

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data 1FK7063-5AH71-1EH2



Client order no. :
Order no. :
Offer no. :
Remarks :
Item no. :
Consignment no. :
Project :

Engineering data		Mechanical data	
Rated speed (100 K)	4500 rpm	Motor type	Permanent-magnet synchronous motor
Number of poles	8	Motor type	Compact
Rated torque (100 K)	3.0 Nm	Shaft height	63
Rated current	3.8 A	Cooling	Natural cooling
Static torque (60 K)	9.10 Nm	Radial runout tolerance	0.040 mm
Static torque (100 K)	11.0 Nm	Concentricity tolerance	0.10 mm
Stall current (60 K)	9.90 A	Axial runout tolerance	0.10 mm
Stall current (100 K)	12.00 A	Vibration severity grade	Grade A
Moment of inertia	17.300 kgcm²	Connector size	1
Efficiency	90.0 %	Degree of protection	IP65 and DE flange IP67
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
Torque constant	0.91 Nm/A	Temperature monitoring	KTY84 temperature sensor in the stator winding
Voltage constant at 20° C	58.0 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
Winding resistance at 20° C	0.29 Ω	Color of the housing	without
Rotating field inductance	3.2 mH	Holding brake	with holding brake
Electrical time constant	11.00 ms	Shaft end	Plain shaft
Mechanical time constant	1.58 ms	Encoder system	Encoder AM2048S/R: absolute encoder 2048 S/R, 4096 revolutions multi-turn, with EnDat interface
Thermal time constant	40 min		
Shaft torsional stiffness	35000 Nm/rad		
Net weight of the motor	12.0 kg		

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Optimum operating point		Recommended Motor Module	
Optimum speed	3300 rpm	Rated inverter current	18 A
Optimum power	2.3 kW	Maximum inverter current	36 A
Limiting data		Maximum torque	31.20 Nm
Max. permissible speed (mech.)	7200 rpm		
Max. permissible speed (inverter)	9900 rpm		
Maximum torque	35.0 Nm		
Maximum current	42.0 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		