

Data sheet for SIMOTICS S-1FK7



MLFB-Ordering data 1FK7063-2AF71-1RA1-Z
L13

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	Compact
Rated torque (100 K)	7.3 Nm	Shaft height	63
Rated current	5.6 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)	6.50 A	Axial runout tolerance	0.10 mm
Stall current (100 K)	8.00 A	Vibration severity grade	Grade A
Moment of inertia	14.700 kgcm²	Connector size	1
Efficiency	91.0 %	Degree of protection	IP65
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
Torque constant	1.37 Nm/A	Temperature monitoring	Pt1000 temperature sensor
Voltage constant at 20° C	90.5 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
Winding resistance at 20° C	0.64 Ω	Color of the housing	Standard (Anthracite RAL 7016)
Rotating field inductance	8.5 mH	Holding brake	without holding brake
Electrical time constant	13.40 ms	Shaft extension	Feather key
Mechanical time constant	1.48 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	40 min		
Shaft torsional stiffness	34000 Nm/rad		
Net weight of the motor	11.1 kg		



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Optimum operating point		Recommended Motor Module	
Optimum speed	3000 rpm	Rated inverter current	9 A
Optimum power	2.3 kW	Maximum inverter current	27 A
Limiting data		Maximum torque	34.00 Nm
Max. permissible speed (mech.)	7200 rpm	Special design	
Max. permissible speed (inverter)	6400 rpm	L13	External ground connection
Maximum torque	35.0 Nm		
Maximum current	28.0 A		