

## Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7042-2AF71-1RG0-Z  
B02

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	8	Motor type	Compact		
Rated torque (100 K)	2.6 Nm	Shaft height	48		
Rated current	2.0 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)	1.80 A	Axial runout tolerance	0.08 mm		
Stall current (100 K)	2.20 A	Vibration severity grade	Grade A		
Moment of inertia	2.900 kgcm <sup>2</sup>	Connector size	1		
Efficiency	89.0 %	Degree of protection	IP64		
<th colspan="2">Physical constants</th>		Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
		Torque constant	1.38 Nm/A	Temperature monitoring	Pt1000 temperature sensor
		Voltage constant at 20° C	90.0 V/1000*min <sup>-1</sup>	Electrical connectors	Connectors for signals and power rotatable
		Winding resistance at 20° C	4.67 Ω	Color of the housing	Standard (Anthracite RAL 7016)
		Rotating field inductance	35.0 mH	Holding brake	without holding brake
		Electrical time constant	7.50 ms	Shaft end	Plain shaft
		Mechanical time constant	2.15 ms	Encoder system	Encoder AM20DQI: absolute encoder 20 bits (resolution 1048576, encoder-internal 512 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)
		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

Optimum speed 3000 rpm

Optimum power 0.8 kW

### Limiting data

Max. permissible speed (mech.) 9000 rpm

Max. permissible speed (inverter) 6400 rpm

Maximum torque 10.5 Nm

Maximum current 7.6 A

### Recommended Motor Module

Rated inverter current 3 A

Maximum inverter current 9 A

Maximum torque 10.50 Nm

### Special design

B02 Works test certificate