

## Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7033-4CF21-1BH0

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

### Engineering data

Rated speed (100 K) 3000 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 0.350 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 4700 Nm/rad

Net weight of the motor 3.4 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 with holding brake

Shaft end Plain shaft

Encoder system Encoder AS24DQI: absolute encoder single-turn 24 bits



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### Optimum operating point

Optimum speed	3000 rpm
Optimum power	0.4 kW

### Limiting data

Max. permissible speed (mech.)	10000 rpm
Max. permissible speed (inverter)	7150 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	2 A
Maximum inverter current	5 A
Maximum torque	2.70 Nm