

Data sheet for SIMOTICS S-1FK7



MLFB-Ordering data 1FK7083-2AC74-1TB0

Client order no. :
Order no. :
Offer no. :
Remarks :

Item no. :
Consignment no. :
Project :

Engineering data		Mechanical data	
Rated speed (100 K)	2000 rpm	Motor type	Permanent-magnet synchronous motor
Number of poles	8		
Rated torque (100 K)	12.5 Nm	Motor type	Compact
Rated current	6.3 A	Shaft height	80
Static torque (60 K)	13.30 Nm	Cooling	Natural cooling
Static torque (100 K)	16.0 Nm	Radial runout tolerance	0.050 mm
Stall current (60 K)	6.10 A	Concentricity tolerance	0.10 mm
Stall current (100 K)	7.50 A	Axial runout tolerance	0.10 mm
Moment of inertia	29.500 kgcm²	Vibration severity grade	Grade A
Efficiency	93.0 %	Connector size	1
Physical constants		Degree of protection	IP64
Torque constant	2.13 Nm/A	Design acc. to Code I	IM B5 (IM V1, IM V3)
Voltage constant at 20° C	138.5 V/1000*min ⁻¹	Temperature monitoring	Pt1000 temperature sensor
Winding resistance at 20° C	0.66 Ω	Electrical connectors	Connectors for signals and power rotatable
Rotating field inductance	12.8 mH	Color of the housing	Standard (Anthracite RAL 7016)
Electrical time constant	19.40 ms	Holding brake	with holding brake
Mechanical time constant	1.13 ms	Shaft extension	Feather key
Thermal time constant	50 min	Encoder system	Resolver 2-pole
Shaft torsional stiffness	72000 Nm/rad		
Net weight of the motor	18.6 kg		



Figure similar

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Optimum operating point		Recommended Motor Module	
Optimum speed	2000 rpm	Rated inverter current	9 A
Optimum power	2.6 kW	Maximum inverter current	27 A
Limiting data		Maximum torque	49.30 Nm
Max. permissible speed (mech.)	6000 rpm		
Max. permissible speed (inverter)	4150 rpm		
Maximum torque	50.0 Nm		
Maximum current	27.5 A		
Holding brake			
Holding brake version	Permanent-magnet brake		
Holding torque	22.0 Nm		
Power supply voltage	DC 24 V ± 10 %		
Coil current	0.9 A		
Opening time	200 ms		
Closing time	60 ms		
Highest braking work	1400 J		