

## Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7040-2AK71-1PB1

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	8	Motor type	Compact
Rated torque (100 K)	1.1 Nm	Shaft height	48
Rated current	1.9 A	Cooling	Natural cooling
Static torque (60 K)	1.30 Nm	Radial runout tolerance	0.040 mm
Static torque (100 K)	1.6 Nm	Concentricity tolerance	0.08 mm
Stall current (60 K)	1.90 A	Axial runout tolerance	0.08 mm
Stall current (100 K)	2.35 A	Vibration severity grade	Grade A
Moment of inertia	1.920 kgcm <sup>2</sup>	Connector size	1
Efficiency	88.0 %	Degree of protection	IP65
<b>Physical constants</b>		Design acc. to Code I	IM B5 (IM V1, IM V3)
		Temperature monitoring	Pt1000 temperature sensor
Torque constant	0.68 Nm/A	Electrical connectors	Connectors for signals and power rotatable
Voltage constant at 20° C	43.4 V/1000*min <sup>-1</sup>	Color of the housing	Standard (Anthracite RAL 7016)
Winding resistance at 20° C	2.87 Ω	Holding brake	with holding brake
Rotating field inductance	16.5 mH	Shaft extension	Feather key
Electrical time constant	5.70 ms	Encoder system	Resolver R14DQ: resolver 14 bits (resolution 16384, internal 2-pole)
Mechanical time constant	3.00 ms		
Thermal time constant	25 min		
Shaft torsional stiffness	13000 Nm/rad		
Net weight of the motor	3.9 kg		



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### Optimum operating point

Optimum speed	6000 rpm
Optimum power	0.7 kW

### Limiting data

Max. permissible speed (mech.)	9000 rpm
Max. permissible speed (inverter)	9000 rpm
Maximum torque	5.1 Nm
Maximum current	7.7 A

### Holding brake

Holding brake version	Permanent-magnet brake
Holding torque	4.0 Nm
Power supply voltage	DC 24 V $\pm$ 10 %
Coil current	0.5 A
Opening time	70 ms
Closing time	30 ms
Highest braking work	150 J

### Recommended Motor Module

Rated inverter current	3 A
Maximum inverter current	9 A
Maximum torque	5.10 Nm