

Data sheet for SIMOTICS S-1FK7

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MLFB-Ordering data

1FK7044-7AH71-1FG2

Figure similar

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Engineering data		Mechanical data			
Rated speed (100 K)	4500 rpm	Motor type	Permanent-magnet synchronous motor		
Number of poles	6	Motor type	High Dynamic		
Rated torque (100 K)	3.0 Nm	Shaft height	48		
Rated current	4.9 A	Cooling	Natural cooling		
Static torque (60 K)	3.00 Nm	Radial runout tolerance	0.040 mm		
Static torque (100 K)	4.0 Nm	Concentricity tolerance	0.08 mm		
Stall current (60 K)	4.60 A	Axial runout tolerance	0.08 mm		
Stall current (100 K)	6.30 A	Vibration severity grade	Grade A		
Moment of inertia	1.280 kgcm ²	Connector size	1		
Efficiency	91.0 %	Degree of protection	IP65 and DE flange IP67		
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)		
		Temperature monitoring	KTY84 temperature sensor in the stator winding		
		Electrical connectors	Connectors for signals and power rotatable		
		Color of the housing	without		
		Holding brake	without holding brake		
		Shaft extension	Plain shaft		
		Encoder system	Encoder AM22DQ: absolute encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)		
		Torque constant	0.63 Nm/A		
		Voltage constant at 20° C	42.0 V/1000*min ⁻¹		
		Winding resistance at 20° C	0.81 Ω		
Rotating field inductance	11.0 mH				
Electrical time constant	13.50 ms				
Mechanical time constant	0.78 ms				
Thermal time constant	45 min				
Shaft torsional stiffness	9500 Nm/rad				
Net weight of the motor	7.7 kg				

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Figure similar

Optimum operating point		Recommended Motor Module	
Optimum speed	4500 rpm	Rated inverter current	9 A
Optimum power	1.4 kW	Maximum inverter current	18 A
Limiting data		Maximum torque	11.00 Nm
Max. permissible speed (mech.)	8000 rpm		
Max. permissible speed (inverter)	13300 rpm		
Maximum torque	12.0 Nm		
Maximum current	20.0 A		