

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7103-3BF71-1QA0

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) 30.0 Nm

Stall current (60 K) 21.00 A

Stall current (100 K) 26.00 A

Moment of inertia 168.000 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 2.35 ms

Thermal time constant 65 min

Shaft torsional stiffness 148000 Nm/rad

Net weight of the motor 32.1 kg

Mechanical data

Motor type Permanent-magnet synchronous motor

Motor type High Inertia

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 without holding brake

Shaft extension Feather key

Encoder system Encoder AS20DQI: absolute encoder single-turn 20 bits



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Optimum operating point		Recommended Motor Module	
Optimum speed	2500 rpm	Rated inverter current	30 A
Optimum power	5.4 kW	Maximum inverter current	90 A
Limiting data		Maximum torque	108.00 Nm
Max. permissible speed (mech.)	5000 rpm		
Max. permissible speed (inverter)	5000 rpm		
Maximum torque	108.0 Nm		
Maximum current	84.0 A		