system	Encoder AS24DQI: absolute encoder single-turn 24 bits
Thermal time constant	30 min		
Shaft torsional stiffness	11400 Nm/rad		
Net weight of the motor	5.3 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)	9000 rpm
Maximum torque	10.5 Nm
Maximum current	15.3 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	5 A
Maximum inverter current	15 A
Maximum torque	10.30 Nm