

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7080-2AH71-1RA1

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	IP65
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		



Figure similar

MLFB-Ordering data

1FK7080-2AH71-1RA1

Optimum operating point		Recommended Motor Module	
Optimum speed	4000 rpm	Rated inverter current	9 A
Optimum power	2.4 kW	Maximum inverter current	27 A
Limiting data		Maximum torque	24.70 Nm
Max. permissible speed (mech.)	6000 rpm		
Max. permissible speed (inverter)	6000 rpm		
Maximum torque	25.0 Nm		
Maximum current	27.5 A		