

Data sheet for SIMOTICS S-1FK7



MLFB-Ordering data 1FK7034-2AK71-1CB1

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)	1.0 Nm	Shaft height	36
Rated current	1.3 A	Cooling	Natural cooling
Static torque (60 K)	1.35 Nm	Radial runout tolerance	0.035 mm
Static torque (100 K)	1.60 Nm	Concentricity tolerance	0.08 mm
Stall current (60 K)	1.55 A	Axial runout tolerance	0.08 mm
Stall current (100 K)	1.90 A	Vibration severity grade	Grade A
Moment of inertia	1.000 kgcm²	Connector size	1
Efficiency	88.0 %	Degree of protection	IP65
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
Torque constant	0.84 Nm/A	Temperature monitoring	Pt1000 temperature sensor
Voltage constant at 20° C	55.0 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
Winding resistance at 20° C	4.46 Ω	Color of the housing	Standard (Anthracite RAL 7016)
Rotating field inductance	17.2 mH	Holding brake	with holding brake
Electrical time constant	3.85 ms	Shaft end	Feather key
Mechanical time constant	1.71 ms	Encoder system	Encoder AM24DQI: absolute encoder 24 bits (resolution 16777216, encoder-internal 2048 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)
Thermal time constant	30 min		
Shaft torsional stiffness	3750 Nm/rad		
Net weight of the motor	3.9 kg		



MLFB-Ordering data 1FK7034-2AK71-1CB1

Optimum operating point		Recommended Motor Module	
Optimum speed	6000 rpm	Rated inverter current	3 A
Optimum power	0.6 kW	Maximum inverter current	9 A
Limiting data		Maximum torque	6.50 Nm
Max. permissible speed (mech.)	10000 rpm		
Max. permissible speed (inverter)	10000 rpm		
Maximum torque	6.5 Nm		
Maximum current	8.0 A		
Holding brake			
Holding brake version	Permanent-magnet brake		
Holding torque	1.9 Nm		
Power supply voltage	DC 24 V ± 10 %		
Coil current	0.3 A		
Opening time	50 ms		
Closing time	30 ms		
Highest braking work	40 J		