

## Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7086-4CF71-1QG0

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) 6.5 Nm

Rated current 5.7 A

Static torque (60 K) 23.00 Nm

Static torque (100 K) 28.00 Nm

Stall current (60 K) 17.40 A

Stall current (100 K) 21.50 A

Moment of inertia 22.000 kgcm<sup>2</sup>

Efficiency 93.0 %

### Physical constants

Torque constant 1.30 Nm/A

Voltage constant at 20° C 84.5 V/1000\*min<sup>-1</sup>

Winding resistance at 20° C 0.12 Ω

Rotating field inductance 3.1 mH

Electrical time constant 26.50 ms

Mechanical time constant 0.46 ms

Thermal time constant 65 min

Shaft torsional stiffness 84000 Nm/rad

Net weight of the motor 23.0 kg

### Mechanical data

Motor type Permanent-magnet synchronous motor

Motor type High Dynamic

Shaft height 80

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 end Plain shaft

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



Figure similar

MLFB-Ordering data

1FK7086-4CF71-1QG0

Optimum operating point		Recommended Motor Module	
Optimum speed	2000 rpm	Rated inverter current	30 A
Optimum power	3.8 kW	Maximum inverter current	72 A
Limiting data		Maximum torque	79.30 Nm
Max. permissible speed (mech.)	6000 rpm		
Max. permissible speed (inverter)	6000 rpm		
Maximum torque	105.0 Nm		
Maximum current	115.0 A		