

Data sheet for SIMOTICS S-1FK7



MLFB-Ordering data 1FK7062-3BF71-1CH2

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 Inertia
Rated torque (100 K)	6.0 Nm	Shaft height	63
Rated current	4.0 A	Cooling	Natural cooling
Static torque (60 K)	7.10 Nm	Radial runout tolerance	0.040 mm
Static torque (100 K)	8.5 Nm	Concentricity tolerance	0.10 mm
Stall current (60 K)	4.30 A	Axial runout tolerance	0.10 mm
Stall current (100 K)	5.30 A	Vibration severity grade	Grade A
Moment of inertia	24.500 kgcm ²	Connector size	1
Efficiency	91.0 %	Degree of protection	IP65 and DE flange IP67
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
Torque constant	1.60 Nm/A	Temperature monitoring	Pt1000 temperature sensor
Voltage constant at 20° C	102.5 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
Winding resistance at 20° C	1.15 Ω	Color of the housing	Standard (Anthracite RAL 7016)
Rotating field inductance	14.6 mH	Holding brake	with holding brake
Electrical time constant	12.80 ms	Shaft extension	Plain shaft
Mechanical time constant	3.15 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	35 min		
Shaft torsional stiffness	25000 Nm/rad		
Net weight of the motor	12.1 kg		



Figure similar

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Optimum operating point		Recommended Motor Module	
Optimum speed	3000 rpm	Rated inverter current	5 A
Optimum power	1.6 kW	Maximum inverter current	15 A
Limiting data		Maximum torque	22.10 Nm
Max. permissible speed (mech.)	7200 rpm		
Max. permissible speed (inverter)	5600 rpm		
Maximum torque	26.0 Nm		
Maximum current	19.2 A		
Holding brake			
Holding brake version	Permanent-magnet brake		
Holding torque	13.0 Nm		
Power supply voltage	DC 24 V ± 10 %		
Coil current	0.8 A		
Opening time	100 ms		
Closing time	50 ms		
Highest braking work	380 J		