

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7011-5AK71-1JH3-Z
X01

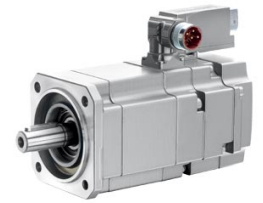


Figure similar

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)	0.1 Nm	Shaft height	20
Rated current	1.0 A	Cooling	Natural cooling
Static torque (60 K)	0.15 Nm	Radial runout tolerance	0.000 mm
Static torque (100 K)	0.2 Nm	Concentricity tolerance	0.00 mm
Stall current (60 K)	1.20 A	Axial runout tolerance	0.00 mm
Stall current (100 K)	1.50 A	Vibration severity grade	Grade A
Moment of inertia	0.083 kgcm ²	Connector size	0.5
Efficiency	62.0 %	Degree of protection	IP54
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
Torque constant	0.12 Nm/A	Temperature monitoring	KTY84 temperature sensor in the stator winding
Voltage constant at 20° C	8.0 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
Winding resistance at 20° C	3.00 Ω	Color of the housing	Jet black, matt RAL 9005
Rotating field inductance	4.2 mH	Holding brake	with holding brake
Electrical time constant	1.40 ms	Shaft extension	Plain shaft
Mechanical time constant	4.00 ms	Encoder system	Encoder AM16S/R: absolute encoder 16 S/R, 4096 revolutions multi-turn, with EnDat interface
Thermal time constant	14 min		
Shaft torsional stiffness	1400 Nm/rad		
Net weight of the motor	1.0 kg		

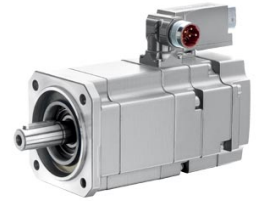


Figure similar

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Optimum operating point

Optimum speed	5000 rpm
Optimum power	0.1 kW

Limiting data

Max. permissible speed (mech.)	8000 rpm
Max. permissible speed (inverter)	8000 rpm
Maximum torque	0.5 Nm
Maximum current	4.2 A

Holding brake

Holding brake version	Permanent-magnet brake
Holding torque	0.4 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	2 J

Recommended Motor Module

Rated inverter current	3 A
Maximum inverter current	6 A
Maximum torque	0.50 Nm

Special design

X01 Paint finish: Jet black, matt RAL 9005