

Data sheet for SIMOTICS S-1FK7



MLFB-Ordering data 1FK7062-3BF71-1DA0

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	23.500 kgcm²	Connector size	1
Efficiency	91.0 %	Degree of protection	IP64
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	without holding brake
Electrical time constant	12.80 ms	Shaft extension	Feather key
Mechanical time constant	3.15 ms	Encoder system	Encoder IC22DQ: incremental encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + commutation position 11 bits
Thermal time constant	35 min		
Shaft torsional stiffness	34500 Nm/rad		
Net weight of the motor	10.7 kg		



Figure similar

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Optimum operating point		Recommended Motor Module	
Optimum speed	3000 rpm	Rated inverter current	5 A
Optimum power	1.9 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		