

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7080-2AH71-1RA0

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)	4.5 Nm	Shaft height	80
Rated current	4.8 A	Cooling	Natural cooling
Static torque (60 K)	6.60 Nm	Radial runout tolerance	0.050 mm
Static torque (100 K)	8.00 Nm	Concentricity tolerance	0.10 mm
Stall current (60 K)	6.00 A	Axial runout tolerance	0.10 mm
Stall current (100 K)	7.40 A	Vibration severity grade	Grade A
Moment of inertia	14.200 kgcm ²	Connector size	1
Efficiency	92.0 %	Degree of protection	IP64
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
		Temperature monitoring	Pt1000 temperature sensor
Torque constant	1.08 Nm/A	Electrical connectors	Connectors for signals and power rotatable
Voltage constant at 20° C	68.5 V/1000*min ⁻¹	Color of the housing	Standard (Anthracite RAL 7016)
Winding resistance at 20° C	0.42 Ω	Holding brake	without holding brake
Rotating field inductance	7.3 mH	Shaft end	Feather key
Electrical time constant	17.30 ms	Encoder system	Encoder AM20DQI: absolute encoder 20 bits (resolution 1048576, encoder-internal 512 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)
Mechanical time constant	1.54 ms		
Thermal time constant	40 min		
Shaft torsional stiffness	120000 Nm/rad		
Net weight of the motor	10.3 kg		



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Optimum operating point

Optimum speed	4000 rpm
Optimum power	2.4 kW

Limiting data

Max. permissible speed (mech.)	6000 rpm
Max. permissible speed (inverter)	6000 rpm
Maximum torque	25.0 Nm
Maximum current	27.5 A

Recommended Motor Module

Rated inverter current	9 A
Maximum inverter current	27 A
Maximum torque	24.70 Nm