

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7083-2AC71-1SA0



Figure similar

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	Motor type	Compact		
Rated torque (100 K)	12.5 Nm	Shaft height	80		
Rated current	6.3 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)	6.10 A	Axial runout tolerance	0.10 mm		
Stall current (100 K)	7.50 A	Vibration severity grade	Grade A		
Moment of inertia	26.000 kgcm ²	Connector size	1		
Efficiency	93.0 %	Degree of protection	IP64		
<th colspan="2">Physical constants</th> <td>Design acc. to Code I</td> <td>IM B5 (IM V1, IM V3)</td>		Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
		Torque constant	2.13 Nm/A	Temperature monitoring	KTY84 temperature sensor in the stator winding
		Voltage constant at 20° C	138.5 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
		Winding resistance at 20° C	0.66 Ω	Color of the housing	Standard (Anthracite RAL 7016)
		Rotating field inductance	12.8 mH	Holding brake	without holding brake
		Electrical time constant	19.40 ms	Shaft extension	Feather key
		Mechanical time constant	1.13 ms	Encoder system	Multi-pole resolver (number of pole pairs corresponds to number of pole pairs of the motor)
		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	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		