

## Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7033-4CK71-1SB1

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	High Dynamic
Rated torque (100 K)	0.9 Nm	Shaft height	36
Rated current	1.6 A	Cooling	Natural cooling
Static torque (60 K)	1.08 Nm	Radial runout tolerance	0.035 mm
Static torque (100 K)	1.3 Nm	Concentricity tolerance	0.08 mm
Stall current (60 K)	1.70 A	Axial runout tolerance	0.08 mm
Stall current (100 K)	2.10 A	Vibration severity grade	Grade A
Moment of inertia	0.350 kgcm <sup>2</sup>	Connector size	1
Efficiency	88.0 %	Degree of protection	IP65
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
Torque constant	0.62 Nm/A	Temperature monitoring	KTY84 temperature sensor in the stator winding
Voltage constant at 20° C	39.5 V/1000*min <sup>-1</sup>	Electrical connectors	Connectors for signals and power rotatable
Winding resistance at 20° C	3.51 Ω	Color of the housing	Standard (Anthracite RAL 7016)
Rotating field inductance	22.0 mH	Holding brake	with holding brake
Electrical time constant	6.30 ms	Shaft extension	Feather key
Mechanical time constant	0.68 ms	Encoder system	Multi-pole resolver (number of pole pairs corresponds to number of pole pairs of the motor)
Thermal time constant	25 min		
Shaft torsional stiffness	4700 Nm/rad		
Net weight of the motor	3.4 kg		



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### Optimum operating point

Optimum speed	6000 rpm
Optimum power	0.6 kW

### Limiting data

Max. permissible speed (mech.)	10000 rpm
Max. permissible speed (inverter)	10000 rpm
Maximum torque	4.3 Nm
Maximum current	7.6 A

### Holding brake

Holding brake version	Permanent-magnet brake
Holding torque	1.9 Nm
Power supply voltage	DC 24 V $\pm$ 10 %
Coil current	0.3 A
Opening time	50 ms
Closing time	30 ms
Highest braking work	40 J

### Recommended Motor Module

Rated inverter current	3 A
Maximum inverter current	9 A
Maximum torque	4.30 Nm