

## Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7103-2AF74-1AG0



Figure similar

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) 36.0 Nm

Stall current (60 K) 21.00 A

Stall current (100 K) 26.00 A

Moment of inertia 104.000 kgcm<sup>2</sup>

Efficiency 93.0 %

### Physical constants

Torque constant 1.39 Nm/A

Voltage constant at 20° C 89.5 V/1000\*min<sup>-1</sup>

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 148000 Nm/rad

Net weight of the motor 28.5 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 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 Plain shaft

Encoder system Encoder IC2048S/R: incremental encoder sin/cos 1 Vpp 2048 S/R with C and D track



Figure similar

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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		