

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data 1FK7063-5AH71-1KA0



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	15.100 kgcm²	Connector size	1
Efficiency	90.0 %	Degree of protection	IP64
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	without holding brake
Electrical time constant	11.00 ms	Shaft end	Feather key
Mechanical time constant	1.58 ms	Encoder system	Encoder AM16DQ: absolute encoder 16 bits (resolution 65536, encoder-internal 32 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)
Thermal time constant	40 min		
Shaft torsional stiffness	35000 Nm/rad		
Net weight of the motor	11.5 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		