

## Data sheet for SIMOTICS S-1FK7

Article No. : 1FK7033-4CF21-1DA0



Figure similar

Client order no. :  
Order no. :  
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Item no. :  
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### Engineering data

Rated speed (100 K)	3,000 rpm
Number of poles	6
Rated torque (100 K)	1.2 Nm
Rated current	2.0 A
Static torque (60 K)	1.08 Nm
Static torque (100 K)	1.30 Nm
Stall current (60 K)	1.70 A
Stall current (100 K)	2.10 A
Moment of inertia	0.250 kgcm <sup>2</sup>
Efficiency	86.0 %

### Physical constants

Torque constant	0.62 Nm/A
Voltage constant at 20° C	39.5 V/1000*min <sup>-1</sup>
Winding resistance at 20° C	3.51 Ω
Rotating field inductance	22.0 mH
Electrical time constant	6.30 ms
Mechanical time constant	0.68 ms
Thermal time constant	25 min
Shaft torsional stiffness	7,300 Nm/rad
Net weight of the motor	3.0 kg

### Mechanical data

Motor type	Permanent-magnet synchronous motor
Motor type	High Dynamic
Shaft height	36
Cooling	Natural cooling
Radial runout tolerance	0.035 mm
Concentricity tolerance	0.08 mm
Axial runout tolerance	0.08 mm
Vibration severity grade	Grade A
Connector size	1
Degree of protection	IP64
Design acc. to Code I	IM B5 (IM V1, IM V3)
Temperature monitoring	Pt1000 temperature sensor
Electrical connectors	Connectors for signals and power rotatable
Color of the housing	Standard (Anthracite RAL 7016)
Holding brake	without holding brake
Shaft end	Feather key
Encoder system	Encoder IC22DQ: incremental encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + commutation position 11 bits

### Optimum operating point

Optimum speed	3,000 rpm
Optimum power	0.4 kW

### Limiting data

Max. permissible speed (mech.)	10,000 rpm
Max. permissible speed (inverter)	7,150 rpm
Maximum torque	4.3 Nm
Maximum current	7.6 A

### Recommended Motor Module

Rated inverter current	2 A
Maximum inverter current	5 A
Maximum torque	2.70 Nm

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