

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7103-2AF71-1SA2

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Engineering data		Mechanical data			
Rated speed (100 K)	3000 rpm	Motor type	Permanent-magnet synchronous motor		
Number of poles	8	Motor type	Compact		
Rated torque (100 K)	14.0 Nm	Shaft height	100		
Rated current	12.0 A	Cooling	Natural cooling		
Static torque (60 K)	30.00 Nm	Radial runout tolerance	0.050 mm		
Static torque (100 K)	36.0 Nm	Concentricity tolerance	0.10 mm		
Stall current (60 K)	21.00 A	Axial runout tolerance	0.10 mm		
Stall current (100 K)	26.00 A	Vibration severity grade	Grade A		
Moment of inertia	104.000 kgcm ²	Connector size	1.5		
Efficiency	93.0 %	Degree of protection	IP65 and DE flange IP67		
<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	1.35 Nm/A	Temperature monitoring	KTY84 temperature sensor in the stator winding
		Voltage constant at 20° C	89.5 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
		Winding resistance at 20° C	0.09 Ω	Color of the housing	Standard (Anthracite RAL 7016)
		Rotating field inductance	2.4 mH	Holding brake	without holding brake
		Electrical time constant	27.00 ms	Shaft extension	Feather key
		Mechanical time constant	1.46 ms	Encoder system	Multi-pole resolver (number of pole pairs corresponds to number of pole pairs of the motor)
		Thermal time constant	65 min		
		Shaft torsional stiffness	148000 Nm/rad		
		Net weight of the motor	28.5 kg		



Figure similar

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Optimum operating point		Recommended Motor Module	
Optimum speed	2500 rpm	Rated inverter current	30 A
Optimum power	5.4 kW	Maximum inverter current	90 A
Limiting data		Maximum torque	108.00 Nm
Max. permissible speed (mech.)	5000 rpm		
Max. permissible speed (inverter)	5000 rpm		
Maximum torque	108.0 Nm		
Maximum current	84.0 A		