

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data **1FK7032-2AK71-1CA0-Z**
X01

Client order no. :
Order no. :
Offer no. :
Remarks :

Item no. :
Consignment no. :
Project :

Engineering data		Mechanical data			
Rated speed (100 K)	6000 rpm	Motor type	Permanent-magnet synchronous motor		
Number of poles	6	Motor type	Compact		
Rated torque (100 K)	0.8 Nm	Shaft height	36		
Rated current	1.3 A	Cooling	Natural cooling		
Static torque (60 K)	0.95 Nm	Radial runout tolerance	0.035 mm		
Static torque (100 K)	1.1 Nm	Concentricity tolerance	0.08 mm		
Stall current (60 K)	1.40 A	Axial runout tolerance	0.08 mm		
Stall current (100 K)	1.70 A	Vibration severity grade	Grade A		
Moment of inertia	0.650 kgcm ²	Connector size	1		
Efficiency	88.0 %	Degree of protection	IP64		
<th colspan="2">Physical constants</th>		Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
		Temperature monitoring	Pt1000 temperature sensor		
		Electrical connectors	Connectors for signals and power rotatable		
		Color of the housing	Jet black, matt RAL 9005		
		Holding brake	without holding brake		
		Shaft extension	Feather key		
		Encoder system	Encoder AM24DQI: absolute encoder 24 bits (resolution 16777216, encoder-internal 2048 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)		
		Torque constant	0.67 Nm/A		
		Voltage constant at 20° C	45.0 V/1000*min ⁻¹		
		Winding resistance at 20° C	5.05 Ω		
Rotating field inductance	17.3 mH				
Electrical time constant	3.45 ms				
Mechanical time constant	2.20 ms				
Thermal time constant	25 min				
Shaft torsional stiffness	6000 Nm/rad				
Net weight of the motor	2.7 kg				



Figure similar

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Optimum operating point

Optimum speed	6000 rpm
Optimum power	0.5 kW

Limiting data

Max. permissible speed (mech.)	10000 rpm
Max. permissible speed (inverter)	10000 rpm
Maximum torque	4.5 Nm
Maximum current	7.0 A

Recommended Motor Module

Rated inverter current	3 A
Maximum inverter current	9 A
Maximum torque	4.50 Nm

Special design

X01 Paint finish: Jet black, matt RAL 9005