

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7042-2AC71-1CA2

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)	2.8 Nm	Shaft height	48
Rated current	1.6 A	Cooling	Natural cooling
Static torque (60 K)	2.50 Nm	Radial runout tolerance	0.040 mm
Static torque (100 K)	3.00 Nm	Concentricity tolerance	0.08 mm
Stall current (60 K)	1.30 A	Axial runout tolerance	0.08 mm
Stall current (100 K)	1.61 A	Vibration severity grade	Grade A
Moment of inertia	2.900 kgcm ²	Connector size	1
Efficiency	88.0 %	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
Torque constant	1.86 Nm/A	Electrical connectors	Connectors for signals and power rotatable
Voltage constant at 20° C	122.0 V/1000*min ⁻¹	Color of the housing	Standard (Anthracite RAL 7016)
Winding resistance at 20° C	8.60 Ω	Holding brake	without holding brake
Rotating field inductance	64.0 mH	Shaft end	Feather key
Electrical time constant	7.40 ms	Encoder system	Encoder AM24DQI: absolute encoder 24 bits (resolution 16777216, encoder-internal 2048 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)
Mechanical time constant	2.15 ms		
Thermal time constant	30 min		
Shaft torsional stiffness	15500 Nm/rad		
Net weight of the motor	4.6 kg		



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Optimum operating point		Recommended Motor Module	
Optimum speed	2000 rpm	Rated inverter current	3 A
Optimum power	0.6 kW	Maximum inverter current	9 A
Limiting data		Maximum torque	10.50 Nm
Max. permissible speed (mech.)	9000 rpm		
Max. permissible speed (inverter)	4750 rpm		
Maximum torque	10.5 Nm		
Maximum current	5.6 A		