

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7101-2AC71-1CB1

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Engineering data

Rated speed (100 K) 2000 rpm

Number of poles 8

Rated torque (100 K) 20.5 Nm

Rated current 9.7 A

Static torque (60 K) 22.50 Nm

Static torque (100 K) 27.00 Nm

Stall current (60 K) 10.00 A

Stall current (100 K) 12.30 A

Moment of inertia 87.000 kgcm²

Efficiency 93.0 %

Physical constants

Torque constant 2.15 Nm/A

Voltage constant at 20° C 144.5 V/1000*min⁻¹

Winding resistance at 20° C 0.34 Ω

Rotating field inductance 8.5 mH

Electrical time constant 25.00 ms

Mechanical time constant 1.62 ms

Thermal time constant 60 min

Shaft torsional stiffness 116000 Nm/rad

Net weight of the motor 27.5 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 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 end Feather key

Encoder system

Encoder AM24DQI: absolute encoder 24 bits (resolution 16777216, encoder-internal 2048 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)



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Optimum operating point

Optimum speed	2000 rpm
Optimum power	4.3 kW

Limiting data

Max. permissible speed (mech.)	5000 rpm
Max. permissible speed (inverter)	4000 rpm
Maximum torque	80.0 Nm
Maximum current	40.5 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	18 A
Maximum inverter current	54 A
Maximum torque	80.00 Nm