

Data sheet for SIMOTICS S-1FK7



MLFB-Ordering data 1FK7101-2AF71-1BG2-Z
N16

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)	15.5 Nm	Shaft height	100
Rated current	11.6 A	Cooling	Natural cooling
Static torque (60 K)	22.50 Nm	Radial runout tolerance	0.050 mm
Static torque (100 K)	27.0 Nm	Concentricity tolerance	0.10 mm
Stall current (60 K)	15.20 A	Axial runout tolerance	0.10 mm
Stall current (100 K)	18.80 A	Vibration severity grade	Grade A
Moment of inertia	79.000 kgcm²	Connector size	1.5
Efficiency	93.0 %	Degree of protection	IP65 and DE flange IP67
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
		Temperature monitoring	Pt1000 temperature sensor
		Electrical connectors	Connectors for signals and power rotatable
		Color of the housing	Standard (Anthracite RAL 7016)
		Holding brake	without holding brake
		Shaft end	Plain shaft
		Encoder system	Encoder AS24DQI with nickel-plated M17 round connector: absolute encoder single-turn 24 bits
Torque constant	1.44 Nm/A		
Voltage constant at 20° C	92.5 V/1000*min ⁻¹		
Winding resistance at 20° C	0.14 Ω		
Rotating field inductance	3.5 mH		
Electrical time constant	25.00 ms		
Mechanical time constant	1.62 ms		
Thermal time constant	60 min		
Shaft torsional stiffness	164000 Nm/rad		
Net weight of the motor	23.0 kg		



Figure similar

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Optimum operating point		Recommended Motor Module	
Optimum speed	3000 rpm	Rated inverter current	18 A
Optimum power	4.8 kW	Maximum inverter current	54 A
Limiting data		Maximum torque	72.00 Nm
Max. permissible speed (mech.)	5000 rpm	Special design	
Max. permissible speed (inverter)	5000 rpm	N16	Nickel plated connectors and paint varnish for increased chemical resistance
Maximum torque	80.0 Nm		
Maximum current	63.0 A		