

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7100-2AC71-1RA2

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Engineering data		Mechanical data			
Rated speed (100 K)	2000 rpm	Motor type	Permanent-magnet synchronous motor		
Number of poles	8	Motor type	Compact		
Rated torque (100 K)	14.5 Nm	Shaft height	100		
Rated current	7.1 A	Cooling	Natural cooling		
Static torque (60 K)	14.90 Nm	Radial runout tolerance	0.050 mm		
Static torque (100 K)	18.0 Nm	Concentricity tolerance	0.10 mm		
Stall current (60 K)	6.80 A	Axial runout tolerance	0.10 mm		
Stall current (100 K)	8.40 A	Vibration severity grade	Grade A		
Moment of inertia	54.000 kgcm ²	Connector size	1		
Efficiency	92.0 %	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 extension	Feather key		
		Encoder system	Encoder AM20DQI: absolute encoder 20 bits (resolution 1048576, encoder-internal 512 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)		
		Torque constant	2.14 Nm/A		
		Voltage constant at 20° C	138.0 V/1000*min ⁻¹		
		Winding resistance at 20° C	0.55 Ω		
Rotating field inductance	12.7 mH				
Electrical time constant	23.00 ms				
Mechanical time constant	1.95 ms				
Thermal time constant	55 min				
Shaft torsional stiffness	183000 Nm/rad				
Net weight of the motor	17.6 kg				



Figure similar

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1FK7100-2AC71-1RA2

Optimum operating point		Recommended Motor Module	
Optimum speed	2000 rpm	Rated inverter current	9 A
Optimum power	3.0 kW	Maximum inverter current	27 A
Limiting data		Maximum torque	53.40 Nm
Max. permissible speed (mech.)	5000 rpm		
Max. permissible speed (inverter)	4200 rpm		
Maximum torque	55.0 Nm		
Maximum current	28.0 A		