

## Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7100-2AC71-1QG1



Figure similar

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) 14.5 Nm

Rated current 7.1 A

Static torque (60 K) 14.90 Nm

Static torque (100 K) 18.00 Nm

Stall current (60 K) 6.80 A

Stall current (100 K) 8.40 A

Moment of inertia 54.000 kgcm<sup>2</sup>

Efficiency 92.0 %

### Physical constants

Torque constant 2.14 Nm/A

Voltage constant at 20° C 138.0 V/1000\*min<sup>-1</sup>

Winding resistance at 20° C 0.55 Ω

Rotating field inductance 12.7 mH

Electrical time constant 23.00 ms

Mechanical time constant 1.95 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 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 without holding brake

Shaft end Plain shaft

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



Figure similar

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Optimum operating point		Recommended Motor Module	
Optimum speed	2000 rpm	Rated inverter current	9 A
Optimum power	3.0 kW	Maximum inverter current	27 A
Limiting data		Maximum torque	53.40 Nm
Max. permissible speed (mech.)	5000 rpm		
Max. permissible speed (inverter)	4200 rpm		
Maximum torque	55.0 Nm		
Maximum current	28.0 A		