

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7061-4CF71-1PH2



Figure similar

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	6	Motor type	High Dynamic
Rated torque (100 K)	5.4 Nm	Shaft height	63
Rated current	5.3 A	Cooling	Natural cooling
Static torque (60 K)	5.30 Nm	Radial runout tolerance	0.040 mm
Static torque (100 K)	6.4 Nm	Concentricity tolerance	0.10 mm
Stall current (60 K)	4.95 A	Axial runout tolerance	0.10 mm
Stall current (100 K)	6.10 A	Vibration severity grade	Grade A
Moment of inertia	5.100 kgcm ²	Connector size	1
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	with holding brake
		Shaft extension	Plain shaft
		Encoder system	
Torque constant	1.05 Nm/A	Resolver R14DQ: resolver 14 bits (resolution 16384, internal 2-pole)	
Voltage constant at 20° C	67.5 V/1000*min ⁻¹		
Winding resistance at 20° C	0.71 Ω		
Rotating field inductance	22.0 mH		
Electrical time constant	31.00 ms		
Mechanical time constant	0.79 ms		
Thermal time constant	45 min		
Shaft torsional stiffness	26500 Nm/rad		
Net weight of the motor	11.0 kg		



Figure similar

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Optimum operating point		Recommended Motor Module	
Optimum speed	3000 rpm	Rated inverter current	9 A
Optimum power	1.7 kW	Maximum inverter current	27 A
Limiting data		Maximum torque	17.30 Nm
Max. permissible speed (mech.)	7500 rpm		
Max. permissible speed (inverter)	7500 rpm		
Maximum torque	17.3 Nm		
Maximum current	18.5 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		