

## Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7083-2AH71-1CA2

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 <sup>2</sup>	Connector size	1		
Efficiency	93.0 %	Degree of protection	IP65 and DE flange IP67		
<th colspan="2">Physical constants</th>		Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
		Torque constant	1.06 Nm/A	Temperature monitoring	Pt1000 temperature sensor
		Voltage constant at 20° C	69.0 V/1000*min <sup>-1</sup>	Electrical connectors	Connectors for signals and power rotatable
		Winding resistance at 20° C	0.17 Ω	Color of the housing	Standard (Anthracite RAL 7016)
		Rotating field inductance	3.2 mH	Holding brake	without holding brake
		Electrical time constant	19.30 ms	Shaft extension	Feather key
		Mechanical time constant	1.14 ms	Encoder system	Encoder AM24DQI: absolute encoder 24 bits (resolution 16777216, encoder-internal 2048 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)
		Thermal time constant	50 min		
		Shaft torsional stiffness	101000 Nm/rad		
		Net weight of the motor	15.6 kg		



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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		