

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7100-2AF71-1FG0

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) 12.0 Nm

Rated current 8.0 A

Static torque (60 K) 14.90 Nm

Static torque (100 K) 18.00 Nm

Stall current (60 K) 9.00 A

Stall current (100 K) 11.10 A

Moment of inertia 54.000 kgcm²

Efficiency 92.0 %

Physical constants

Torque constant 1.62 Nm/A

Voltage constant at 20° C 104.5 V/1000*min⁻¹

Winding resistance at 20° C 0.32 Ω

Rotating field inductance 7.3 mH

Electrical time constant 22.50 ms

Mechanical time constant 2.00 ms

Thermal time constant 55 min

Shaft torsional stiffness 183000 Nm/rad

Net weight of the motor 17.6 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

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 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		Recommended Motor Module	
Optimum speed	3000 rpm	Rated inverter current	18 A
Optimum power	3.8 kW	Maximum inverter current	54 A
Limiting data		Maximum torque	55.00 Nm
Max. permissible speed (mech.)	5000 rpm		
Max. permissible speed (inverter)	5000 rpm		
Maximum torque	55.0 Nm		
Maximum current	37.0 A		