

Data sheet for SIMOTICS S-1FK7



MLFB-Ordering data 1FK7032-2AK71-1RG0-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 kgcm²	Connector size	1
Efficiency	88.0 %	Degree of protection	IP64
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
Torque constant	0.67 Nm/A	Temperature monitoring	Pt1000 temperature sensor
Voltage constant at 20° C	45.0 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
Winding resistance at 20° C	5.05 Ω	Color of the housing	Jet black, matt RAL 9005
Rotating field inductance	17.3 mH	Holding brake	without holding brake
Electrical time constant	3.45 ms	Shaft extension	Plain shaft
Mechanical time constant	2.20 ms	Encoder system	Encoder AM20DQI: absolute encoder 20 bits (resolution 1048576, encoder-internal 512 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)
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		Recommended Motor Module	
Optimum speed	6000 rpm	Rated inverter current	3 A
Optimum power	0.5 kW	Maximum inverter current	9 A
Limiting data		Maximum torque	4.50 Nm
Max. permissible speed (mech.)	10000 rpm	Special design	
Max. permissible speed (inverter)	10000 rpm	X01	Paint finish: Jet black, matt RAL 9005
Maximum torque	4.5 Nm		
Maximum current	7.0 A		