

Data sheet for SIMOTICS S-1FK7

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Figure similar

MLFB-Ordering data

1FK7060-5AH71-1AH2

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Engineering data		Mechanical data			
Rated speed (100 K)	4500 rpm	Motor type	Permanent-magnet synchronous motor		
Number of poles	8	Motor type	Compact		
Rated torque (100 K)	3.7 Nm	Shaft height	63		
Rated current	4.1 A	Cooling	Natural cooling		
Static torque (60 K)	5.00 Nm	Radial runout tolerance	0.040 mm		
Static torque (100 K)	6.0 Nm	Concentricity tolerance	0.10 mm		
Stall current (60 K)	5.10 A	Axial runout tolerance	0.10 mm		
Stall current (100 K)	6.20 A	Vibration severity grade	Grade A		
Moment of inertia	10.200 kgcm ²	Connector size	1		
Efficiency	90.0 %	Degree of protection	IP65 and DE flange IP67		
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)		
		Temperature monitoring	KTY84 temperature sensor in the stator winding		
		Electrical connectors	Connectors for signals and power rotatable		
		Color of the housing	without		
		Holding brake	with holding brake		
		Shaft extension	Plain shaft		
		Encoder system	Encoder IC2048S/R: incremental encoder sin/cos 1 Vpp 2048 S/R with C and D track		
		Torque constant	0.95 Nm/A		
		Voltage constant at 20° C	60.5 V/1000*min ⁻¹		
		Winding resistance at 20° C	0.73 Ω		
Rotating field inductance	7.0 mH				
Electrical time constant	9.60 ms				
Mechanical time constant	1.93 ms				
Thermal time constant	30 min				
Shaft torsional stiffness	42000 Nm/rad				
Net weight of the motor	8.0 kg				

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Figure similar

Optimum operating point

Optimum speed	4500 rpm
Optimum power	1.7 kW

Limiting data

Max. permissible speed (mech.)	7200 rpm
Max. permissible speed (inverter)	9500 rpm
Maximum torque	18.0 Nm
Maximum current	19.5 A

Holding brake

Holding brake version	Permanent-magnet brake
Holding torque	13.0 Nm
Power supply voltage	DC 24 V \pm 10 %
Coil current	0.8 A
Opening time	100 ms
Closing time	50 ms
Highest braking work	380 J

Recommended Motor Module

Rated inverter current	9 A
Maximum inverter current	18 A
Maximum torque	16.80 Nm