

## Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7061-4CF71-1KG1



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	4.100 kgcm <sup>2</sup>	Connector size	1		
Efficiency	93.0 %	Degree of protection	IP65		
<th colspan="2">Physical constants</th>		Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
		Torque constant	1.05 Nm/A	Temperature monitoring	Pt1000 temperature sensor
		Voltage constant at 20° C	67.5 V/1000*min <sup>-1</sup>	Electrical connectors	Connectors for signals and power rotatable
		Winding resistance at 20° C	0.71 Ω	Color of the housing	Standard (Anthracite RAL 7016)
		Rotating field inductance	22.0 mH	Holding brake	without holding brake
		Electrical time constant	31.00 ms	Shaft extension	Plain shaft
		Mechanical time constant	0.79 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	45 min		
		Shaft torsional stiffness	36500 Nm/rad		
		Net weight of the motor	9.5 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		