

Data sheet for SIMOTICS S-1FK7



MLFB-Ordering data 1FK7101-2AF71-1QG0-Z
X01

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)	15.5 Nm	Shaft height	100
Rated current	11.6 A	Cooling	Natural cooling
Static torque (60 K)	22.50 Nm	Radial runout tolerance	0.050 mm
Static torque (100 K)	27.00 Nm	Concentricity tolerance	0.10 mm
Stall current (60 K)	15.20 A	Axial runout tolerance	0.10 mm
Stall current (100 K)	18.80 A	Vibration severity grade	Grade A
Moment of inertia	79.000 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	1.44 Nm/A	Temperature monitoring	Pt1000 temperature sensor
Voltage constant at 20° C	92.5 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
Winding resistance at 20° C	0.14 Ω	Color of the housing	Jet black, matt RAL 9005
Rotating field inductance	3.5 mH	Holding brake	without holding brake
Electrical time constant	25.00 ms	Shaft end	Plain shaft
Mechanical time constant	1.62 ms	Encoder system	Encoder AS20DQI: absolute encoder single-turn 20 bits
Thermal time constant	60 min		
Shaft torsional stiffness	164000 Nm/rad		
Net weight of the motor	23.0 kg		



Figure similar

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Optimum operating point		Recommended Motor Module	
Optimum speed	3000 rpm	Rated inverter current	18 A
Optimum power	4.8 kW	Maximum inverter current	54 A
Limiting data		Maximum torque	72.00 Nm
Max. permissible speed (mech.)	5000 rpm	Special design	
Max. permissible speed (inverter)	5000 rpm	X01	Paint finish: Jet black, matt RAL 9005
Maximum torque	80.0 Nm		
Maximum current	63.0 A		