

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7032-2AK71-1CG2-Z
Q31

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Engineering data		Mechanical data			
Rated speed (100 K)	6000 rpm	Motor type	Permanent-magnet synchronous motor		
Number of poles	6	Motor type	Compact		
Rated torque (100 K)	0.8 Nm	Shaft height	36		
Rated current	1.3 A	Cooling	Natural cooling		
Static torque (60 K)	0.95 Nm	Radial runout tolerance	0.035 mm		
Static torque (100 K)	1.1 Nm	Concentricity tolerance	0.08 mm		
Stall current (60 K)	1.40 A	Axial runout tolerance	0.08 mm		
Stall current (100 K)	1.70 A	Vibration severity grade	Grade A		
Moment of inertia	0.650 kgcm ²	Connector size	1		
Efficiency	88.0 %	Degree of protection	IP65 and DE flange IP67		
<th colspan="2">Physical constants</th>		Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
		Torque constant	0.67 Nm/A	Temperature monitoring	Pt1000 temperature sensor
		Voltage constant at 20° C	45.0 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
		Winding resistance at 20° C	5.05 Ω	Color of the housing	Standard (Anthracite RAL 7016)
		Rotating field inductance	17.3 mH	Holding brake	without holding brake
		Electrical time constant	3.45 ms	Shaft end	Plain shaft
		Mechanical time constant	2.20 ms	Encoder system	Encoder AM24DQI: absolute encoder 24 bits (resolution 16777216, encoder-internal 2048 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)
		Thermal time constant	25 min		
		Shaft torsional stiffness	6000 Nm/rad		
		Net weight of the motor	2.7 kg		



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Optimum operating point

Optimum speed	6000 rpm
Optimum power	0.5 kW

Limiting data

Max. permissible speed (mech.)	10000 rpm
Max. permissible speed (inverter)	10000 rpm
Maximum torque	4.5 Nm
Maximum current	7.0 A

Recommended Motor Module

Rated inverter current	3 A
Maximum inverter current	9 A
Maximum torque	4.50 Nm

Special design

Q31 Metal rating plate on the motor