

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7083-2AH71-1RA0

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)	3.0 Nm	Shaft height	80
Rated current	3.6 A	Cooling	Natural cooling
Static torque (60 K)	13.30 Nm	Radial runout tolerance	0.050 mm
Static torque (100 K)	16.0 Nm	Concentricity tolerance	0.10 mm
Stall current (60 K)	12.20 A	Axial runout tolerance	0.10 mm
Stall current (100 K)	15.00 A	Vibration severity grade	Grade A
Moment of inertia	26.000 kgcm ²	Connector size	1
Efficiency	93.0 %	Degree of protection	IP64
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
		Temperature monitoring	Pt1000 temperature sensor
Torque constant	1.06 Nm/A	Electrical connectors	Connectors for signals and power rotatable
Voltage constant at 20° C	69.0 V/1000*min ⁻¹	Color of the housing	Standard (Anthracite RAL 7016)
Winding resistance at 20° C	0.17 Ω	Holding brake	without holding brake
Rotating field inductance	3.2 mH	Shaft extension	Feather key
Electrical time constant	19.30 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	1.14 ms		
Thermal time constant	50 min		
Shaft torsional stiffness	101000 Nm/rad		
Net weight of the motor	15.6 kg		



Figure similar

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Optimum operating point		Recommended Motor Module	
Optimum speed	3000 rpm	Rated inverter current	18 A
Optimum power	3.3 kW	Maximum inverter current	54 A
Limiting data		Maximum torque	49.30 Nm
Max. permissible speed (mech.)	6000 rpm		
Max. permissible speed (inverter)	6000 rpm		
Maximum torque	50.0 Nm		
Maximum current	55.0 A		