

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7085-4CF71-1QG0-Z
X01



Figure similar

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	High Dynamic		
Rated torque (100 K)	6.5 Nm	Shaft height	80		
Rated current	7.0 A	Cooling	Natural cooling		
Static torque (60 K)	18.30 Nm	Radial runout tolerance	0.050 mm		
Static torque (100 K)	22.0 Nm	Concentricity tolerance	0.10 mm		
Stall current (60 K)	17.80 A	Axial runout tolerance	0.10 mm		
Stall current (100 K)	22.00 A	Vibration severity grade	Grade A		
Moment of inertia	22.000 kgcm ²	Connector size	1.5		
Efficiency	92.0 %	Degree of protection	IP64		
<th colspan="2">Physical constants</th>		Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
		Torque constant	1.00 Nm/A	Temperature monitoring	Pt1000 temperature sensor
		Voltage constant at 20° C	64.5 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
		Winding resistance at 20° C	0.12 Ω	Color of the housing	Jet black, matt RAL 9005
		Rotating field inductance	3.7 mH	Holding brake	without holding brake
		Electrical time constant	31.50 ms	Shaft end	Plain shaft
		Mechanical time constant	0.78 ms	Encoder system	Encoder AS20DQI: absolute encoder single-turn 20 bits
		Thermal time constant	65 min		
		Shaft torsional stiffness	84000 Nm/rad		
		Net weight of the motor	23.0 kg		



Figure similar

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Optimum operating point

Optimum speed 2500 rpm

Optimum power 3.1 kW

Limiting data

Max. permissible speed (mech.) 6000 rpm

Max. permissible speed (inverter) 6000 rpm

Maximum torque 65.0 Nm

Maximum current 84.0 A

Recommended Motor Module

Rated inverter current 30 A

Maximum inverter current 72 A

Maximum torque 59.80 Nm

Special design

X01

Paint finish: Jet black, matt RAL 9005