

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7060-2AH71-1RH0

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Engineering data

Rated speed (100 K) 4500 rpm

Number of poles 8

Rated torque (100 K) 3.7 Nm

Rated current 4.3 A

Static torque (60 K) 5.00 Nm

Static torque (100 K) 6.0 Nm

Stall current (60 K) 5.10 A

Stall current (100 K) 6.30 A

Moment of inertia 8.700 kgcm²

Efficiency 90.0 %

Physical constants

Torque constant 0.95 Nm/A

Voltage constant at 20° C 60.5 V/1000*min⁻¹

Winding resistance at 20° C 0.69 Ω

Rotating field inductance 7.6 mH

Electrical time constant 10.90 ms

Mechanical time constant 1.78 ms

Thermal time constant 30 min

Shaft torsional stiffness 28500 Nm/rad

Net weight of the motor 8.5 kg

Mechanical data

Motor type Permanent-magnet synchronous motor

Motor type Compact

Shaft height 63

Cooling Natural cooling

Radial runout tolerance 0.040 mm

Concentricity tolerance 0.10 mm

Axial runout tolerance 0.10 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 extension Plain shaft

Encoder system

Encoder AM20DQI: absolute encoder 20 bits (resolution 1048576, encoder-internal 512 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)



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1FK7060-2AH71-1RH0

Optimum operating point

Optimum speed	4500 rpm
Optimum power	1.7 kW

Limiting data

Max. permissible speed (mech.)	7200 rpm
Max. permissible speed (inverter)	7200 rpm
Maximum torque	18.0 Nm
Maximum current	21.5 A

Holding brake

Holding brake version	Permanent-magnet brake
Holding torque	13.0 Nm
Power supply voltage	DC 24 V \pm 10 %
Coil current	0.8 A
Opening time	100 ms
Closing time	50 ms
Highest braking work	380 J

Recommended Motor Module

Rated inverter current	9 A
Maximum inverter current	27 A
Maximum torque	18.00 Nm