

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data1FK7103-5AC71-1AG0



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)	25.0 Nm	Shaft height	100
Rated current	11.5 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)	12.00 A	Axial runout tolerance	0.10 mm
Stall current (100 K)	14.70 A	Vibration severity grade	Grade A
Moment of inertia	105.000 kgcm²	Connector size	1.5
Efficiency	93.0 %	Degree of protection	IP64
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
Torque constant	2.45 Nm/A	Temperature monitoring	KTY84 temperature sensor in the stator winding
Voltage constant at 20° C	156.0 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
Winding resistance at 20° C	0.28 Ω	Color of the housing	without
Rotating field inductance	6.5 mH	Holding brake	without holding brake
Electrical time constant	23.00 ms	Shaft end	Plain shaft
Mechanical time constant	1.50 ms	Encoder system	Encoder IC2048S/R: incremental encoder sin/cos 1 Vpp 2048 S/R with C and D track
Thermal time constant	65 min		
Shaft torsional stiffness	149000 Nm/rad		
Net weight of the motor	29.0 kg		

MLFB-Ordering data 1FK7103-5AC71-1AG0

Optimum operating point		Recommended Motor Module	
Optimum speed	2000 rpm	Rated inverter current	18 A
Optimum power	5.2 kW	Maximum inverter current	36 A
Limiting data		Maximum torque	86.00 Nm
Max. permissible speed (mech.)	5000 rpm		
Max. permissible speed (inverter)	3700 rpm		
Maximum torque	108.0 Nm		
Maximum current	46.0 A		