

## Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7040-2AK74-1SB1

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

### Engineering data

Rated speed (100 K) 6000 rpm

Number of poles 8

Rated torque (100 K) 1.1 Nm

Rated current 1.9 A

Static torque (60 K) 1.30 Nm

Static torque (100 K) 1.6 Nm

Stall current (60 K) 1.90 A

Stall current (100 K) 2.35 A

Moment of inertia 1.920 kgcm<sup>2</sup>

Efficiency 88.0 %

### Physical constants

Torque constant 0.68 Nm/A

Voltage constant at 20° C 43.4 V/1000\*min<sup>-1</sup>

Winding resistance at 20° C 2.87 Ω

Rotating field inductance 16.5 mH

Electrical time constant 5.70 ms

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

### Mechanical data

Motor type Permanent-magnet synchronous motor

Motor type Compact

Shaft height 48

Cooling Natural cooling

Radial runout tolerance 0.040 mm

Concentricity tolerance 0.08 mm

Axial runout tolerance 0.08 mm

Vibration severity grade Grade A

Connector size 1

Degree of protection IP65

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 extension Feather key

Encoder system Multi-pole resolver (number of pole pairs corresponds to number of pole pairs of the motor)



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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