

Data sheet for SIMOTICS S-1FK7



MLFB-Ordering data 1FK7083-2AF71-1BA2-Z
X08

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)	10.5 Nm	Shaft height	80
Rated current	7.2 A	Cooling	Natural cooling
Static torque (60 K)	13.30 Nm	Radial runout tolerance	0.050 mm
Static torque (100 K)	16.00 Nm	Concentricity tolerance	0.10 mm
Stall current (60 K)	8.20 A	Axial runout tolerance	0.10 mm
Stall current (100 K)	10.10 A	Vibration severity grade	Grade A
Moment of inertia	26.000 kgcm ²	Connector size	1
Efficiency	93.0 %	Degree of protection	IP65 and DE flange IP67
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
Torque constant	1.58 Nm/A	Temperature monitoring	Pt1000 temperature sensor
Voltage constant at 20° C	102.5 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
Winding resistance at 20° C	0.38 Ω	Color of the housing	Suitable for food grade applications white aluminum RAL 9006
Rotating field inductance	7.0 mH	Holding brake	without holding brake
Electrical time constant	18.60 ms	Shaft end	Feather key
Mechanical time constant	1.18 ms	Encoder system	Encoder AS24DQI: absolute encoder single-turn 24 bits
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	
Optimum speed	3000 rpm
Optimum power	3.3 kW
Limiting data	
Max. permissible speed (mech.)	6000 rpm
Max. permissible speed (inverter)	5600 rpm
Maximum torque	50.0 Nm
Maximum current	37.0 A
Recommended Motor Module	
Rated inverter current	9 A
Maximum inverter current	27 A
Maximum torque	40.00 Nm
Special design	
X08	Paint finish: Suitable for food grade applications white aluminum RAL 9006