

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7103-2AF71-1FH0

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Engineering data

Rated speed (100 K) 3000 rpm

Number of poles 8

Rated torque (100 K) 14.0 Nm

Rated current 11.5 A

Static torque (60 K) 30.00 Nm

Static torque (100 K) 36.00 Nm

Stall current (60 K) 21.00 A

Stall current (100 K) 26.00 A

Moment of inertia 112.000 kgcm²

Efficiency 93.0 %

Physical constants

Torque constant 1.39 Nm/A

Voltage constant at 20° C 89.5 V/1000*min⁻¹

Winding resistance at 20° C 0.09 Ω

Rotating field inductance 2.4 mH

Electrical time constant 27.00 ms

Mechanical time constant 1.46 ms

Thermal time constant 65 min

Shaft torsional stiffness 108000 Nm/rad

Net weight of the motor 33.0 kg

Mechanical data

Motor type Permanent-magnet synchronous motor

Motor type Compact

Shaft height 100

Cooling Natural cooling

Radial runout tolerance 0.050 mm

Concentricity tolerance 0.10 mm

Axial runout tolerance 0.10 mm

Vibration severity grade Grade A

Connector size 1.5

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 AM22DQ: absolute encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)



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Optimum operating point

Optimum speed	2500 rpm
Optimum power	5.4 kW

Limiting data

Max. permissible speed (mech.)	5000 rpm
Max. permissible speed (inverter)	5000 rpm
Maximum torque	108.0 Nm
Maximum current	84.0 A

Holding brake

Holding brake version	Permanent-magnet brake
Holding torque	43.0 Nm
Power supply voltage	DC 24 V \pm 10 %
Coil current	1.0 A
Opening time	300 ms
Closing time	70 ms
Highest braking work	3380 J

Recommended Motor Module

Rated inverter current	30 A
Maximum inverter current	90 A
Maximum torque	108.00 Nm